Case in Slavic

Edited by

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From the Publisher

This book represents the twelfth and final installment 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.

Case in Slavic was the third and final monumental collection of articles on Slavic morphosyntax published by Slavica. (Note to readers: It's been 30 years already! We would be *delighted* if someone would take it upon themselves to edit a fourth such collection.) Like its two predecessors, this one has some real classics (my personal favorite is Gil Rappaport's proposal for treating *kak* as essentially a non-case-assigning preposition), and it is more overtly theoretical than the earlier volumes, albeit reflecting a democratic range of theories. Exploring these three anthologies along with the quinquennial volumes of *American Contributions to the International Congress of Slavists*, not coincidentally also published by Slavica since 1978, offers a representative survey of American work by Slavists *sensu stricto* (as opposed to general linguistic theoreticians, mostly native speakers of various Slavic linguists) on more theoretical brands of Slavic linguistics.

Slavica would like to express its sincere thanks to Richard Brecht and James Levine for graciously granting permission for this reprint. We welcome comments on this and all the earlier titles released in this series.

George Fowler
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Slavica Publishers, Inc.

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Dedication

Shortly before his death Roman Jakobson had agreed to contribute to our collection of articles devoted to the study of case in Slavic. The timing of this study and Jakobson's participation in it were particularly appropriate in light of the central place which "abstract case" had assumed in his colleague's, Noam Chomsky's, latest version of the Extended Standard Theory, "Government and Binding." Unfortunately, we have had to continue without Jakobson's perspective on this important topic. We could have expected a retrospective as only Jakobson could do, a critical and insightful analysis of contemporary work, and a longsighted view of future prospects and directions. Few linguists have ever had Jakobson's command of the past, present and future of the discipline.

Jakobson's basic studies on case in Russian continue to serve as the basis, or the foil, for most work done on Slavic case. We are referring here, of course, to his "Beitrag zur allgemeinen Kasuslehre" of 1936 and "Morfologičeskie nabljudenija nad slavjanskim skloneniem" of 1958.

A truly great mind often overwhelms close colleagues and students. A truly great teacher spawns independence of thought among these same students and colleagues. Jakobson was both a brilliant scholar and a marvelous teacher, and so one sees both reactions among us: an obsession with developing his arguments and intuitions, and an abiding need to challenge or improve his ideas. Both reactions can be as appropriate as they are inevitable, and both are found among the papers of this collection.

We humbly dedicate this volume to the memory of Roman Osipovič Jakobson, a pioneer in case studies and a peerless scholar and teacher.

CONTENTS

Preface

This volume presents a selection of papers devoted to various facets of the phenomenon of case in the Slavic languages. Case—always a central concern of the Prague School and those trained in other European traditions—has only recently begun to receive serious attention in the syntax-centered work of linguists trained in the theory of Transformational-Generative Grammar. The emergence of Chomsky's latest version of the Extended Standard Theory, his Government-Binding theory of "abstract case," has moved case to the foreground of American syntactic research and has stimulated renewed interest in questions discussed in earlier structuralist work, as well as in Fillmorean case relations. Thus, while the focus of attention among generative grammarians is still concentrated on the relation of syntax to case, the Prague School's concern for case and meaning is now being reexamined in light of perceived inadequacies of these attempts to account for morphological case in strictly syntactic terms.

The present volume represents a sampling of current work on Slavic case done within the Case Grammar, Government-Binding, Localist, Meaning-Text, Operational, and Prague School-Jakobsonian frameworks by linguists in the U.S., Canada, Australia, Western and Eastern Europe. Together, the papers here clearly demonstrate a commonality of interest that cuts across theory-specific issues. Our purpose will have been served if this collection informs current work within competing theories so that new "wheels" will not be discovered, nor perhaps square ones invented.

A few words should be said about the papers and their arrangement. Our introductory essay attempts to provide a brief overview, to identify the major issues in the study of case, to highlight recurring themes, and to show, wherever appropriate, how the individual papers relate to these issues. The diversity of material, together with the fact that the category of case itself interacts with various levels of language, made any arrangement of the papers into discrete groups based on linguistic levels difficult to

justify. Other criteria for grouping the papers also seemed inappropriate. Thus, while it was possible to isolate at least one group of papers on the basis of the general theory used—those written within the framework of Chomsky's Government-Binding theory of "abstract case"—the other papers seemed not to cohere naturally into integrated groups based on shared theoretical assumptions. Consequently, rather than impose what we felt would have been arbitrary group boundaries, we divided the papers into just two very broad sections.

The first section, containing papers by Mel'čuk and Comrie, deals with the metatheory of case. Mel'čuk's paper aims primarily at developing, within Meaning-Text theory, a rigorous definition of the very term "case," which is ambiguous in its three senses as (1) a grammatical category, (2) a particular case (e.g. nominative or accusative) and (3) a case form. Comrie's paper, also concerned with defining case, focuses especially on the formal and functional criteria necessary to determine the identity and number of cases in a given language.

The sixteen contributions in the second section are presented in order of what we considered to be their primary emphases, beginning with questions of morphology, shifting to syntax, then to semantics, and finally, to pragmatics. Nevertheless, even this arrangement in places is somewhat arbitrary since, as we mentioned above, the concerns of most of the papers cut across linguistic levels. For example, the lead paper in this section by Chvany examines the extent of isomorphism between case morphology and case semantics in Russian. In particular, she attempts to reconcile Russian case forms as represented in Jakobson's two-dimensional conflation diagrams, with the system of case meanings modelled in his famous metaphorical cube. Gladney's paper is an attempt to account for the assignment of case to NP complements of prepositions in Russian. His main thesis is that prepositions do not govern case in the traditional sense, i.e., they are not specified (as certain verbs are) to idiosyncratically assign a particular case to their complements. Rather, Gladney argues that certain cases in prepositional constructions are assigned syntactically in particular phrase structures (e.g. the genitive and accusative), while others are assigned semantically by deep Case Relations such as Measure, Instrument, Goal. (The question of whether case selection can be motivated by meaning independently of syntactic structure is raised in several papers and is a major focus of our introductory essay.)

Bogusławski's paper examines the morphology of accusative singular case marking on Polish nouns. Employing the theory of Operational Grammar (Bogusławski 1978), he assumes a lexicon which stores nominative singular word-forms and a set of operations which, under specified conditions, replace the nominative with the correct accusative ending. Bogusławski's analysis demonstrates that a given nominal case inflection bears not only a particular case meaning (e.g. accusative), but also conveys additional meaning, including information about the semantic categories to which the noun belongs.

The papers by Babby, Franks and Rappaport are representative of the syntax-centered work done within the framework of Chomsky's Government-Binding theory of "abstract case." Each of these papers attempts to relate the concepts and principles of abstract case theory to the problem of assigning morphological case in Russian. Babby analyzes NP-internal case assignment and distribution in Russian and concludes that the central assumption of abstract case theory—that case assignment is determined strictly by structural relations—must be substantially revised in light of case data from Russian. Specifically, he argues that the theory, as presently formulated, cannot account for what he calls "semantic case," i.e., case whose assignment is not dictated by configurational structure and which therefore makes a significant contribution to a sentence's semantic interpretation. Frank's paper serves as a counterpoint to Babby's. He examines Russian "bare genitive" constructions, which include the partitive genitive with the meaning 'some' (*Nalivajte mne čaju* [GEN] 'Pour me some tea') and sentences with genitives expressing the opposite meaning 'many, much' (*Ljudej* [GEN] *sobralos'* 'Many people gathered'). These constructions are putative instances of semantic case: the genitive case assigned to the NP in such sentences does not appear to be determined by a governing category, and the genitive case marking seems to contribute a discernible nuance to the sentence's semantic interpretation. However, Franks proposes a syntactic analysis which upholds the configurationally-based view of case assignment and in effect denies the status of semantic case to bare genitives. Rappaport's paper applies the case-assigning strategies of abstract case theory to Russian simile expressions beginning with the word *kak* 'like/as' (*Ja ljubil ego, kak brata* [ACC] 'I loved him like a brother'). The central question he seeks to answer is how case is assigned to the NP complement of *kak* in such expressions.

His investigation of manner, factive and circumstantial *kak* phrases demonstrates that case marking on the NP complement of *kak* cannot be determined configurationally, but rather must be accounted for by relations of co-reference and control.

It is well known that language may employ, in addition to nominal inflections, a number of other grammatical devices for expressing case. This is the subject of Topolińska's paper, which examines Macedonian and Bulgarian, two Slavic languages where nominal case inflections to a great extent have been replaced analytically by prepositions. Topolińska's analysis of Standard Macedonian in particular, and Balkan Slavic in general, demonstrates, among other things, that the often-noted distinction between "grammatical cases" and more meaningful "adverbial cases" (cf. Kuryłowicz 1949/1960) is no less valid for the Balkan Slavic system, than for those Slavic languages that still express case by means of derivational morphology.

The remaining papers are concerned chiefly with elucidating the meaning of particular case constructions, characterizing the meaning(s) of individual cases, or with identifying the semantic (and pragmatic) conditions on the rules which assign morphological case forms. For example, Miller applies Jakobson's well-known principle—"one form, one meaning, different form, different meaning"—to Comrie's (1974a) and Neidle's (1982b) transformational analyses of the "second dative" in Russian (*My poprosili Ivana pojti odnomu* [DAT] 'We asked Ivan to go alone'). Application of this principle leads Miller to reject the syntactic approach of these two analyses, and to propose a third, localist solution which, he asserts, pays closer attention to the semantics of the construction. Rothstein discusses the grammatical devices in West Slavic languages for distinguishing the notion of "equation" from that of "ascription" in sentences of the form "X is Y." His analysis points to the equation vs. ascription distinction as one of the semantic conditions determining the choice of nominative or instrumental case in Polish and Slovak predicate nominals, a view that is compatible with Nichols' (1981) major work on predicate nominals in Russian. Kilby critiques several studies of the Russian instrumental, which, in his view, have attempted to give a "general account" of this case (specifically Jakobson 1936/1971; Wierzbicka 1980b; Veyrenc 1971; Kilby 1977 and 1982). Kilby argues that each of these analyses of the Russian instrumental—the semantics-centered approaches of Jakobson and Wierzbicka, and

the syntax-centered approaches of Veyrenc and his own—despite their divergent theoretical premises, seem to converge on Jakobson's original notion of the instrumental as a "peripheral" case. His paper is an attempt to reconcile these competing approaches with this apparent point of convergence in order to determine whether a synthesis, or "consensus," might be reached. Timberlake's paper, the only previously published work in this collection, is reprinted here because it ranks among the most important articles on Slavic case. Timberlake analyzes the distribution of genitive (vs. accusative) case marking on direct objects of negated verbs in Russian (cf. *On èto* [ACC] *znaet* 'He knows that' with *On ètogo* [GEN] *ne znaet* 'He doesn't know that'), and argues that the various conditions on the genitive of negation, previously treated separately, can be fruitfully viewed as correlates of a general semantic hierarchy of "individuation." Testament to the importance of this phenomenon in Russian linguistic scholarship is Corbett's contribution, a 106-item bibliography of works devoted wholly or in part to the problem of selecting genitive or accusative case on direct objects of negated verbs in Russian. C.H. van Schooneveld's paper argues for the necessity to refine Jakobson's methodology for assigning invariant meanings for the Russian cases. In particular, van Schooneveld suggests that certain anomalies in Jakobson's system can be shown to be more apparent than real if Jakobson's semantic features are viewed not only in terms of the narrated event, but also in reference to the speech situation. He then attempts to show that the notion of the speech situation, or "transmissional deixis," as he calls it, also plays an important role in the syntax of case. Wierzbicka's paper is devoted to elucidating the semantic structure of the dative case in Polish. Rejecting the notion of a unitary, invariant meaning for the dative, Wierzbicka proposes instead a prototypical "core" meaning of the dative case in language, and a set of related sub-meanings of the dative in Polish, the latter based on a detailed semantic analysis of 31 different constructions in which the dative occurs. Grochowski employs a semantic metalanguage of the type developed by Wierzbicka (1972, 1980b and this volume) in his analysis of Polish predicate-argument expressions conveying the "deep case" relation of Instrument. Finally, Levine examines the "inalienable dative" in Russian, and argues that certain properties and nuances associated with this construction can best be accounted for in some, albeit pre-theoretical, pragmatic component.

It is the editors' view that these papers represent a fair sampling of the current work being done on case in Slavic, with two exceptions: no study operating in Perlmutter's Relational Grammar Theory is included, nor is current Soviet work represented. If this volume results in improved communication among investigators of case in and outside of Slavic, then we shall consider our efforts successful.

Richard D. Brecht James S. Levine

College Park, Maryland and Fairfax, Virginia
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The editors note with sorrow that one of the contributors, David Kilby, passed away while this book was in production. His absence will be sorely felt in the dialogue he helped to foster.

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Case and Meaning

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0. *Introduction.* The tradition of case investigations in Slavic is long and distinguished. Perhaps the two major monuments are Roman Jakobson's "Beitrag zur allgemeinen Kasuslehre" (1936/1971) and "Morfologičeskie nabljudenija nad slavjanskim skloneniem" (1958/1971). Characteristically, Jakobson's work, together with that of Hjelmslev ("La catégorie des cas," *Principes de grammaire générale*), Kuryłowicz ("Le problème du classement des cas"), and more recently Anderson (*The Grammar of Case: Towards a Localistic Theory*), provoked a great deal of discussion among European linguists working on case. In the United States Jakobson's work on case is for all intents and purposes universally accepted among Slavists, although until recently only a handful of scholars had been involved in research on this problem. This situation altered radically with developments in general linguistic theory in the U.S., in particular, with the proposals for Case Grammar launched by Fillmore's 1968 article "The Case for Case," Perlmutter's "Relational Grammar" theory developed in the 1970s (e.g. Perlmutter 1983), and now again with the notion of "abstract case" in Chomsky's Government-Binding theory of the last five years.

A detailed account of the developments in case theory lies well beyond the scope of this essay. However, it is possible to sketch in broad outline the coincidences and divergences of interest among the competing schools, particularly as they are reflected in current work on Slavic case. It is appropriate that even now the general discussion on case reflect Jakobson's lifelong concern: the explicit correlation of form with meaning. Specifically, current work operating from this point of view continues to pose the following questions: What is the function of case forms in inflected languages? Do case forms convey meaning? If so, just what meaning do they convey? Conversely, what is the status of such meaning in non-inflected languages? What other formal means have the same function as case forms?

While the central issues of the investigation of case in natural language seem to be more or less obvious to all, the differing

theoretical premises (as well as the specific language under investigation) occasion among investigators significant divergences in approach and emphasis. For example, the strong syntactic orientation of Transformational Grammar theory has produced a very "syntactic" approach to case among current American linguists operating within this framework. By contrast, the "functionalist" and "semiotic" legacy of Roman Jakobson and the Prague School focuses on the "meaning" of cases in various Slavic languages, their invariant semantic core, and their contextual variations.[1]

Furthermore, if one looks at the work being done on case around the globe, on first glance one is struck by an apparent wide diversity of concerns. For example, some linguists are concerned with the metalanguage necessary to catalogue languages according to their case structure. Others are concerned with developing an analysis of case as part of a general theory of grammar. Some investigators focus on the overall case structure, formal and/or semantic, in one language. Still other studies examine the contextual variations of a particular case in order to arrive at its general meaning. Some focus on case alternations and the conditions affecting the choice of case. At the other extreme investigators concentrate on the formal manifestations (morphological or syntactic) of one or more cases.

Still, there are certain assumptions and core concerns that virtually all contemporary studies have in common. Thus, there is general consensus that the category of case is more resistant to analysis than other grammaticalized semantic domains like gender, number, person and tense. The reason for this, it would seem, is that while these latter grammatical categories can be more or less readily identified with certain pragmatic categories of the real world, it is much more difficult to find real world correlates for the putative referents of case. And despite the diverse array of concerns mentioned above, one finds, upon closer examination, a certain commonality of interest among investigators working within different frameworks. So, almost all studies of case ultimately reduce to some sort of investigation of the relationship among the grammatical exponents of case (e.g. case affixes), the syntactic structures in which they occur, and the general and specific meaning associated with the use of particular cases in particular contexts. In fact, most studies focus exactly on the ellusive line between the syntactic and semantic functions of case, emphasizing one or the other side of the question.

A *sine qua non* for any study of the phenomenon is a general discussion on how to speak about case, for this is perhaps the only guarantee that investigations conducted within different theories can be related to one another no matter how far they diverge in basic premises and focus. The first task, then, is simply to define the notion of case in natural language. Just what is meant by "case," its form, its meaning and function, is sometimes less than obvious. As Comrie argues (this volume), we are still in need of a set of criteria to enable us to identify and distinguish one case from another in a given language. Thus, there are instances when a morphological form signals different cases, and other instances when different forms constitute different markers of the same case. Most would agree, for example, with Wierzbicka's (1983:249) analysis of the Russian sentences *Ivan uvidel Moskvič* 'Ivan saw a Moskvič (a brand of car)' and *Ivan uvidel Moskviča* 'Ivan saw a Moscovite (a male inhabitant of Moscow)'. She notes that the object NP's in these sentences differ in CASE MARKING, but not in CASE: the two case forms, *-Ø* and *-a*, signal an inanimate and animate referent, respectively, yet at the same time both mark the accusative case. There are other instances, however, where alternative case forms imply different cases to some, but merely "variants" of the same case to others. For example, how should the Russian "partitive" be analyzed? Specifically, do the alternative genitive inflections, *-a*, vs. *-u*, which occur on certain masculine mass nouns (e.g. *cena konjaka* 'price of cognac' vs. *rjumka konjaku* 'glass of cognac') mark two distinct genitive cases, genitive I and genitive II (the partitive)? Or are these two forms, as Wierzbicka (1983:250) argues, mere "allomorphs" of one genitive case, the form in *-u* being a cumulative marker of the genitive case plus a new category of "partitiveness"? Such questions can only be answered if we have a rigorous definition of case and a set of principles for delimiting cases in language. These are precisely the issues addressed by Mel'čuk and Comrie (this volume). Also, such studies are valuable in keeping claims about universality more modest, at least initially. Universal claims made on the basis of data from the Indo-European languages must be shown to be valid for the less familiar or "esoteric" languages. Accordingly, we must be able to document that a theory of case is as applicable to a language with just two cases, like Old French, as it is to Tabassaran, which according to Mel'čuk (this volume) has forty-six cases!

In the following discussion we will first describe two poles from which case has been described, the semantic approach of Jakobson and the syntactic approach of Chomsky. We shall then attempt to relate most contemporary work done on Slavic case to these two "extremes" and thus show that in fact we are dealing less with the substance than with the focus of investigation. Our conclusion will be that a significant problem in the study of case is the failure on the part of investigators to understand the commonality of interest among them, a failure aided and abetted by the philosophical and terminological differences of competing linguistic schools.

1. *Semantic Case.* For linguists working on Slavic, particularly within the Prague School framework, the central issue with case, as with all grammatical categories, has been the isolation of the meaning which its individual instantiations contribute to the utterance in which they occur. Roman Jakobson's basic premise, as recapitulated by Waugh (1982:xii) is:

> ...as a primary fact, there is no meaning without a form (meanings are not abstract categories), and no form without a meaning (form is the means by which meaning is carried and can be conveyed from speaker to addressee).

The succinct version of this is "one form—one meaning". This axiom of "invariance" has driven linguists of the Prague School in their studies to isolate the "general meaning" of individual case morphemes by abstracting it as the common denominator of the contextual meanings associated with each form. Cf. again Waugh (1982:xiii-xiv):

> The general meaning, which may also be termed the relational invariant, is the common denominator of signification as the sign is given an interpretation in various contexts and is thus more abstract and more general than any particular contextualization, while the contextual meanings are the more specific variants which occur in given contexts... furthermore, the general meaning is more paradigmatic in nature being based for example on oppositional structure, while the particular contextual meanings belong in all their complexity more

to the syntagmatic axis, being dependent upon their relation to other facets of the (syntagmatic) context.

Jakobson's fundamental insight, of course, is that the individual cases of a language are not atomic units, but enter into a system of correlative and oppositional relations with one another. It follows that the general meaning of each case is comprised of a set of semantic features available to a language (if not universally) which uniquely define each case on the basis of those features which it shares or does not share with other cases. In recent times the paradigm of this approach—with certain refinements—is represented by Cornelius van Schooneveld's work (e.g. van Schooneveld 1978, 1982 and this volume).

Though Jakobson's proposals have been tested, elaborated, and criticized, much of the work done on Slavic has accepted his basic assumptions and has concentrated on establishing the semantic contribution made by a particular case. In the work of the structural linguists and their current followers (for example, van Schooneveld, Wierzbicka) there has never been any doubt as to the centrality of the study of case in natural language and the necessity of investigating the meaning of individual cases in particular languages. However, few investigators have shared Jakobson's optimism that all case use, whether syntactic or semantic, can be unified under a highly restricted, correlative set of invariant semantic distinctive features.[2]

Scepticism of this general approach, that is, of the adequacy of attempts to provide semantic definitions of morphological cases, is perhaps one of the reasons why generative grammarians, until quite recently, had relegated case to a superficial position in grammatical theory (cf. Anderson 1971:9). And although the problem of case has now become a central object of interest in generative grammar, the view of case that has been advanced by Chomsky and his colleagues is, characteristically, a purely syntactic one. Thus, one can speak of two extremes in the assessment of the semantic load of case forms: On the one view, case morphemes contribute meaning on their own, meaning which is obligatorily in agreement with the other lexical and grammatical meaning of the utterance. The other view is that morphological case is dictated by the structure of the sentence itself or by the governing case-assigning verb or preposition. On this latter view, case forms are basically meaningless.

Extreme views of case are well represented in the traditional literature on case in natural language. Mel'čuk (this volume) identifies them as paradigmatically and syntagmatically oriented theories of case. The principal exponent of the former approach is Jakobson and his followers. The latter is exemplified by an approach which treats a specific case in a language "...as the class of all nominal forms mutually substitutable in certain specified 'governing' contexts."[3] As far as the meaning bearing function of case is concerned, most traditional studies have taken the middle ground, starting from the observation that some instances of case usage are more "meaningful" than others. This insight has been captured by a distinction variously termed "grammatical" vs. "adverbial," "syntactic" vs. "concrete," as well as "grammatical" vs. "concrete" (e.g. Kuryłowicz 1949/1960). A clear example of this middle position is given again by Mel'čuk:

> There are some cases 2 (in some languages) which never have meaning: such as, e.g., the Russian nominative or the Russian prepositional. There are cases 2 (in some languages) which always have meaning: such, it seems, is true of the Finnish partitive. Finally, there are also cases 2 which in some contexts have meaning and in other contexts do not: such as, e.g., the Russian partitive which conveys the meaning 'some' [= 'an indefinite portion of'] with the direct object of several verbs (*Prinesi saxar!* 'Bring the sugar!', vs. *Prinesi saxaru!* 'Bring some sugar!'), but which is devoid of meaning in such idiomatic expressions as *bez tolku* 'to no purpose' or *dlja smexu* 'to amuse people'.

Presumably, Mel'čuk would also treat as meaningless the partitive after lexemes such as *malo* 'a little', *mnogo* 'a lot', etc.[4]

Since Chomsky's view of case as essentially meaningless contrasts so sharply with the traditional Prague School view, it is worthwhile sketching the basic assumptions involved. This is particularly relevant since both extreme views are represented by current work on case in the United States.

2. *Syntactic Case.* Syntactically/formally oriented contemporary linguists working within the framework of Chomsky's Transformational-Generative Grammar generally had neglected the problem of case in their model of natural language. However, the

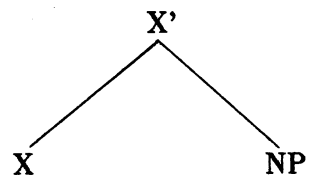
recent development of Chomsky's Government-Binding Theory of "abstract case" (Chomsky 1981 and 1982) has stimulated new research in this area and has resulted in the formulation of some concrete proposals that have a direct bearing on the question of the "meaningfulness" of case. These proposals emphasize the role of configurational context in assigning case to a Noun Phrase (NP). They can be summarized as follows:

(a) Case is strictly determined by syntactic structure, i.e., an NP is assigned a particular case if it bears a certain structural relation to another category (e.g. Verb or Preposition). Therefore,

(b) case makes no contribution to the semantic interpretation of sentences.

According to Chomsky (1981), there are two strategies for assigning case to an NP. Both are defined in terms of syntactic configuration. In the first strategy, "Structural Case Assignment," an NP is assigned a particular case if it stands in a certain structural relation to another category. The key structural relation is that of "government."[5] The general schema of government is given below in (1), where X can be said to govern NP:

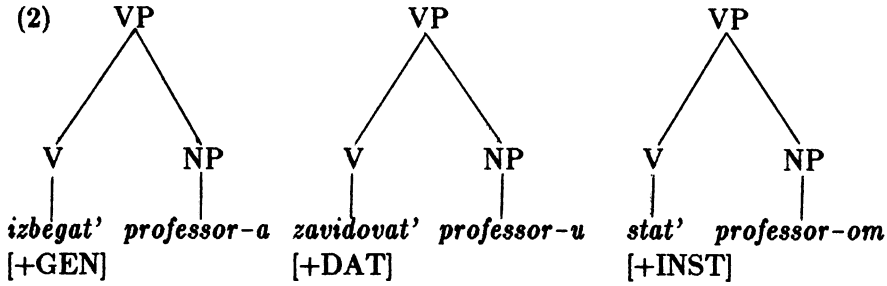
(1)



Thus, in English Prepositional Phrases (PP) and Verb Phrases (VP) the Preposition and the Verb "govern" their object NP's and so STRUCTURALLY assign to them the Objective case (e.g. 'about me', 'loves her'). In Russian these same categories structurally assign the Accusative case to their NP objects.

The second strategy for assigning case, according to Chomsky, is "Inherent Case Assignment." Here certain governing categories are subcategorized to occur with a particular case. In Russian, for example, certain prepositions and verbs provoke inherent case, i.e., they obligatorily assign a particular oblique case to their objects.[6] Thus, the verb *izbegat'* 'avoid' assigns Genitive, *zavidovat'* 'envy' assigns Dative, and *stat'* 'become' assigns Instrumental.

(2)



Observe that in the branching diagrams of (2) each Verb assigns its object a different case and that each of these cases is expressed morphologically by the different endings on the NP *professor*: *-a* (GEN), *-u* (DAT) and *-om* (INST).

To sum up Chomsky's view of syntactic case, in both case-assigning strategies, structural and inherent, the case-assigning category must be in the syntactically "governing" position in order to assign case to its object. If the governing category is a Verb or Preposition that is idiosyncratically marked to select a particular case, it will automatically assign that (inherent) case to its object. (In Russian, the inherently assigned cases would be the so-called "oblique" cases, namely the Genitive, Dative, Locative and Instrumental.) If, however, the governing category is a transitive Verb or one of a small number of Prepositions, it will structurally assign its object the Accusative case. Thus, in both of these strategies, case assignment is dictated by and predictable from the SYNTACTIC CONFIGURATION, with or without the peculiar properties of the governing category.

If the occurrence of morphological cases is completely predictable from the syntactic structure or from the lexical specification (specifically the subcategorization) of the verb, morphological case essentially makes no contribution to the semantic interpretation of sentences. This seems to present two alternatives. The first is to treat case morphemes as totally meaningless. The second is to assume that the meanings they express obligatorily agree with the context in which they occur. Both alternatives presume that the syntactic structure (in the instance of structural case assignment) and the subcategorization features (for inherent case assignment) themselves convey any case meanings associated with the notions of subject vs. object, direct vs. indirect object, accusative vs. instrumental governing verbs, etc. In any instance, such "semantic" questions are not entirely

eliminated but removed to a different component or level of the grammar.[7]

3. *The Debate on the Middle Ground.* The two positions sketched above, semantic case and syntactic case, define the extremes between which falls much work on case. For example, when testing Chomsky's proposals, one asks whether there are instances when morphological cases are not redundant, but, instead convey meaning? In other words, is there such a thing as "semantic case"? The strategy for answering this question, i.e. for determining whether morphological cases are meaningful, is to try to find instances where two or more morphological cases can occur WITHIN THE SAME SYNTACTIC CONFIGURATION. If in such constructions there is a discernible difference in meaning, then this meaning must be attributed to the morphological cases themselves.[8] Perhaps the most obvious example of a case alternation occurring within apparently the same syntactic structure is one where a preposition can be followed by two or more cases:

(3) a. On xodil v park.
he walked to park:ACC
'He walked to the park.'

b. On xodil v parke.
he walked in park:LOC
'He walked in the park.'

In these two sentences the prepositional objects show an alternation between the Accusative and the Locative cases. These sentences exemplify the well-documented semantic distinction of "motion toward" vs. "location" in Slavic. The only difference in FORM between these sentences seems to be in the morphological case endings on the object NP's, and it is therefore tempting to attribute these differences in MEANING to the cases themselves. While this conclusion can hardly be surprising to most Slavic linguists, Chomsky's proposals can only be challenged if it can be documented that each sentence of the pair has the same syntactic structure. If this can be demonstrated, then the difference in meaning between the sentences must be attributed to the case forms—and so the existence of "semantic case" will be proven and Chomsky's claims for case will have to be revised.

The debate as to the meaningfulness of case is hardly new in the history of linguistics. Perhaps the best known discussion of the

issues involved is that of Kuryłowicz 1949/1960, who explicitly criticized Jakobson (and Hjelmslev) for their totally semantic approach to case. Significantly, Kuryłowicz used prepositional constructions, like the one cited above, to argue that the cases are not in direct opposition. Rather, he argued that in fact the contrast in case is a direct reflection of a structural contrast involving prepositional phrases which are inside or outside of the verb phrase. (Thus, Kuryłowicz argues for the existence of both semantic and syntactic case!) It goes without saying that Chomsky would have recourse to the self same argument in order to sustain his position on the meaninglessness of case. However, in a case-rich family of languages like Slavic, there are many putative instances of case alternations which can serve as candidates for semantic case: the Genitive/Accusative alternation in direct objects of negated verbs (Timberlake 1975 and this volume) or in subjects of intransitive verbs (Babby 1980b); the Nominative/Instrumental alternation in sentences involving natural forces (Wierzbicka 1980b) or in predicate nominals (Chvany 1975, Nichols 1981, Rothstein, this volume); the Instrumental/Accusative and Dative/Genitive of "inalienable possession" (Levine 1980, 1984, this volume, Brecht and Levine 1984). Mel'čuk (this volume) cites two "prototypical examples of 'meaningful' cases": the addessive vs. dative and the ablative vs. ergative in Lezgian.

The latest proposals concerning syntactic case have been made largely on the basis of data from minimally inflected languages like English; they have just begun to be tested on Russian, a typologically different language in which case is morphologically expressed on all the inflected constituents of an NP. The results of research within the Government-Binding framework thus far have been mixed. While certain studies have tended to support the validity of Chomsky's proposals for languages like Russian (Pesetsky 1982; Franks (this volume) and Rappaport (this volume), others have pointed to inadequacies in the theory, using the traditional instances of semantic case. In particular, Babby (this volume) and Freidin and Babby (1984) argue within the G-B framework that Chomsky's proposals do not account for semantic case in Russian. According to Babby, only semantic case contributes to a sentence's semantic interpretation and it is only in "case languages" like Russian that semantic case is found.

One of the examples which Babby adduces in support of his claim for semantic case is the Accusative/Genitive alternation after

transitive verbs in Russian, the so-called "partitive genitive". Thus, examples like the following are to be treated as minimal pairs:

(4) a. Daj nam xleb.
give to-us bread:ACC
'Give us the bread.'

b. Daj nam xleba.
give to-us bread:GEN
'Give us some bread.'

Here the difference in meaning seems to be attributable directly to the difference in case. Significantly, this alternation has been the focus of the debate on the meaningfulness of case for many years. In fact, Kuryłowicz used this same construction to argue for the syntactic status of certain case alternations, arguing that the meaning distinction here must be attributed to the syntactic fact in English of article selection (definite or indefinite). Franks (this volume) proposes a different syntactic analysis for Russian: he posits an empty quantifier before the genitive object, thus again arguing for a clear structural basis for the distinction of case.[9]

The fact that some cases seem to be more meaningful than others is well documented in the literature on case. Normally a distinction is made between "voll-" and "randkasus," to use Jakobson's terminology. In Russian, according to Jakobson, the nominative, genitive and accusative are the "full" cases, while the instrumental, locative and dative are the "peripheral" ones. This division normally coincides with the "syntactic" vs. "semantic" ("grammatical" vs. "adverbial," or "abstract" vs. "concrete") distinction and even the "structurally" vs. "inherently" assigned cases of Chomsky. Presumably Tesnière's (1959) valence theory also is relevant here, particularly his distinction of "actants" vs. "circonstants," although the role of the dative and genitive cases is problematic with regard to the "full" vs. "peripheral" distinction. The issue is, not surprisingly, more complicated than this simple division would suggest, for there appear to be instances where other cases are syntactically determined. For example, the instrumental case in Russian occurs automatically where a double accusative is expected. Another example is given by Topolińska (this volume), who notes that in southern Macedonian dialects the dative (or what is functionally equivalent to the dative) has acquired the status of a "grammaticalized" case.

At this stage the preponderance of evidence seems to argue for the inclusion within the theory of grammar of both syntactic and semantic case. Mel'čuk (this volume) puts it succinctly:

> Personally, I am convinced that only an appropriate combination of both approaches is capable of yielding satisfactory results. Case 1 is mainly a syntactic category, and cases 2 are there, before all, to mark passive SSynt-roles of nominals; at the same time, though, they so often convey a meaning that it is impossible to describe them without accounting for their semantic load. Yet one cannot abstract from their basically syntactic nature either: the majority of cases 2 cannot be described exclusively in terms of their content; they are, as a rule, entailed by particular syntactic constructions or by particular lexical items in particular constructions. Therefore, a double-facetted description, put forth in our definition of case 1, imposes itself.

4. *Case and Meaning.* Chomsky's approach does not preclude the search for the semantics of case. Rather, it has simply removed the question from the syntactic component (and even the interpretive component) and made it a matter of the lexicon. Nevertheless, the central issue must be addressed. To be sure, if one or another case is dictated by a configuration or governing lexical item, then the semantic weight of the case in the utterance is indeed slight. However, in a theory of language which attempts to "explain" or account for all correlations, i.e. which assumes that such correlations are systemic rather than accidental, one is still left with specifying why a particular case is more compatible with one configuration or governing lexical category than another case might be. In other words, that *loben* in German takes the accusative case and *schmeicheln* the dative either is totally *ad hoc*, or the grammatical meaning of these cases and the lexical meaning of the verbs in question must be interrelated. Whether this question is resolved in the syntactic or interpretive components or whether it is left to the lexicon is merely a consequence of the theoretical framework in which one is operating.

The most common semantic basis for the assignment of case is what Fillmore calls the "labeled" or "mediated" relations of NP arguments. These "deep cases" or "theta roles," to use Chomsky's

term, have names like Agentive, Instrumental, Objective, Factitive, Locative, Benefactive, etc. Many studies, including Grochowski (this volume), are devoted to the investigation of the surface realization of these semantic relations. The problem, at least as far as the semantic specification of the case morphemes is concerned, is that there is no one-to-one mapping from such semantic relations to surface form. Nevertheless, there appears to be at least some relationship, as Gladney (this volume) argues in positing the thematic relation of 'Measure' to account for the occurrence of the accusative case in Russian or as Grochowski (this volume) demonstrates in his study of the "deep" Instrumental case relation in Polish. In Chomsky's framework, as noted above, case meaning essentially is located in the lexicon and is tied to the thematic relations of the verb's subcategorized NP's. It is unclear, however, how one is to integrate the thematic relations, the lexical meaning of verbs dictating inherent case assignment, the grammatical functions (subject, object, etc.), and the formal manifestations of case. Jakobson, for example, posits a set of abstract semantic features which are assumed to map directly onto morphological forms and which seem to respond both to semantic (thematic and lexical) as well as syntactic factors.[10] However, the distinction between grammatical functions and semantic relations is not explicitly drawn. The same can be said about Localist accounts of case.

There have been various attempts to arrive at semantic features to define case, including Jakobson's and that of the Localists (e.g. Anderson 1971; Miller 1974 and this volume; Kilby 1977). The problem with abstract semantic features—as with all semantics—is that one cannot argue for or against them on other than intuitive grounds, for they lack specification in a universal semantic alphabet, nor are such posited features incorporated within some sort of formal calculus relating meaning and form. Wierzbicka's (1972, 1980a, 1980b and this volume) ongoing effort to develop a universal metalanguage of semantic primitives is promising in this regard. Her modeling of case meanings in terms of metalanguage constructed from natural language may be viewed as an elaboration of Jakobson's invariant distinctive feature approach (cf. Levine 1982). Wierzbicka treats the invariant general definition of a particular case as what Mel'čuk calls "META-descriptive statements." As Wierzbicka (this volume) puts it: "[each case has] a core meaning, on the basis of which it can

be identified cross-linguistically..., and a language-specific set of other, related meanings, which have to be specified in the grammatical description of a given language...." To use Nichols' (1982:696ff.) words, this "maximally content-oriented" approach has "the merit of bringing out hitherto unnoticed semantic properties of syntactic relations..." and as such has great heuristic value.

It is indeed difficult nowadays to discuss the semantic contribution of an element in an utterance without addressing in some fashion the pragmatic factors involved.[11] Although the explicit distinction between semantically and pragmatically derived notions in an utterance is a fairly recent development in linguistics, this distinction has been at the basis of a significant amount of work on grammatical meaning. (For example, the Prague School "functional approach" is pragmatically oriented.) Recent work even has begun to propose a certain pragmatic calculus (Brecht, in press, Brecht & Levine 1984, Levine, this volume). One of the best examples of the complexity of the problem of the interrelation of semantic and pragmatic factors is Nichols' (1981) work on the instrumental vs. nominative alternation in Russian predicate nominals. Nevertheless, the interaction of pragmatics and case is still a largely unexplored area. Much more work is needed before we know the full ramifications of pragmatics for case meaning.

5. *The Formal Manifestations of Case.* Many purely formal questions on case remain to be resolved. For example, one concern is the discrimination of a case form from its distribution, given the fact that form and distribution frequently are not in a one-to-one correlation. Any general theory of case must confront this issue, as Comrie and Mel'čuk (this volume) do, just as Chomsky and his colleagues must distinguish between the grammatical functions, i.e. the syntactic roles of subject, object, etc., and the real or "abstract" morphological manifestations of case. The question of the interrelationship among thematic roles, grammatical functions and morphological case currently is being vigorously debated (see, for example, Williams 1984) as a central issue in the theory of Government-Binding.

Finally, even the question of the morphological manifestation of case is by no means clear, as the debate over case and prepositional phrases makes clear.[12] The issues involved become clearer in diachronic perspective, as Topolińska (this volume) demonstrates in her investigation of the loss of case in the Slavic

languages of the southern Balkan peninsula. Grammaticalized clitics and prepositions are on a par with morphological desinences, provided one can determine when grammaticalization has taken place.

6. *Conclusions.* Our purpose here has been to provide a brief overview of the state of case investigations in Slavic. This is particularly important for general linguistic theory because, in our view, some of the most important work on case has been carried out on the basis of data from the Slavic languages. While there remains considerable commonality of interest among both general and Slavic linguists, the all too characteristic epistemological issues remain. Basically the problem is one of communication, of linguists working within different frameworks failing to address themselves to anyone outside the particular theory in which they are operating. As any broad examination of work being done on case will show—and this collection of papers is as good a sample as exists, investigators are involved naturally enough with the same substantive issues: case and thematic roles, syntactic vs. semantic case, syntactic functions and morphological expression. To be sure, the approaches dictated by various theoretical premises focus on different aspects of these issues, often casting traditional problems in new guises. Thus, the following are questions unifying the concerns of different theoretical approaches:

- Among the many putative instances of case alternations with semantic consequences within case languages like Russian, can one argue for or against the existence of different syntactic structures?
- What are the formal structures for signaling case beyond the traditional morphological desinences? What do the languages and dialects in transition (for example, in the south Balkan Slavic or the north Great Russian dialects) have to show us in this regard?
- Do anaphoric processes operate in case languages as they do in languages like English?
- How, in particular, does the long tradition in Slavic of the investigation of voice and diathesis interrelate with the syntactic concerns of case?[13]
- How are thematic roles and syntactic functions to be related?
- What is the relationship between semantic case features,

thematic roles, and syntactic functions?

- What aspects of the utterance value, which are dependent upon case phenomena, are attributable to pragmatic considerations?

Of course, many such issues can be raised. Our goal has been to focus the attention of investigators in different traditions on issues such as these in hopes of provoking more mutually comprehensible discussion on case.

NOTES

[1]Presumably, the semantically oriented approach must reflect the contemporary concern for the pragmatic aspects of an utterance as well. See Levine (this volume).

[2]The view that there can be a single, invariant meaning unifying all the uses of a given case has recently been rejected by N. Ju. Švedova, author of the section "Meanings of cases" (§1156–1172) and general editor of the latest Soviet Academy Grammar (*Russkaja Grammatika* 1980). Denying the possibility of a semantic invariant, Švedova postulates for each case a complex of meanings, some of which are described as "central" or "basic" to a given case, while others are semantically "peripheral".

According to Švedova, the (prepositionless) cases may have one, two or all three of the following central meanings: "subjective", "objective" and "attributive." The distribution of these meanings is given as follows: the Nominative can express both a subjective (*Syn rabotaet* 'The son[Nom] works') and attributive meaning (*Doč' – krasavica* 'The daughter is a beauty[Nom]'). The Genitive is subjective (*Knig ne vypuskaetsja* 'Books[Gen] are not being produced'), objective (*On ždet utra* 'He is waiting for morning[Gen]') and attributive (*SSSR–èto strana ozer* 'The USSR is a land of lakes[GEN]'). The central meanings of the Dative are objective (*Pis'mo drugu* 'A letter to a friend[Dat]') and subjective (*Mne xolodno* 'To me[Dat] it is cold'). For the Accusative the central meaning is objective (*On čitaet knigu* 'He is reading a book[Acc]') while for the Instrumental they are attributive (*Sestra budet vračom* 'Sister will be a doctor[Inst]') and objective (*Otec gorditsja synom* 'Father is proud of his son[Inst]'). Moreover, each of the central meanings, according to Švedova, in certain contexts can be found in combinations with one another, so that, for example, the Nominative is said to have a "subjective–objective" meaning in a sentence like *Syn nakazan otcom* 'The son[Nom] was punished by his father.'

Among the possible peripheral meanings of the cases Švedova mentions the "information–supplying meaning" (*informativno–vospolnjajuščee značenie*) of the Nominative (*Ee zovut Lena* 'Her name is Lena[Nom]') and the Instrumental (*On sčitaetsja èruditom* 'He is considered an erudite person[Inst]'), as well as a number of "adverbial" meanings of the Accusative (e.g. *My ždem god* 'We've been waiting a year[Acc]') and the Genitive (*Uvidimsja pjatogo maja* 'We'll see each other on the fifth[Gen] of May').

The approach taken in RG 1980 clearly stresses the importance of syntax as a basis for arriving at case meanings. While syntactic functions like "subject" and "object" are obviously crucial to an adequate account of case, the approach outlined above does not make clear how these syntactic functions interrelate with semantic roles like Agent, Patient, Instrument, etc. We argue

below that perhaps the central problem that must be addressed in current work on case is how grammatical functions, semantic roles and the formal exponents of case can be related in an explicit theory of case.

[3]Mel'čuk (this volume) cites Revzin 1967, Marcus 1967, Zaliznjak 1967, 1973 and Gladkij 1969, 1973 as examples of the syntagmatically oriented approach to case.

[4]It should be noted that Gladney (this volume) directly challenges Mel'čuk's claim that the Russian prepositional is a meaningless case.

[5]Babby (this volume: note 31) argues that certain case data in Russian point to c-command, not government, as the key structural relation in case theory.

[6]Gladney (this volume) argues against the view that prepositions in Russian assign inherent case.

[7]Such questions are raised in Gladney's (this volume) discussion of the relative semantic contributions of the preposition, the morphological case and the Case Relation in a prepositional phrase. Clearly, neither the meaning of the preposition nor that of the case is irrelevant; rather the issue has to be viewed as one of semantic agreement between the individual lexical and grammatical morphemes in the phrase.

[8]One of the primary goals of Babby (this volume) is to argue for the existence of semantic case in Russian.

[9]Another putative instance of semantic case is the so-called "genitive of temporary use." The genitive case on the direct object in this construction contributes the meaning 'for a while'. Corresponding utterances with the accusative direct object lack this meaning. Common in nineteenth-century Russian literature, this use of the genitive, illustrated in (ii) below, is becoming extinct in Contemporary Russian (cf. RG 1980:§1765; Ickovič 1968:57–8):

(i) Odolži mne nožik.
loan to-me knife:ACC
'Loan me a knife.'

(ii) Odolži mne nožika.
loan to-me knife:GEN
'Loan me a knife (for a while).'

However, as Wierzbicka (1983:259–61) demonstrates, this construction has a counterpart in Polish, which, though subject to certain conditions, is perfectly acceptable in the contemporary language:

(iii) Daj mi nóż.
give to-me knife:ACC
'Give me a knife.' (e.g. as a present)

(iv) Daj mi noża.
give to-me knife:GEN
'Give me a knife (for a moment).'

According to Wierzbicka, the genitive is favored over the accusative when the object NP is indefinite, unmodified and refers to a "small object." Stylistically, use of the genitive is considered very colloquial. The meaning contributed by

the genitive case is that the action is "quick," "spontaneous" and of a "non-serious" nature.

Wierzbicka concludes that the genitive-case object in this construction is semantically motivated, i.e., an instance of what we have been referring to as semantic case. However, it is clear that even here, a configurationally-based analysis could be proposed. Thus, following tradition, one could treat the genitive object here as a variety of the partitive genitive (cf. Delbrück 1893/1967), which, as in Franks (this volume), is assigned its genitive case marking by a governing empty quantifier. Assuming Jakobson's characterization of the genitive as [+quantified] is correct, then the "temporary use" meaning associated with the genitive object in this construction would be explainable as "quantification of time." The remaining nuances—that the action is spontaneous and for a non-serious purpose—are no doubt pragmatically implied. Clearly, more data must be gathered before the question of semantic vs. syntactic case can be resolved.

[10]See Chvany (this volume) for a detailed investigation of the putative isomorphism between form and meaning claimed by Jakobson in his analysis of the Russian case system. Also, see Kilby 1977 and (this volume) where it is argued that Jakobson's characterization of the instrumental case as "peripheral" is syntactically as well as semantically motivated.

[11]Programmatic studies of the scope of linguistic pragmatics are to be found in Leech 1983 and Levinson 1983.

[12]Cf. the opposing views of Gladney and Mel'čuk (this volume).

[13]This is the central concern of Perlmutter's theory of Relational Grammar, especially the work of Channon in Slavic (e.g. Channon 1980). This tradition is conspicuous by its absence in the present volume.

Toward a Definition of Case

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[Tebja ne soblaznit' ni plat'jami, ni sned'ju...
Zaezžij muzykant igraet na trube.
Čto mir ves' rjadom s nim, s ego gorjačej med'ju?]
...Sud'ba, sud'by, sud'be, sud'boju, o sud'be.
Bulat Okudžava, "*Zaezžij muzykant*".
'[One cannot seduce you with fancy dresses or food...
The visiting musician is playing his trumpet.
What's the whole world next to him, to his hot copper?]
...Destiny, of destiny, to destiny, by destiny, about destiny'.
Bulat Okudžava, modern Russian poet and song-writer:
A Visiting Musician.

This paper attempts to bring a bit more order into the discussion of GRAMMATICAL CASE, more precisely, to sharpen the notion of case itself.[1] I will not consider new facts, propose new theories or analyses, or put forth new hypotheses. I will only try to develop a rigorous definition of this protean entity which is case; I will be speaking exclusively of the term and of how it should be used. Therefore, what follows is a contribution to the LANGUAGE OF LINGUISTICS (rather than to the description of a particular

natural language or languages). This is an attempt strictly within the lines drawn and argued for in Mel'čuk 1982.[2]

I will operate under the following assumption: when defining a term designed to cover a class of observable linguistic$_1$[3] phenomena $\{P_i\}$, we should first of all establish a kernel $\{P_j'\}$ of this class, i.e., such prototypical or ideal phenomena among all the P_is which we would like to have covered by our definition under any circumstances. These P_j's—*the empirical basis of the definition*—are chosen quite intuitively and must be taken as our postulate. Second, we develop a definition that takes care of all the P_j's. Third, we apply this definition to the phenomena in the difference P_i–P_j', i.e., to less clear-cut, fuzzy or dubious items. If our definition is good, it should:

(i) cover all items which are intuitively sufficiently similar to P_j's (cf. Kuipers 1975 on the importance of intuitively felt similarity for linguistics);

(ii) reject all items which are intuitively sufficiently dissimilar to P_j's;

(iii) in all intermediate domains where our intuition balks, produce results which could be supported by further arguments elaborated especially for the solution in question. (Such an instance will be provided by an analysis of the English "Saxon Genitive" below.)

This approach is basically identical with what Hockett proposed some 30 years ago, namely to define case first on the basis of the Latin or Greek case system and then to generalize reasonably, so that new phenomena subsumed under our definition will be sufficiently similar to, say, Latin case (Hockett MS).

1.
Ambiguity of the Term *Case*.

On the one hand, in modern linguistics the term ***case*** is indiscriminately used to cover NOMINAL CASE (as in Russian ***pojas*** 'belt' NOM, ***pojasa*** GEN, ***pojasu*** DAT, ...) as well as ADJECTIVAL CASE (as in Russian ***dlinnyj*** 'long' [SG. MASC] NOM, ***dlinnogo*** GEN, ***dlinnomu*** DAT, ...). I believe that nominal and adjectival case are two different morphological categories and should be discussed separately: nominal case is governed, adjectival case is induced by agreement with nominal case, etc. Without

entering into a lengthy discussion, let me simply state that in this paper only nominal case is considered.

Moreover, even in nouns two different case categories can sometimes be distinguished: one case is directly governed by the syntactically superordinate unit; the other appears as a mark of agreement—very much like adjectival case (e.g., in Old Georgian, Basque, Ngarluma, where a noun may have two consecutive markers of two different cases: see below, p. 68 ff.). Of these two, I will consider exclusively the first category: CASUS RECTUS. Therefore, when I say simply *case* I will mean 'governed nominal case'.

On the other hand, even if we consider the term *(grammatical) case* solely in the above-indicated narrow interpretation, we discover that it still is, as currently used in linguistics, at least three-way ambiguous:

1. *Case 1* = a (grammatical or, more precisely, inflectional) category; this sense can be seen in such sentences as: "The Czech noun is inflected for case; Tartar possesses case as an autonomous category; Case is widely discussed nowadays."

2. *Case 2* = an element (= a grammeme) of case 1, i.e., a specific case: nominative, accusative, superessive, etc. Cf.: "Bats has twenty-two cases; The nominative is the case of naming objects; This verb requires the dative case."

3. *Case 3* = a case form, i.e., a linguistic$_1$ form which expresses a case 2 (roughly, a particular case marker or a particular wordform); cf. "*Členami* is in Russian the instrumental case of *člen* 'member' in the plural; The genitive case never appears after plural in regular English nouns; Give me the dative case of *chłopiec* both in singular and plural."

Unfortunately, these senses, especially 'case 2' and 'case 3', are too often confused in linguistic$_2$ discourse, resulting in unwarranted or meaningless statements (cf. Wierzbicka 1981 and Goddard 1982, where the point is vigorously made against the confusion of the concepts 'case' = 'case 2' vs. 'case form' = 'case 3'). Because of this, I will use numerical indices to keep the three senses of the term *case* as strictly separated as possible.

2.
Preliminary Notions.

Grammatical case, be it case 1, case 2 or case 3, is very far

from an elementary concept. It is a rather involved entity which presupposes a whole series of other complex notions. It is not possible to present here the complete theoretical framework (with all postulates and definitions) that is necessary in order to rigorously introduce *case 1, 2, 3*. The reader has to be satisfied with something much less, namely with a list of intermediate notions which appear in our definition of *case 1* (on which definitions of *case 2* and *case 3* are based); these notions are accompanied by brief comments that hint at the idea behind the term used.

Most important, my constructions are developed within the Meaning-Text theory (Mel'čuk 1974, 1976:26-62, 1979:1-21, 1981). Familiarity with this theory may prove necessary for complete understanding of my proposals. This is especially true of the surface-syntactic representation used in Meaning-Text linguistic$_1$ models, and particularly of the surface-syntactic structure, which is a labeled unordered dependency tree with no non-terminal nodes. (The nodes are labeled with the lexeme occurrences of the sentence represented, and the branches occur with the names of surface-syntactic relations, or roles, roughly—syntactic functions such as 'the (grammatical) subject of', 'the direct object of', 'the modifier of', etc.) Since in my conception case 1 concerns primarily surface-syntactic roles of the nominal, it is clear to what extent the surface-syntactic formalism adopted is vital for all subsequent deliberations.

Let it be equally emphasized that by *(natural) language* $\mathcal{L}$, I understand a particular correspondence, or mapping, between an infinite set of meanings and an infinite set of texts. Both sets and the correspondence itself, i.e., a specific language, are thought to be empirically given by the totality of speakers and readily accessible to the linguist (who can—theoretically—be also considered a native speaker). All the linguistic$_2$ notions that I introduce below are meaningful only *with respect to a given language* $\mathcal{L}$. To save space, I omit this restriction, but it should be borne in mind that when I write, e.g., *utterance,* what is meant is 'an utterance of $\mathcal{L}$'; when I speak of *category,* I mean 'a category of $\mathcal{L}$'; etc.

Below follow all the intermediate notions necessary for the definition of *case 1*. The explanatory statements supplied are by no means rigorous definitions in all instances; many of them are no more than approximate characterizations and should be construed as such.

1. *Utterance* = an autonomous part of discourse, i.e., a linguistic$_1$ sign or a complex of signs (= a meaningful text) which can appear between two absolute pauses (e.g., sentence, clause, phrase, wordform). Notation: U (from *utterance*).

2. *Lex* = an elementary autonomous linguistic$_1$ sign, i.e., a minimal utterance not consisting of other utterances (roughly, a wordform). Notation: $\underline{w}$ (from *wordform*). Note that this is an oversimplification: actually, a lex can consist of several simpler lexes (= wordforms), as in so-called analytical forms: ***has been seen***, for instance, is one lex (consisting of three lexes) of the lexeme SEE. The complete definition of lex, however, is too complicated to be considered here.

3. *Lexeme* = the set of all lexes that can be described by one dictionary entry (= a word in one of its senses; all the lexes of a lexeme have an identical lexicographic definition and an identical lexical co-occurrence). Notation: L; $\underline{w}$(L) = 'a lex of the lexeme L'.

4. *To express*, or $\underline{X}$ *expresses* 'Y' = the signatum of the linguistic$_1$ sign $\underline{X}$ contains the signatum 'Y' or the part 'Y' of a signatum. Notation: $\underline{w}$('c') = 'the lex [≃wordform] $\underline{w}$ that expresses the signatum 'c' (or '...the part 'c' of a signatum')'.[4]

It is important to note that a linguistic$_1$ signatum is not necessarily a genuine meaning: it can be a syntactic dependency, or a piece of information about the syntactic valence of a unit, or else a command to change, in a specified way, the combinatorial properties of a unit. Of course, all such signata are related, in the final analysis, to meaning, so that in this sense they are meaningful. However, they are not parts of a semantic representation and they affect the latter only indirectly.

5. *Category* = a maximal set of mutually exclusive signata (or parts of signata). For instance, the meanings 'solid', 'liquid', 'gas-like',...—taken all together—form a category; another example is the category of tense: 'present', 'past', 'future'. (The modifier *maximal* ensures that a category actually embraces ALL the signata it can embrace. From our formulation it follows that a category has no fewer than TWO elements: one element cannot be 'mutually exclusive'.)

6. *Inflectional category (of a class K of lexemes)*[5] = a category {'s_1', 's_2', ..., 's_n'| $n \geq 2$} such that the following two conditions are met simultaneously:

1) *a.* Any lexeme of *K* obligatorily expresses an 's_i'
and
b. any 's_i' is obligatorily expressed in at least some lexemes of *K*.

2) 's_i'-s are expressed regularly, i.e. for most 's_i'-s the following holds:
(i) an 's_i' has a small set of markers distributed according to general rules;
(ii) an 's_i' is applicable to (nearly) all lexemes of *K*;
(iii) an 's_i' is strictly compositional, which means that the result of uniting an 's_i' to a 'K' is always computable by general rules.

Despite the obvious importance of the concept of inflectional category for the definition of *case 1*, I am in no position to elaborate on it here. Let me only indicate that these two formal conditions reflect the two intuitively felt constitutive properties of inflectional categories: their obligatory character and relative regularity of expression, respectively. In Condition 1, the requirement *a* guarantees that no lexeme of *K* can be outside of the category in question, while the requirement *b* provides for both incomplete (=defective) paradigms (e.g. *singularia/pluralia tantum*) and so-called partial inflectional signata (= relevant only for a subclass of *K*; see below, p. 61, on partial cases 2). In accordance with a long-standing grammatical tradition, I do not require that in an inflectional category, ANY of its elements should be applicable to ALL of the lexemes in *K*; it is sufficient if ANY of these elements applies to SOME lexemes of *K*.

Note that it is also not required that there be in *K* at least one lexeme such that ANY of 's_i' can be expressed in one of its lexes. Such a requirement would amount to stipulating that at least one lexeme in *K* distinguishes ALL the elements of a given inflectional category. Very often this is actually the case: e.g., if we take the category of grammatical nominal number in English, in spite of many *singularia* and *pluralia tantum*, there are English nouns (in fact, the majority) which can express both singular and plural. However, logically this is not necessary. I can easily imagine an inflectional category such that one of its several elements, say, 's_1', is expressed only in a subset of lexemes in *K*, while another one, 's_2' is expressed in a different (= disjoint) subset of *K*; so that no lexeme of *K* can express all of 's_i'. Russian case 1 is, for

instance, such a category. Therefore, I have not introduced the above requirement into the definition of inflectional category.

7. *Grammeme* = an element of an inflectional category (i.e., an inflectional signatum or part thereof).

8. *Nominal* = a member of the distributional class of lexemes which includes proper names. In other words, nominals are proper names plus all other lexemes which are similar to proper names with respect to their syntactic (and possibly morphological) behavior. These other lexemes include common names and pronouns as well as several deverbal formations (gerunds, masdars, etc.).

9. *Passive surface-syntactic [=SSynt-] role* (of a linguistic$_1$ unit) = being the dependent of a particular SSynt-relation or the top node of a particular SSynt-construction which represents an autonomous (= independent) utterance. (The second part of this formulation is explained below, in item 4 of Section 5.) For instance, one of the passive SSynt-roles of the English infinitive without *to* is "complement of a modal verb" (*must* →*go*, *should* → *prepare*, ...).

10. *Passive surface-syntactic valence* (of a linguistic$_1$ unit) = union of all passive SSynt-roles possible for this unit. Notation:

$\mathrm{VAL}_{\mathrm{pass}}^{\mathrm{SSynt}}(\underline{w})$.

11. *Surface-syntactic governor* (of a lex $\underline{w}_1$ in utterance U) = lex $\underline{w}_2$ such that $\underline{w}_1$ is dependent on $\underline{w}_2$ via a particular SSynt-relation. Notation:

$\mathrm{G}_{\mathrm{U}}^{\mathrm{SSynt}}(\underline{w})$; $\mathrm{G}_{\mathrm{U}}^{\mathrm{SSynt}}(\underline{w}_1) = \underline{w}_2 \equiv \underline{w}_2 \rightarrow \underline{w}_1$ (in U).

12. *Major surface-syntactic relation* = a SSynt-relation between the main verb and a nominal depending on it as an actant, i.e., corresponding to one of its semantic variables. Major SSynt-relations are predicative (for the grammatical subject), objective (for direct and indirect objects), and complementive (for predicative complements). What is at issue here is a very important distinction between (strongly governed) ACTANTS and freely added CIRCUMSTANTIALS (the latter being—very roughly!—adverbials; cf. Vater 1978).

I think that the main verb with its nominal actants is the

kernel of any syntax, a basic SSynt-configuration which should underlie any discussion involving surface-syntactic problems. Note that our formulation does not preclude major SSynt-relations with governors other than the main verb; it only implies that these relations should be defined on the basis of the "main verb + nominal actants" configuration.[6]

3.
Empirical Basis of the Definition.

The prototypical category of case 1 in the present study is formed by case 1 in such Slavic languages as Russian and Polish, then in Latin, Sanskrit and German, as well as in Georgian, Lezgian and Hungarian. The choice of these languages is determined by the fact that the presence and the nature of case 1 in them seems indisputable and also by the fact that I am better acquainted with them.

4.
Definitions.

The definition of case 1 which follows is extremely complex; I did my best trying to come up with something simpler and more digestible, but failed. Maybe the complexity of the definition proposed reflects the actual state of affairs: after all, grammatical case IS a notoriously complex concept. Nonetheless, the reader should not be frightened away by the clumsy and involved formal construction appearing below: in Section 5 it is explained at length in prose and illustrated with obvious examples.

1. *Case 1* = grammatical category of nominals such that:
   (i) Each of its grammemes 'c_i' is a pair

$$<M_1^i, M_2^i>$$

   where:
   - M_1^i is a non-empty proper subset $\{\rho_i\}$ of the set of all passive surface-syntactic [=SSynt-] roles filled by the nominals of the language in question, such that:
     a) for any nominal lex $\underline{w}$ which expresses 'c_i', its passive SSynt-valence is identical with or included in M_1^i;

b) for any ρ_i, there is a nominal lex $\underline{w}$ expressing 'c_i' and an utterance in which $\underline{w}$ plays the SSynt-role ρ_i;

- M_2^i is a (possibly empty) proper subset $\{\sigma_i\}$ of the set of all predicate semantemes of the language in question, such that:

a) for any nominal lex $\underline{w}$ which expresses 'c_i', if in an utterance the lex $\underline{w}$ itself or its relation to its SSynt-governor is characterized by semanteme σ, then σ belongs to M_2^i;

b) for any σ_i, there is a nominal lex $\underline{w}$ expressing 'c_i' and an utterance in which $\underline{w}$ itself or its relation to its SSynt-governor is characterized by σ_i.

(ii) It contains no fewer than two grammemes 'c_i' and 'c_j', such that for both sets M_1^i and M_1^j each set includes at least one major SSynt-relation which the other set does not include.

Since verbal formulation proves so cumbersome, symbolic notation may be helpful. Let there be:

$\underline{w}$('c_i')	- a lex (of language $\mathcal{L}$) expressing the grammeme 'c_i'
$VAL_{pass}^{SSynt}(\underline{w})$	- passive surface-syntactic valence of a lex $\underline{w}$ [=union of all passive SSynt-roles ρ_i it can fill]
R^m	- a major passive SSynt-role
$VAL_{pass}^{SSynt}(\mathcal{L})$	- the set of all the passive SSynt-roles of nominals in language $\mathcal{L}$
$SEM(\mathcal{L})$	- the set of all predicate semantemes of $\mathcal{L}$
$U(\underline{w})$	- the utterance containing a lex $\underline{w}$
$G_U^{SSynt}(\underline{w})$	- the surface-syntactic governor of $\underline{w}$ in an utterance U
$\rho_U(\underline{w})$	- the passive surface-syntactic role played by a lex $\underline{w}$ in an utterance U
$\sigma(\underline{w})/\sigma(\underline{w}_1, \underline{w}_2)$	- the semanteme σ characterizes $\underline{w}$/the semantic relation between $\underline{w}_1$ and $\underline{w}_2$

Then, *case 1* is such a category C of nominals that both (i) and (ii) hold:

(i) Each of its grammemes 'c_i' is a pair

$$<M_1^i, M_2^i>$$

such that:

1) $M_1^i \subset VAL_{pass}^{SSynt}(\mathcal{L})$ & $M_1^i \neq \Lambda$;

2) a. $(\forall \underline{w}('c_i'))[VAL_{pass}^{SSynt}(\underline{w}('c_i')) \subseteq M_1^i]$;

b. $(\forall \rho_i \in M_1^i)$, $(\exists \underline{w}('c_i'), \exists U(\underline{w}('c_i')))[\rho_U(\underline{w}('c_i')) = \rho_i]$;

3) $M_2^i \subset SEM(\mathcal{L})$;

4) a. $(\forall \underline{w}('c_i'), \forall U(\underline{w}('c_i')))[(\exists \sigma | \sigma(\underline{w}('c_i')) \vee \vee \sigma(\underline{w}('c_i'), G_U^{SSynt}(\underline{w}('c_i')))) \rightarrow \sigma \in M_2^i]$

b. $(\forall \sigma_i \in M_2^i)$, $(\exists \underline{w}('c_i'), \exists U(\underline{w}('c_i')))[\sigma_i(\underline{w}('c_i')) \vee \vee \sigma_i(\underline{w}('c_i'), G_U^{SSynt}(\underline{w}('c_i')))]$;

(ii) $(\exists 'c_i', 'c_j' \in C | 'c_i' \neq 'c_j', \exists R_1^m, R_2^m \in \in VAL_{pass}^{SSynt}(\mathcal{L}) | R_1^m \neq R_2^m)$ $[M_1^i \ni R_1^m$ & $M_1^j \ni R_2^m$ & & $M_1^i \not\ni R_2^m$ & $M_1^j \not\ni R_1^m]$

Informally and very approximately, this means the following two things:

(i) Case 1 necessarily provides for marking passive SSynt-roles (i.e., the SSynt-dependencies) of a nominal N within this nominal and possibly provides for characterizing N semantically (more precisely, for characterizing the semantic content of N: independently or with respect to its syntactic governor).

(ii) The category of case 1 in a language is required to contain at least two different cases 2 expressing two different major passive SSynt-roles.

2. Case 2 = a grammeme belonging to case 1.
3. Case 3 = a lex expressing a case 2.

In order to avoid possible confusion, I suggest banning the term *case 3* altogether in contexts where a shift in meaning is possible

and replacing it with the expression *the form of a case 2*.

5.
Comments and Explanations.

1. As defined above, the main task of case 1 and therefore case 2 is to mark the SSynt-dependencies of nominals. There are cases 2, or specific usages of cases 2, which do no more than just that: these are SYNTACTIC cases. However, even if a case 2 expresses a particular meaning (and is *eo ipso* a SEMANTIC case), it still marks the SSynt-dependency of the corresponding nominal. In other words, marking the SSynt-dependencies of nominals is the primary, constitutive property of cases 2 (and consequently of case 1); conveying meanings is their secondary, non-obligatory property. Thus, theoretically there can be purely syntactic cases 2, but no purely semantic cases 2: every semantic case 2 obligatorily marks a passive syntactic role as well, whereas the converse is not true.

Therefore the concept of case 1 is, in my view, essentially based on a specific SSynt-representation of utterances, in particular on SSynt-relations. (The semantic functions of cases 2 will be discussed in Section 8.)

2. Case 1 marks nominals as DEPENDENT members of particular SSynt-relations; that is to say, it determines their PASSIVE SSynt-valence. There exist, however, other grammatical categories of nominals which mark the nominal as the GOVERNING member of certain SSynt-relations. These categories are, in a sense, the inverse of case 1. There are three examples:

– The so-called *ezafa* of several Iranian languages. For example in Persian, a noun receives the suffix *-e* if this noun subordinates a modifier: an adjective, another noun or a relative clause: ***ketab*** 'book' but ***ketab-e ǰaleb*** '[an] interesting book' or ***kitab-e pedar-e man*** '[the/a] book of my father' = lit. 'book-of father-of I' [***pedar*** 'father', ***man*** 'I'].

– The category of possession (or belonging) in Altaic languages. The noun governing another noun (the governed noun can be in the nominative, genitive or dative—depending on its referentiality, determinacy and the like) receives the suffix of belonging to the 3rd person. Examples: Hung. ***a család ajándék-a*** 'the family's present' = lit. 'the family present-its' [***család*** 'family', ***ajándék*** 'present', ***-a*** = suffix of belonging to the 3rd person singular]; or Hung. ***a költő-nek barát-ja*** 'friend of the poet' [***költő***

'poet', *-nek* = dative suffix, *barát* 'friend', *-ja* = suffix of belonging to the 3rd person singular].

– The so-called 'state' of nouns in Semitic languages: a noun that governs a noun must be in the construct state, as opposed to the absolute state; thus in Modern Hebrew: *sfarím* 'books' but *sifrei limúd* 'books-of learning' = 'manuals'; *xéder* 'room' but *xadar óxel* 'room-of food' = 'dining room'; *dávār* 'word' but *dvār ha-nāvíʔ* 'word-of the-prophet'; *zākēn* 'master, boss' but *zkan ha-bajít* 'master-of the-house'; etc.

3. The requirement that M_1^i should be a PROPER subset of the set of all passive SSynt-roles of nominals ensures that a case 2 cannot mark ALL passive SSynt-roles which a nominal can play in the language considered. A case 2 marking all possible SSynt-roles of a nominal is a *contradictio in adjecto*: if a marker accompanies a nominal in all roles which the latter plays, such a marker is independent of SSynt-role and consequently is not a case marker. On the other hand, a case 2 marking no syntactic role of nominals at all is equally a *contradictio in adjecto*: hence the requirement for M_1^i to be non-empty. Note that such a requirement is absent with respect to M_2^i: M_2 is allowed to be empty; this is so because a case 2 can express no meaning.

4. A case 2 can also mark the SSynt-role of a nominal in constructions where this nominal is the top governor and does not depend on anything else: Russ. *Xleba i zreliščl* [both nouns are in the genitive] = Lat. *Panem et circenses!* [both nouns are in the accusative] '[We require] bread and shows!'; Russ. *Avtoprobegom – po bezdorožʼju i razgilʼdjajstvul*, lit. '[Let us strike] with an auto rally on lack of roads and slipshodness!'; Russ. *Aristokratov na fonarʼ!* 'Aristocrats [in the accusative] on the street-lamp!'; etc. In order to cover all such case occurrences as well, we have to extend the notion of passive SSynt-role to include the ability of the unit in question to be the SSynt-top of a particular construction. That is exactly what we have done above, item 9 of Section 2.

5. The actual passive SSynt-valence of a case form, i.e., of a declined nominal lex, depends not only on the case 2 it expresses but also on the semantic and syntactic properties of the stem of this lex—which can reduce the passive SSynt-potential the case 2 imparts to all nominal lexes in this language. For instance, in Russian the accusative marks, along with direct objects, the circumstantial of duration—but only with a specified subset of nouns (names of time intervals; names of events including the

semantic component 'duration'; etc.). Cf: *Vsju nedelju* [Acc] *on nabljudal...* 'The whole week he kept observing...'; *Vsju vojnu* [Acc] *on nabljudal...* 'During the whole war he kept observing...'; but not ?*Vsë sobranie* [Acc] *on nabljudal...* 'During the whole meeting...' [the correct way to say this is *V tečenie vsego sobranija...*]. This is why I require that the passive SSynt-valence of $\underline{w}$('c_i') be equal to or included in M_1^i.

6. Subitems *a* and *b* in Requirements 2) and 4) of Condition (i) of our definition take care of sufficiency and necessity, respectively. More specifically, 2*a* requires that any SSynt-role which a lex expressing a given case 2 can play should be included into M_1 of this case 2; inversely, 2*b* requires that any SSynt-role in M_1 of a given case 2 should be played by some lexes (expressing this case 2) in some utterances. Analogously, 4*a* requires that any semanteme which a lex expressing a given case 2 (or the relation of this lex to its SSynt-governor) can be characterized by should be included into M_2 of this case 2; inversely, 4*b* requires that any semanteme in M_2 of a given case 2 should characterize some lexes (expressing this case 2) or their relations to their SSynt-governors in some utterances.

7. Condition (ii) provides for the correct treatment of caselike forms which are in fact not cases 2 and should not be admitted as such. Suppose that a language has a vocative form, obligatory for direct address and formally always distinct from the 'basic' form of the noun; at the same time, this language has no other nominal caselike forms. The grammeme 'vocative' [= 'direct address'] satisfies Condition (i) of the definition; without Condition (ii) we would be forced to classify this vocative form as the form of a case 2. The result would be that the other noun form (= the 'basic', or zero, form) would—BY DEFAULT—become another case 2, say the common case 2 (or the nominative), used in all SSynt-contexts except for direct address. (This is so because an inflectional category cannot contain fewer than two elements—cf. above, p. 39. Therefore, by postulating one case 2 in a language, we automatically create a second case 2 which has to embrace all the nominal forms not covered by the first case 2.)

Thus the language under consideration would receive the category of case 1, with all the theoretical implications of this decision,—which obviously contradicts our intuition. A vocative form alone should not be allowed to force us into admitting case 1

in the absence of other valid reasons. This effect is achieved by Condition (ii). What this condition does in fact is to require that any case system includes at least two different genuine, unquestionable cases 2 which encode different MAJOR SSynt-dependencies, such as 'grammatical subject' vs. 'grammatical object'. If a case system is well established by obvious cases 2, then even a "dubious" case 2 is readily accomodated within this system. Consequently, for example, in Modern Greek the vocative is a case 2 because there are other unquestionable cases 2: nominative, accusative, genitive. However, dubious forms alone do not create a case system. Thus, for instance, the so-called Saxon Genitive of Modern English is rejected as a case 2 by our definition: there are, as a result, no cases 2 (and no case 1) in the English noun (but the pronominal subsystem of English has case 1, which is a different matter); cf. Section 6.[7]

Let it be emphasized that Condition (ii) amounts to forbidding that a language has only concrete (= adverbial) cases 2 and no abstract (= grammatical) cases 2; about the latter distinction see below, Section 9. As stated above, I try to model the general concept of case 1 after such languages as Latin or Russian, where the case system is strongly anchored in abstract cases 2. (For a different viewpoint cf. Lehmann 1983:366–67.)

Note that case 2 cannot be defined prior to case 1 (I owe this suggestion to Ju. Šixanovič). The description of a case grammeme (= of a case 2) is necessary but not sufficient as a condition imposed on the notion of case: the case category as such has a property (expressed by Condition (ii), i.e., "contains no fewer than two grammemes, such that...") which logically cannot be ascribed to an individual case 2.

6.
English "Saxon Genitive."

The problem of the "Saxon Genitive Case" in English (*the boy's book, my children's room*) has a long and respectable history, which I will summarize very briefly and rather superficially. The most current view has it that the noun in Modern English features a two-case system: the marked genitive case 2 in *-s* and the unmarked common case.[8] This point of view is stated as a matter of fact in the classical work by Otto Jespersen (1924, 1927, 1933) and accepted with no discussion in one of the best contemporary

English grammars (Quirk *et al.* 1972:192); cf. also Barxudarov 1975:84–86. However, this view is by no means impregnable: there are also many scholars who deny the English *-s*-form the status of case 2, cf., e.g., Vachek 1961:24–31, Ilyish 1965:45, Poldauf 1970, Hansen 1970 (with further references), Chomsky 1975: 281, and Zwicky 1975. I side with the latter and think that the Saxon Genitive is not a case 2 and, therefore, there is no category of case 1 in the English noun at all. Our definition as it stands rejects the *-s*-form of the English noun as a case 2. (Formally, this is ensured by Condition (ii), since the *-s*-form cannot play any major SSynt-role.) The question now is whether this is the right thing to do. To be sure that our definition is good, we must, in particular, be sure that the Saxon Genitive really does not deserve the status of case 2. To achieve this, I will adduce the following six arguments which show that the Saxon Genitive does not behave as elements of other inflectional categories of Modern English do; therefore, it is not a grammeme—and, consequently, not a case 2. (These arguments are essentially borrowed from Vachek, Hansen and Zwicky, *op. cit.*)

1. All of the few English inflectional grammemes characterize a given lexeme, never a phrase:

(1) all my relative*s* and acquaintance*s* ~ *all my relative and acquaintance*s*;
my sister*s*-in-law ~ *my sister-in-law*s*;
three passer*s*-by ~ *three passer-bi*es*;
young*er* and strong*er* ~ *young and strong*er*;
He shav*ed* and wash*ed* ~ *He shave and wash*ed*; etc.

That is, the so-called ***group inflection*** never occurs in English. But the Saxon Genitive systematically marks phrases rather than lexemes:

(2) John and Mary'*s* parents,
my sister-in-law'*s* house,
the unfortunate passer-by'*s* body,
the king of England'*s* throne, etc.

In this respect, the Saxon Genitive is quite like English derivational elements, several of which can be easily joined to (lexicalized) phrases:

(3) atomic physics ~ atomic physic-*ist*
[=(atomic physic)-ist];
every day ~ everyday-*ness*;
at home ~ at-home-*ish*;
out of doors ~ out-of-doors-*y*;
goose-flesh ~ goose-flesh-*y*; etc.

2. An English inflection never combines with another non-zero inflection; so, e.g., there is no 3sg marker in the non-zero marked past. However the Saxon Genitive does combine with plural inflections different from /z, s/: ***children's, women's, virtuosi's, seraphim's, both sheep's.*** At the same time, the Saxon Genitive does not combine with the plural /z, s/: ****boys's*/bójziz/, etc.: in the plural of regular nouns a portmanteau item, i.e. a megamorph, appears which expresses 'plural' and 'possessiveness' together. (For a careful analysis of all relevant problems see Zwicky 1975.) This fact is by no means phonological: On the one hand, in a context where the Saxon Genitive should have appeared on an *-s*-plural noun though linearly separated from the plural /z, s/, it doesn't appear: ****all my sisters-in-law's parents*; ****all my sisters'-in-law parents*** is equally ungrammatical. [The correct way to say this is to use the construction with ***of: parents of all my sisters-in-law.***] On the other hand, the Saxon Genitive readily appears after any non-plural /z/ or /s/: ***in Cole's <Max's> case, for missus's***/mísəzəz/ ***dress*** (but not phonetically identical ****for misses's*/mísəzəz/: Zwicky 1975:173), etc. It is clear, then, that what plays a role here is a complicated (phono-)morphological interdependency between plural and the Saxon Genitive. Such involved interaction is not at all typical of English inflections while several English derivational categories do exhibit similar restrictions: cf., e.g., ***three fingers ~ three-fingered <*three-fingersed>***, ***many values ~ many-valued <*many valuesed>***, etc.; or ***murderer***, not ****murdereder***, although ***murderer*** = 'who (has) murdered'. Obviously, also in this respect the Saxon Genitive is nearer to derivational rather than inflectional meanings.

3. The *-s*-inflection of the plural induces voicing of the final consonant in several stems: ***wife ~ wives, thief ~ thieves, wolf ~ wolves,...***; the /z/ of the Saxon Genitive never does that: ***my wife's <*wive's> friends, the thief's <*thieve's> footsteps, ...***

4. All English inflectional categories (with the exception of the

-ing form) show "irregular" forms: irregular plurals (such as *women, mice, oxen,...*), irregular 3sg forms (*is, does, has*), irregular pasts (*was, went, put, sang,...*), irregular participles (*gone, sung, put,...*), irregular degrees (*better* or *worst*). As opposed to this, the Saxon Genitive is absolutely regular (even more so than derivational formations).

5. An English inflectional category is, as a rule, valid for the majority of lexemes within the corresponding word class, exceptions being semantically motivated: grammatical number embraces all the (semantically) countable nouns, tense (and 3sg)—all of the verbs, degree—all of (semantically) graduable adjectives. The Saxon Genitive, however, applies to a restricted number of nouns: all human nouns, all proper names, some measure nouns (*at a mile's distance, the whole week's work*) plus a few isolated instances.

6. An English inflectional category never drastically changes the syntactic behavior of a lexeme. Take, for example, grammatical number: a noun, be it singular or plural, retains the main syntactic properties of a noun (i.e., quite independent of its number, it can be: the grammatical subject or object of a verb; the object of a preposition; the head of an absolute construction, such as *My courage <All the students> gone, I...*; etc.). The tenses and the degrees behave similarly: a verb also has both in the present and in the past the same syntactic properties—as does an adjective in different forms of comparison. The Saxon Genitive, however, as opposed to these inflectional categories, transforms the syntactic properties of the noun in a most radical way:

- A noun in the Saxon Genitive cannot fulfill any of the syntactic roles of a "normal" noun, in particular, to be dependent on a verb or a preposition (except for such special cases as *of Mary's* or *at the grocer's*).

- No "normal" (= non-Genitive) noun can ever be used in the context where the Saxon Genitive appears: **my wife friends, *these men jobs,...*

- A Saxon Genitive noun acquires the syntactic properties of a determiner and may become incompatible with the latter: **this Mary's book ~ this book of Mary's,* exactly parallel to **this my book ~ this book of mine.* (This is not true of the so-called 'qualifying' Saxon Genitive: *a children's book,* etc.)

- All "normal" nouns mostly follow their SSynt-governors and in a couple of constructions precede them (the subject, as a rule, precedes the verb; the subordinated component of a nominal

compound precedes the noun it modifies). A Saxon Genitive noun, however, can only precede its governor.

True, a case 2 is supposed to change the (passive) syntactic potential of a wordform in a more sensible way than, for instance, grammatical number. But a noun in different cases 2 still remains within the limits of typically nominal roles (in particular, it may depend on a verb or a preposition; it does not become a quasi-determiner; etc.) and retains the basic syntactic properties of nouns. This seems not to be the case with the Saxon Genitive.

Summing up this evidence, I conclude (in accordance with the above mentioned authors) that the English Saxon Genitive is not a case 2: it is a special formation similar to possessive adjectives in Slavic languages (of the type Russ. *Mašin* 'of Masha', *otcov* 'of father'). It can be conveniently called *possessive form* and should not be considered a paradigm-building unit. Therefore, the English noun lacks case 1 altogether. It is in order to account for this substantive conclusion and cover all such cases that Condition (ii) is necessary in my definition of case 1.[9]

7.
External Independence of Case Forms.

The deplorable confusion of *case 1* and *2* with *case form* (our *case 3*), mentioned in Section 1, has entailed the appearance (and frequent usage) of the expression "variant of a case"—which in fact is meaningless. Let us consider a well known example, that of the so-called Russian masculine genitives in *-a* and *-u* (*konjaka* vs. *konjaku*, both 'cognac'). The first form characterizes all masculine nouns and can be used in all contexts requiring the genitive; the second one is possible only with certain masculine mass nouns ([*nemnogo* 'a little'] *saxaru* 'sugar', but not **xlebu* 'bread'; [*nemnogo* 'a little'] *supu* 'soup', but not **boršču* 'borscht'; [*nemnogo*] *lesu* 'wood', but not **uglju* 'coal') and several masculine abstracts (*straxu* 'fright', *xodu* 'going', *tolku* 'meaning',...) in three types of governing contexts only:

- with a transitive verb to mark its direct object, if the latter refers to an indefinite amount of the corresponding material;
- with a quantitative expression to mark the dependent noun, which denotes the material quantified;
- in several idiomatic expressions, as the object of a preposition.

Following are several representative examples:

(4) a. *Nalej mne roma/romu!* 'Pour me some rum!'
b. *On prodaval rom <*roma/*romu> tuzemcam* 'He used to sell rum to the aborigines'.
c. *Nalej mne rom!* 'Pour me the rum (rather than anything else)!'
d. *nemnogo <2 litra> roma/romu* 'a little <two liters> rum'
e. *cvet <cena> roma <*romu>* 'the color <price> of rum'
f. *so straxu <*straxa> ~ ot straxa <*straxu>* 'from fear'.

It is very often said that the form in *-u* manifests a variant of the genitive which can (and sometimes must) be used in specified contexts; such is the official view of school grammars and most reference books. However, if we admit that the *form* or, more precisely, the *marker* of a case 2 can be chosen depending on the external governing context of the wordform concerned, then it could be maintained that any forms of different cases 2 are actually different forms of the same case 2, distributed in accordance with different governing surface-syntactic contexts. Suppose we say that Russ. *saxaru* and *saxara* are forms of the same case 2 (= genitive) but that *saxaru* can appear only when selected by *nemnogo,* verbs such as *dat'* 'give' or *prinesti* 'bring', etc. In this case, nothing would prevent us from saying that *stolbe* 'pole' PREP and *stolbom* 'pole' INSTR are forms of one and the same case 2 distributed along the following lines: *stolbe* is used with the prepositions *na, v, o, pri,* ..., and *stolbom*—with the preposition *s* or *za,* with such verbs and adjectives as *interesovat'sja* 'be interested in', *dovolen* '(be) satisfied with', and with transitive verbs to denote the instrument of action. One could easily reach the absurd conclusion that all syntactic cases 2 of a given language are in fact a single case 2, whose various forms are determined by their governing SSynt-contexts! This would simply mean that there are no cases 2 at all.[10]

To preclude this "argumentation", we will have to postulate the PRINCIPLE OF EXTERNAL AUTONOMY OF CASE FORMS: PEACF. (This principle is by no means a novelty in linguistics: it has been followed, although implicitly, for a long time, at least in more or less obvious situations.) Let there be:

R – a nominal stem;
$\underline{w}$(R) – a wordform with the stem R;
'c' – a case 2;
$\underline{m}_1$('c') different morphs expressing 'c' [$\underline{m}_1 \neq \underline{m}_2$]; note that $\underline{m}_1$ and $\underline{m}_2$ may express not only case 2
$\underline{m}_2$('c') but other grammemes as well, i.e., they may be cumulative markers.

Then the following must hold:

(PEACF) If a language displays two nominal wordforms ($\underline{w}_1$R) and $\underline{w}_2$(R) such that $\underline{w}_1$(R) contains $\underline{m}_{21}$('c') and $\underline{w}_2$(R) contains $\underline{m}_2$('c'), then either $\underline{w}_1$(R) and $\underline{w}_2$(R) are in free variation, or the choice between $\underline{w}_1$(R) and $\underline{w}_2$(R) depends only upon their own properties (i.e., upon the grammemes they express and/or morphological processes they include) or else—in rare and rather exceptional situations—upon the presence of a particular SSynt-dependent or co-dependent thereof.[11]

In prose, this means that for a single nominal stem, two different markers of the same case 2 can be in the following relationship only:

a) Either they are always mutually interchangeable, independently of context and without affecting meaning or grammaticality, in which instance they are in free variation. Cf. Russ. *-oj* ~ *-oju* and *-ej* ~ *eju* in the instrumental singular of feminine nouns (Ist Declension): ***rukoj/rukoju*** 'hand' INSTR or ***stolicej/ stoliceju*** 'capital city'; similarly, Germ. *-∅* ~ *-e* in the dative singular of strong masculine nouns: ***am Tag/am Tage*** 'in the day', ***im Haus/im Hause*** 'in the house', etc.

b) Or these markers are distributed contingent upon the following two factors:

– The current situation: depending upon some other features of the same wordform, e.g., upon other grammemes expressed. Cf. Russian *-om* and *-ami*, both marking the instrumental: *-om* expresses the instrumental and the singular, while *-ami* expresses the instrumental and the plural. (This is the case of CUMULATIVE morphs expressing syncretically a case 2 and one or more other grammemes.)

– The exceptional situation: depending upon the presence of a particular SSynt-dependent of the wordform in question. Cf. Germ. ***Heimat Marias*** *<*Maria>* 'Maria's motherland' vs. ***Heimat meiner***

*geliebten Maria <*Marias>; Heimat Vergils <*Vergil>* 'Vergil's motherland' vs. *Heimat seines Vergil <*Vergils>* 'his Vergil's motherland'; *die geheimnisvollste Stadt Europas <*Europa>* 'Europe's most mysterious city' vs. *Städte eines unbekannten Europa <*Europas>* 'cities of an unknown Europe'; etc. In these phrases the genitive of a proper noun has a form with *-s* if it has no adjectival (= agreeing modifier), and a form with a zero suffix otherwise. (The last condition of the PEACF represents a sharpening of its previous formulation in Mel'čuk 1980:801; that formulation turned out to be insufficient since it did not account for the above German examples.)

Thus the PEACF actually means autonomy only from the SUPERORDINATED (= governing) syntactic external context; the subordinated and co-subordinated context may—in principle—affect the choice of case 2 forms within the same case 2.

In agreement with the PEACF, no case marker can be selected with respect to the external governing context of the wordform in question. Only cases 2 as such are determined by governing SSynt-context of the wordform concerned or by the meaning to be expressed; as for the markers of a given case 2, they are determined by the "internal state of affairs" within the wordform (or—rather rarely—contingent upon a depending wordform).

As early as 1936 R. Jakobson insisted (following A. Šaxmatov and N. Trubetzkoy) that Russian wordforms such as [*na*] *mostu* '(being) on the bridge', [*v*] *lesu* '(being) in the forest', [*v*] *krovi* '(being) in the blood', on the one hand, and [*nemnogo*] *čaju* 'a little tea', [*daj mne*] *saxaru* 'give me some sugar', on the other, should not be considered mere variants of the prepositional and the genitive cases 2 respectively, but rather forms of two separate cases 2 in their own right: locative (or 'prepositional II', as Jakobson calls it) and partitive (or 'genitive II'). The papers Jakobson 1936/1971 and 1958/1971, which expound this viewpoint, are too well known to reproduce here the corresponding argumentation. Jakobson's proposal neatly corresponds to the Principle of PEACF.

The PEACF forces us to postulate in Russian ten cases 2:

- six currently distinguished;
- locative and partitive just mentioned;
- a vocative, attested as a distinct formal entity in colloquial forms of hypochoristic human names such as *Mam!* 'mum!', *Nad'!* /nád'/, *Seréž!* / s'ir'óž/ etc. (with a voiced final consonant, which

is impossible elsewhere in Russian);

– and an adnumerative, used with numerals, as in *dva šagá* 'two steps' etc. (cf. below, p. 61).

If, for some reason (irrelevant here), one does not want to admit the "extra" cases 2 in Russian, the only choice left is to introduce new declensional categories of the noun—such as 'partitivity', for instance, so that *peska* 'of-sand' and *(nemnogo) pesku* '(a little) sand' should be described as PESOK $_{sg,\ gen,\ non-part}$ and PESOK$_{sg,\ gen,\ part}$, respectively. One cannot, however, talk about "variants of a case 2" or about "case allomorphs that differ semantically" (as is sometimes done): these expressions are logically absurd.[12]

8.
Do Cases 2 Have Meanings?

The answer to this question, which has concerned linguists for a long time, seems trivial; it is parallel to the answer given in a Soviet joke by the famous Radio Erevan to the question of a naive listener as to whether there will be money under communism:

[Q.] – *Budut li den'gi pri kommunizme?*

[A.] – *U kogo budut, a u kogo net!*

('Some people will have it, and some not'.)

There are cases 2 (in some languages) which never have meaning: such is, e.g., the Russian nominative or the Russian prepositional. There are cases 2 (in some languages) which always have meaning: such, it seems, is true of the Finnish partitive. Finally, there are also cases 2 which in some contexts have meaning and in other contexts do not: such as, e.g., the Russian partitive which conveys the meaning 'some' [= 'an indefinite amount of'] with the direct object of several verbs (*Prinesi saxar!* 'Bring the sugar!' vs. *Prinesi saxaru!* 'Bring some sugar!'), but which is devoid of meaning in such idiomatic expressions as *bez tolku* 'to no purpose' or *dlja smexu* 'to amuse people'. In this respect, cases 2 are similar to so-called structural, or function, words. Take, for instance, Russian prepositions and conjunctions: some of them never have meaning such as *čto* 'that'; some of them always have meaning, such as *esli* 'if' or *po napravleniju k* 'in the direction of'; and some have meaning in one type of context but not in another: *valjat'sja na stole* 'be scattered on the desk' [where *na* 'on' contrasts with the possible *v* 'in', *pod* 'under', or *za* 'behind' and therefore carries

meaning], as opposed to *deržat'sja na ètom argumente* 'hinge on this argument' [where *na* is automatic and therefore meaningless].[13]

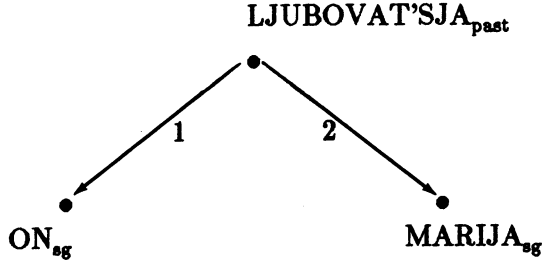
A statement of the type "A case 2 (or a case 2 occurrence) has/has no meaning" should be construed within the framework of Meaning-Text theory as follows:

(i) A case 2 which conveys no meaning of its own encodes, on the morphological level, a particular syntactic relation; therefore, this case 2 does not appear in the syntactic structure of the sentence. Cf., e.g., the Deep-Morphological and Deep-Syntactic structures of the Russian sentence *On ljubovalsja Mariej* 'He was admiring Mary':

(5) Deep-Morphological Structure

$ON_{sg,\ nom}$ $LJUBOVAT'SJA_{past,\ masc}$ $MARIJA_{sg,\ instr}$

Deep-Syntactic Structure



Neither the nominative of ON nor the instrumental of MARIJA should appear in the syntactic structure: on the one hand, the syntactic roles of the corresponding lexemes (the 1st and 2nd deep-syntactic actants of LJUBOVAT'SJA, respectively) fully determine their amalgamation into the semantic representation (= SemR) of the sentence; on the other hand, these syntactic roles fully and univocally determine the case marking.

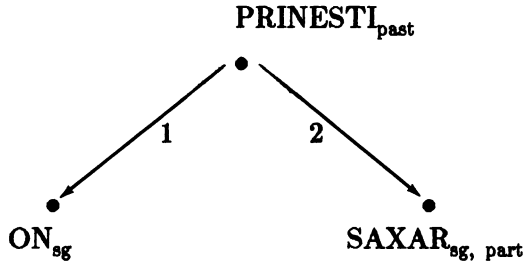
Thus a "meaningless" case 2 contributes to the meaning of the sentence, but only indirectly—through its syntactic structure.

(ii) A case 2 which conveys a meaning must appear in the syntactic structure. For instance, Russ. *On prinës saxaru* 'He brought some sugar':

(6) Deep-Morphological Structure

$ON_{sg,\ nom}$ $PRINESTI_{past,\ masc}$ $SAXAR_{sg,\ part}$

Deep-Syntactic Structure



Here the partitive of SAXAR expresses 'some'; the deep-syntactic role of SAXAR (= the 2nd actant of PRINESTI) does not univocally determine either the (corresponding portion of the) SemR (= meaning) of the sentence, or the case marking.

Thus a "meaningful" case 2 contributes to the meaning of the sentence in two ways: first, in a straightforward manner, e.g., part(itive) ⇔ 'an indefinite amount of' (in an appropriate context), and second, indirectly: through the syntactic relation it marks.

To put it in slightly different terms: A "meaningful" case 2 is selected (under text synthesis from a semantic representation) according to its meaning (and syntactic context), very much like the way "full" lexemes are selected; it appears in the syntactic structure of the sentence. A "meaningless" case 2 is selected by the syntactic context only, exactly as "empty" lexemes (= function words) are selected; it is not admitted into the syntactic structure and appears in the deep-morphological structure of the sentence only. (Here the analogy between "meaningless" cases 2 and "empty" lexemes stops: the latter do appear in the syntactic structure of a sentence—for several reasons, which are irrelevant at this point.)

Prototypical examples of "meaningful" cases 2 are easily found in such languages as Lezgian (see Mel'čuk 1983a:266–69). Two examples will suffice:

– The adessive alternating with the dative in the indirect object NP governed by a verb of giving or belonging means 'for a

time' ≅ 'as an interim user', cf:

(7) Lezg. a. *Ali-di* *z-az* *ktab-* *Ø* *vug -ana*
Ali-ERG I-DAT book- NOM pass -AOR
'Ali gave me the book' [lit. 'Caused-by-Ali, to-me the-book passed'].

vs.

b. *Ali-di* *z-av* *ktab-Ø* *vug-ana*
I-ADES
'Ali lent me the book' [= 'gave it to me for a time'].

– The ablative alternating with the ergative in the agentive complement NP means 'without direct and voluntary involvement', cf.:

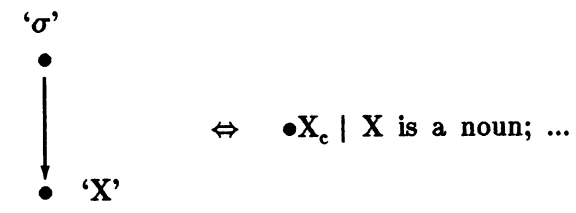
(8) Lezg. a. *Ali-di* *kiç-* *Ø* *qe -na*
Ali-ERG dog- NOM die -AOR
'Ali killed the dog' [lit. 'Caused-by-Ali, the-dog died'].

vs.

b. *Ali-divaj* *kiç-Ø* *qe-na*
Ali-ABL
'Because of Ali, the dog died' [= 'Somehow, but not on purpose, Ali caused the dog's death'].

For a "meaningful" case 2 *c* in a language $\mathcal{L}$, or, more precisely, in a Meaning-Text model of $\mathcal{L}$, there should be a (set of) semantic rule(s) specifying the SemR of this *c*, i.e., something of the following form (such rules apply between the SemR and the DSynt-structure of a sentence):

(9)



σ stands for the meaning of the case 2 *c*; if, e.g., *c* is the Russian partitive, then σ = 'an indefinite amount of'.

Here an obvious question arises: where do the famous Jakobsonian (1936/1971) case features fit into the picture which I propose? Should we state somewhere and, if so, then where, that the Russian genitive and the prepositional are "quantified", the dative and the accusative—"directional", etc.? My answer is affirmative but I think that Jakobsonian case features are not descriptive statements, i.e., not part of a linguistic$_1$ model: they are, as far as I can see, META-descriptive statements, i.e., part of the description of a linguistic$_1$ model. In other words, in a linguistic$_1$ model of Russian, we do not find semantic rules correlating a case label and a bundle of Jakobsonian features. In a Meaning-Text type model of Russian we will have for cases 2 only semantic rules such as (9), and these, not for all cases 2 but exclusively for those that are held to be "meaningful" (according to our interpretation of case 2 "meaningfulness"). Now, in a description of our model, or, if you like, in a linguistic$_2$ model of second order, we will characterize the behavior of Russian cases 2 within the model, using Jakobsonian features (or something very similar). Such features serve an explanatory purpose, providing a common denominator for many case-related phenomena which otherwise seem disparate and antisystematic.

9.
Taxonomy of Cases 2.

I know of SIX relevant properties, or rather contrasts, to characterize nominal cases 2. They are binary and they intersect, thus generating $2^6 = 64$ theoretically possible classes of cases 2. (The actual number of such classes is smaller, since there are several incompatibilities.) Two of these contrasts belong to the content plane and four to the expression plane.

Content Plane:

1. *Syntactic* vs. *Semantic* Cases 2. This distinction, also known as *Abstract <Grammatical>* vs. *Concrete <Adverbial>* Cases 2, was established and studied by J. Kuryłowicz (1949/1960). As stated in Sections 5 and 8, a purely syntactic case 2 marks the dependent

SSynt-role of the noun—or, more precisely, it specifies the set of its potential dependent SSynt-roles, but it does not express any meaning directly. As opposed to a syntactic case 2, a semantic case 2, while fulfilling the same functions, in addition conveys a meaning, i.e., expresses a part of the SemR of the sentence.

2. *Complete* vs. *Partial* Cases 2 (Zaliznjak 1973:84-86). A complete case 2 embraces all nouns of a language throughout the whole paradigm (with the exception of the non-systematic and purely formal defectiveness: e.g., the Russ. genitive plurals ***mečt*, **vymen*, **mgl/*mgol*** do not occur, while ***ščec*** '[some] cabbage soup' exists only in the genitive plural). A partial case 2, however, functions for a subset of the nouns or for a subset of the paradigms only: sometimes for purely semantic reasons, sometimes not. Several examples of partial cases 2 follow:

-In Russian, the partitive is possible only in the singular and only with some masculine mass nouns. The adnumerative is even more partial: it is relevant only for a couple of nouns in the singular (***časá*** 'hour', ***šagá*** 'step') and for some dozen nouns in the plural ([*10*] ***čelovek*** 'men', ***gramm, volt,*** ...); cf. Mel'čuk 1984:425.

-In Finnish, the comitative is limited to the possessive form of the noun in the plural: e.g., ***hirsi-ne-nsa*** 'with his/their log/logs', where ***hirsi*** is the plural stem (the singular stem being ***hirte***), ***-ne*** is the suffix of the comitative, and ***-nsa***, the 3rd person possessive suffix of both numbers; forms ****hirsi-ne*** (without the possessive suffix) or ****hirte-ne-nsa*** (with the singular stem) are ungrammatical. (Note that, being formally plural, the comitative form denotes both singularity and plurality of the entities referred to.)

-In Armenian, the locative does not occur in human nouns and in the nouns of the ***-an***-declension (type ***tun*** 'house' etc.).

Expression plane:

3. *Synthetic* vs. *Analytical* Cases 2. A synthetic case 2 is expressed WITHIN the corresponding wordform, i.e., by a morphological means, namely: mostly by an affix (practically, I know only of case suffixes) or—rather rarely—by an apophony

(e.g. Estonian *tuba* 'room' NOM - *toa* 'idem' GEN, *nuga* 'knife' NOM - *noa* 'idem' GEN, etc.). An analytical case 2 is expressed OUTSIDE the corresponding wordform, i.e., by an auxiliary (= function) word. Let it be emphasized that the following two conditions must be met simultaneously for a function word introducing a NP and marking its SSynt-role to be interpreted as an analytical case 2 marker, rather than a pre- or post-position:

(i) The language considered should have function words of the same type that mark major syntactic roles as well. That is, if English had, along with *to, of, with,* etc., special "prepositions" obligatorily introducing the grammatical subject and the direct object, English prepositions could be treated as case 2 markers.

(ii) The noun following a "suspect" function word should not be itself in a synthetic case 2. If this were so, this function word would govern a case 2 and therefore behave as a preposition (or postposition). This means, in particular, that in a given language all cases 2 are either synthetic or analytical: the mixture (unlike, e.g., in the domain of tenses) is logically excluded. (If indeed we have, in a language, at least two synthetic cases 2, then the noun introduced by the "suspect" function word would automatically be in a case 2, which contradicts Condition (ii) and makes the "suspect" word a pre-/post-position.)

Analytical cases 2 seem to exist in Tagalog, where any non-pronominal NP is obligatorily introduced by a particle specifying its SSynt-role. Thus we have:

- Grammatical subject: *ang* (common nouns)/*si* (proper nouns), as an analog of the subjective;
- Direct object, Agent or Complement of means, Adnominal or Possessor's attribute: *ng/ni*, as an analog of the oblique;
- Indirect object, Adverbial of Location/Destination: *sa/kay* as an analog of the lative (or the dative).[14]

Cf. examples (the particle *ay* introduces a non-initial main verb):

(10) a. *Ang apó* *ay sumulat ng liham.*
grand-son wrote letter

b. *Ang Tagalog ay inaaral* *ng aking kapatíd.*
is-studied my brother

c. *Nagpadalá akó ng aklát sa aking kaibigan sa Manila.*
sent I book my friend

d. *Ang aklát ay arí ng paakláan.*
book belong library

e. *Para sa aking kaibigan ang paanyayang itó.*
for my friend invitation this

4. *Primary* vs. *Secondary* Cases 2. A primary case 2 is built on the basic stem of the noun, whereas a secondary case 2 is built on the form of a primary case 2. Thus, in Tokharian A the oblique is formed directly from the stem: NOM *kaṣṣi* 'master, teacher, guru'—OBL *kaṣṣiṃ*; all other cases 2 are derived from the oblique: INSTR *kaṣṣin-yo*, Dat *kaṣṣin-ać*, LOC *kaṣṣin-aṃ*, ... (*-n-* and *-ṃ-* being purely graphic variants). Secondary cases 2 are widespread in the languages of Soviet Daghestan. For instance, in Lezgian the ergative, a primary case 2, is derived from the base: the base *lam* 'donkey' -ERG *lamra,* while the other cases 2, being secondary, are built formally on the ergative: GEN *lamra-n,* DAT *lamra-z,* ADESS *lamra-v,* ... In Dargwa, we find as many as three layers of case 2 markers: the primary ergative *(žuz* 'book—ERG *žuzli),* the secondary dative and allative (formally derived from the ergative: DAT *žuzli-s,* ALL *žuzli-či)* and the tertiary comitative and discussive (formally derived from the allative: COM *žuzliči-l* 'together with book', DISC *žuzliči-la* 'about a book'). Note that formally the ending $\underline{M}$ of a secondary case 2 *c* consists of two case 2 markers: $\underline{m}_1 + \underline{m}_2$ (= $\underline{M}$), of which only $\underline{m}_2$ expresses the case 2 *c*, $\underline{m}_1$ being—in this context—an empty morph, a sort of epenthesis, with no semantic content.

Secondary cases 2 should not be confused with compound cases 2: see immediately below.

5. *Simple* vs. *Compound* Cases 2. A simple case 2 is a (part of a) "simple" signatum expressed by an unanalyzable marker; a compound case 2 is a "compound" signatum $\sigma = \sigma_1 \oplus \sigma_2 \oplus \ldots \oplus \sigma_n$ expressed by a compound ending $\underline{M} = \underline{m}_1 \oplus \underline{m}_2 \oplus \ldots \oplus \underline{m}_n$ such that $\underline{m}_1 = \underline{m}_1(\sigma_1)$, $\underline{m}_2 = \underline{m}_2(\sigma_2)$, ..., $\underline{m}_n = \underline{m}_n(\sigma_n)$, i.e., each component of the compound case marker expresses a component of the compound case signatum. The most typical instance of compound cases 2 are locative cases 2 in several Daghestanian languages; here $\underline{m}_1$ expresses the localization, and $\underline{m}_2$—the orientation ('being there' - 'moving to/towards' - moving from' -

'moving through'). Cf. in Lezgian: POSTESSIVE *vaxa-q*^{h} '[being] behind the sister'—POSTLATIVE *vaxa-q*^{h}*-di* '[moving] to behind the sister'—POSTELATIVE *vaxa-q*^{h}*-aj* '[moving] from behind the sister'; or SUBESSIVE *vaxa-k* '[being] under the sister' —SUBLATIVE *vaxa-k-di* '[moving] to under the sister' —SUBELATIVE *vaxa-k-aj* '[moving] from under the sister'. (The terms for compound cases 2 reflect their internal structure: the terms are also compound; namely, the first component of a compound case 2 term specifies the localization [POST- = 'behind', SUB- = 'under', ...], and the second, the orientation [-ESSIVE = 'being', -LATIVE = 'moving to', -ELATIVE = 'moving from'].)

The contrasts "primary *vs.* secondary" and "simple *vs.* compound" are logically independent; thus we have all four possible combinations: primary simple cases 2 (e.g., the Lezgian ergative: *vax* 'sister' - ERG *vaxa*); primary compound cases 2 (Didoy [= Tsez] locative cases 2; e.g., NOM *hon* 'mountain' - SUPERL *hon-tx̌o* - SUPEREL *hon-tx̌-aj* - SUPERPROL *hon-tx̌-aza*); secondary simple cases 2 (the Lezgian dative: *vaxa-z*); and secondary compound cases 2 (Lezgian locative cases 2—such as postlative, postelative, etc.).

Compound cases 2 create an interesting theoretical dilemma: Either we admit compound cases 2 and thereby accept non-elementary grammemes (since, according to our own definition, a compound case 2 is a grammeme) or we ban compound cases 2 altogether and analyze forms such as the Lezgian postlative *vaxa-q*^{h}*-di* '[moving] to behind the sister' as manifesting two different categories: (simple) case 1 expressing the localization ('in', 'on', 'behind', 'under', ...) and a new inflectional category, say, orientation, expressing the type of movement ('being there', 'moving to', ...). It is impossible to discuss here the problem in its full complexity, and I will do no more than outline a possible line of argument.

Following the traditional view, I prefer to admit the existence of compound cases 2 and *eo ipso* of compound grammemes.[15] My reasons are that compound cases 2 belong to the same paradigm as simple cases 2 (whatever it may mean) and behave—on the syntactic level—exactly as simple cases 2 do. In particular, a compound case 2 is often governed (by a verb) as a whole, completely independently of the components of its signatum. Thus we find in Lezgian the following:

the verb *inanmiš tir* 'believe [in]' governs the postessive;
the verb *reγüda* 'feel shy [in front of]' governs the postelative;
the verb *kučeda* 'be afraid [of]' governs the subelative;

cf. the examples in (11):

(11) a. *Xalk'* *vičin* *k'uvat-di-q^{h}*
nation-SG-NOM own force-SG-POSTESS
inanmiš tir
believe-PRES
'The nation believes in its own force'.

b. *Mualim-di-q^{h}-aj* *reγüda*
teacher-SG-POSTEL feel.shy-PRES
'He/she feels shy in the presence of a teacher'.

c. *Mualim-di-k-aj* *kučeda*
teacher-SG-SUBEL be.afraid-PRES
'He/she is afraid of the teacher'.

On the other hand, though, in genuine locative contexts ('run [to] behind the tree', 'crawl out from under the stone', ...) the uses of compound cases 2 follow from the semantic components of their signata. The foregoing makes one think of lexical idiomatic expressions and their relationship to simple lexemes: e.g., ***kick the bucket*** can be understood and used in accordance with its "compositional" meaning (= 'kick' + 'the bucket', as in, e.g., ***He angrily kicked the bucket full of dirty water, swore and stepped out of the cabin***); but most often it is used as a non-decomposable whole, meaning 'to die' (with a note of flippancy with regard to the person who died). Something very similar seems to hold concerning compound cases 2: the signatum of a compound case 2 is an easily "idiomatizable" complex of, so to speak, subgrammemes. This is exactly the solution I propose for the problem of compound cases 2: the concept of grammeme should subsume idiomatized (or idiomatizable) complexes of 'smaller' grammatical elements, which I suggest calling subgrammemes. The subgrammemes will be introduced in parallel with submorphs to be distinguished in such well-known instances as Russ. *za-by-(t')* 'forget' (no longer related semantically to *by-(t')* 'be') or *s-umasšedš-(ij)* 'mad, crazy' (lit. 'from-reason-having-descended'), etc. This concept of subgrammemes corresponds to one of R.

Jakobson's favorite principles: to look for and state ALL minimal correspondences between meaning and sound, even those that lie deep under "normal" morphic level (cf. Mel'čuk 1977b). However, this quest for minimal meaning-sound correspondences and the description thereof do not belong to a linguistic$_1$ model, i.e., they are not part of the description of a language. Just like Jakobsonian case features, the subgrammemes should be treated in a META-linguistic$_1$ model, i.e., in the description of our description of the language in question. Therefore, if we keep the model and the meta-model strictly separated, the problem of compound cases 2 is solved: they are compound in the meta-model; in the model itself they are described in exactly the same way as simple cases 2.

6. *Autonomous* vs. *Non-autonomous* Cases 2 (Zaliznjak 1973:69-74). A case 2 *c* is (morphologically) autonomous if it has at least one marker that does not coincide with a marker of any other case 2 which can appear on the same base (= stem) as *c*; otherwise, *c* is non-autonomous. The Russian dative is autonomous, since it has, e.g., the marker *-u* that unambiguously signals the dative with *derev-* 'tree' or *okn-* 'window' (in fact, it has also the unambiguous marker *-am* in the plural). But the Russian partitive is non-autonomous, since its only marker *-u* always coincides with the dative *-u* of the same stem: *snégu* can be the dative or the partitive of 'snow', and this is true of all nouns which have the partitive.[16]

It is obvious that in principle it is always possible to do without any non-autonomous case 2, using instead the case(s) 2 with which our non-autonomous case 2 is homophonous. This will entail, though, an increase in the complexity of the corresponding SSynt-rules, so that there is a trade-off between the complexity of a given case system (in particular, the presence/absence of non-autonomous cases 2) and the complexity of the SSynt-rules of the same language (as explicitly stated in Zaliznjak 1973:69). For instance, we can reject the Russian partitive altogether, treating the forms such as (*nemnogo*) *snegu* <*saxaru, pesku, ...*> as dative forms and including into the SSynt-rules of Russian several rules allowing the dative (of a lexically specified subset of masculine nouns) to appear in the three types of context mentioned in Section 7, p. 52. However, these rules would be more complex than the corresponding rule for the partitive. The latter simply

says "In contexts *C* you may use the partitive", while the former have to say much more: "In context *C* you may use the dative if the given noun belongs to the following list". Whether or not a particular noun has the partitive is quite naturally specified in its morphological characterization (in the dictionary), and there is no need to mention the fact in SSynt-rules again. But it is impossible to specify in the morphological characterization of a noun whether or not it has the dative usable only in restricted syntactic contexts *C*: such a strange "dative" would in fact be a different case 2, i.e., the partitive. Therefore we would have to state all the constraints needed for the "partitive" use of the dative in the SSynt-rules.

With considerations such as the above as our guide, we can ensure that a decision concerning the admission of a non-autonomous case 2 into the case 2 inventory of $\mathcal{L}$ is taken on a principled basis. Namely, I propose the PRINCIPLE OF INTERNAL AUTONOMY OF CASES 2. (This is, in a rather loose sense, the inverse of the Principle of External Autonomy of Case 2 Forms, p. 54: there, the choice of a case 2 form should not be contingent upon a different wordform that syntactically subordinates the nominal in question; here, the choice of a case 2 (depending on a different wordform) should not be contingent on idiosyncratic properties of the stem to be declined.)

(PIAC) A morphologically non-autonomous case 2 should be admitted into the case 2 inventory of a language $\mathcal{L}$ if and only if otherwise the SSynt-rules which state the selection of cases 2 would have to mention individual properties of the lexeme to be declined.

If we do not admit the partitive into the case 2 inventory of Russian (and use the dative instead), then the SSynt-rules specifying the contexts for these "partitive" datives must unavoidably refer to individual lexemes (SUP 'soup', but not BORŠČ 'borsht': *Nalej supu* <**boršču*> 'Give (me) some soup <borsht>'; PESOK 'sand', but not GRANIT 'granit'; LUK 'onions', but not OVËS 'oats'; etc.). With the partitive in our case 2 inventory, the Russian SSynt-rules simply require the partitive (in the appropriate position) or the genitive, the first being selected—on the syntactic level—if the noun in question has it.

The information on whether a noun has the partitive or not must be stored anyway in the morphological zone of its dictionary entry. Thus all individual lexemic peculiarities are relegated to the domain of morphological description. This is exactly the main idea behind the PIAC: to keep the syntax as free as possible of all morphological deviances and caprices. Where such deviances do not appear, there is no reason to postulate a non-autonomous case 2.

A good example of the situation where the PIAC forbids a non-autonomous case 2 is found in Lak (Daghestan). Here, the (grammatical?) subject of a transitive verb is marked by the nominative if it is a 1st or 2nd person pronoun and by the genitive otherwise (without a single exception):

(12) a. *Na* *<Ina>* *lu* *bukka-ra*
I-NOM thou-NOM book-NOM read-1/2PERS
'I <You-sg> read the book'.

b. *Uss-i-l* *<Ars-na-l>* *lu* *bukka-j*
he-GEN son-GEN book-NOM read-3PERS
'He <The son> reads the book'.

Logically, one could postulate for Lak a morphologically non-autonomous ergative, whose forms coincide with the nominative forms in 1st/2nd person pronouns and with the genitive forms in all other nominals (= 3rd person pronouns and nouns). However, the PIAC does not allow us to do so, since in the SSynt-rules of Lak specifying the choice of the nominative *vs.* the genitive in a transitive subject, no individual lexemic properties need be mentioned.

To complete the general picture of cases 2, I probably should briefly touch upon the AGREED nominal cases that—according to the proviso at the beginning of Section 1—are not cases 2 and do not belong to case 1 but constitute a different inflectional category of the noun: CASUS CONCORDATUS.

Typically, a case 2 of a noun N is governed, i.e., determined by the SSynt-relation in which N is dependent (X——→N) as well as by certain lexemic properties of the lexeme which syntactically subordinates N. However, in some languages the noun has markers physically identical with (or similar to) the markers of cases 2 but fulfilling quite a different function: these caselike forms mark the agreement of N with another noun N', such that N belongs to NP

headed by N', i.e., N∈NP(N'). Note that N is not necessarily a direct dependent of N' and, therefore, we cannot say that the caselike forms in question mark the dependent SSynt-role of the noun. Moreover, N receives two consecutive "case" markings, one of which (as a rule, the first one) is an actual (= governed) case 2, marking the dependent SSynt-role of N within NP(N'), and the other one is an agreed case, which automatically reflects the case 2 of N'. Let me give two examples:

- In Ngarluma (Australia), all the nouns in a relative clause mark, in addition to their own case 2, the case 2 of the head (= noun modified by this clause). For instance, if we simulate two Ngarluma sentences in Russian, we get the following:

(13) a. *Ja vižu mal'čik-a, kotor-ogo-ogo ukusila*
I see boy-ACC which-ACC-ACC bit
sobak-a-u
dog-NOM-ACC
'I see the boy whom the dog bit'.

vs.

b. *Ja vstretilsja s mal'čik-om, kotor-ogo-im*
I met with boy-INSTR which-ACC-INSTR
ukusila sobak-a-oj
bit dog-NOM-INSTR
'I met with the boy whom the dog bit'.

In (13a) and (13b), the relative clauses mean strictly the same; the markers of the agreed cases are underlined.

- In Old Georgian, a noun N as an adnominal attribute of another noun N' receives the governed genitive (marking the dependency of N on N') as well as the reflection of the case 2 of the governing noun N':

(14) *saxel -man mam -isa -man*
name -ERG father-GEN-ERG
'father's name';
saxel -ita mam -isa -jta
name -INSTR father-GEN-INSTR
'with father's name; etc.

The second suffix in the forms of *mama* 'father' is the marker of an agreed case.

In a general theory of nominal case we will have to consider both CASE I, or GOVERNED CASE, with the subdivisions we have introduced: *case I.1*, *case I.2* and *case I.3*; and CASE II, or AGREED CASE, with analogous subdivisions: *case II.1* (the category), *case II.2* (specific cases II) and *case II.3* (the form of a case II.2).[17] However, as stated in Section 1, the agreed nominal case is not discussed in the present paper.

10.
Illustrative Inventory of Cases 2.

The number of cases 2 varies from language to language. Without claiming a definitive status for my figures (since many cases 2 are problematic in several languages), I will illustrate the astonishing variety of cases 2. There are:

– 2	cases 2 in	Old French and Esperanto;
– 3	" " "	Classical Arabic, Hindi, Kabardian, and Rumanian;
– 4	" " "	Adyghe and German;
– 5	" " "	Old Greek;
– 6	" " "	Osmanli Turkish;
– 7	" " "	Latin, Georgian, and Kannada;
– 8	" " "	Sanskrit;
– 9	" " "	Tokharian A;
– 10	" " "	Tokharian B and Russian;
– 14	" " "	Estonian;
– 15	" " "	Finnish;
– 16	" " "	Chechen;
– 21	" " "	Hungarian;
– 22	" " "	Bats (related to Chechen);
– 26	" " "	Andi and Archi;
– 27	" " "	Dargwa;
– 42	" " "	Lak;
– 46	" " "	Tabassaran.

The last figure—46—is the empirical maximum known to us today; it is obviously impossible to establish a theoretical

maximum. As for the theoretical minimum of cases 2 in a language, it is rather obvious: two (this follows from the definition of inflectional category, see Section 2, item 5).

In the list which follows I indicate only the most important SSynt-roles (and meanings, if any) marked by each case 2; this rough characterization should not be misconstrued as an attempt at definition.

1. Nominative: designation of things (outside of any syntactic context). Other frequent SSynt-roles marked by the nominative: the grammatical subject (in the so-called nominative construction, as in Latin, Russian, Turkish, etc.); the direct object (in the so-called ergative construction, as in Georgian or Chukchee); the predicative nominal; adverbial of duration (in languages with the ergative construction); several types of attributes.

2. Subjective: marks any grammatical subject (but cannot be used as the designation of a thing); cf. Japanese *-ga*-case 2.

3. Ergative: marks either the agentive grammatical subject (of a transitive verb) or the complement of agent. (The ergative may be more or less directly related to the semantic component of 'causation'.)

4. Accusative: marks the direct object, i.e., the "patient" main object of a transitive verb (for the concept of 'transitive' see Mel'čuk 1979:50–51; the accusative may be also related to 'causation'—very roughly, it marks the name of the thing undergoing causation). Other frequent SSynt-roles: adverbials of duration (*čitat' celyj den'* 'to read the whole day') or of relation ('with respect to', as in, e.g., Old Greek); may be also governed by some prepositions.

5. Pathetive: marks the "patientive" grammatical subject of a transitive verb (in Dyirbal; see Mel'čuk 1979:52–53 and passim).

6. Dative: marks the indirect object of a verb (destination, addressee, experiencer), especially of verbs of 'giving'; hence the name. Other SSynt-roles: a complement governed by some prepositions; Dativus Ethicus and the like; the grammatical subject in the so-called affective construction ("to-me sees he", meaning 'I see him').

7. Instrumental: marks the instrument or the means. Other SSynt-roles: the agent with the passive; the predicative nominal; the grammatical subject in the ergative construction; several adverbials; a complement governed by some prepositions.

8. Genitive: marks the adnominal attribute (the transform of the grammatical subject or the direct object: Benveniste 1962). Other SSynt-roles: the direct object after a negated transitive verb; the main object of some verbs; a complement governed by some prepositions; the agent with the passive (Lithuanian); and the grammatical subject in an ergative construction.

9. Partitive: marks (almost) the same SSynt-roles as the accusative and the nominative but adds the meaning of 'indeterminacy' (≈ 'some', 'part of...'). Thus in Basque it appears with an indefinite grammatical subject (of an intransitive verb) and with an indefinite direct object in negative or interrogative sentences. It also marks nouns depending on a quantitative expression (as in Russian *pobol'še <polkilo> saxaru* ' a bit more <half a kilo> sugar [please]').

10. Oblique: marks the same SSynt-roles as the cases 2 from the accusative through the partitive, i.e., all roles except the grammatical subject in a nominative construction and the direct object in a certain type of ergative construction.

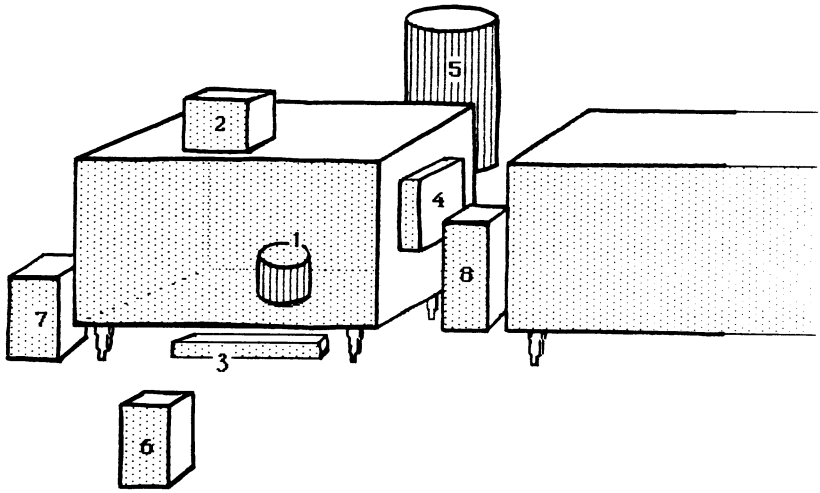
The first ten cases 2 presented above are the so-called "grammatical" (also "abstract" or "syntactic") cases 2. As a rule, they do not express meanings—or, if they do, they do not do it in a very systematic way. (Their meanings, for example, depend on the construction in which they appear, or on other factors.) In general, it is difficult and sometimes impossible to ascribe a particular well-defined meaning or a set of well-defined meanings to a particular "grammatical" case 2 as such.[18]

As opposed to the above, all the following cases 2 are "adverbial" (also "concrete" or "semantic") cases 2. Each of these, in addition to marking a SSynt-role, which is most often a circumstantial (= adverbial) or, less frequently, a governed object or complement, expresses a particular meaning.

I will begin with "local" cases 2—or cases 2 which express localization with respect to the object denoted by the nominal stem. One can think of eight localizations, which are designated below with Latin prepositions:[19]

1)	within the object:	*In-*
2)	on/over its upper surface (outside):	*Super-*
3)	on/under its lower surface (outside):	*Sub-*
4)	on its lateral surface (outside):	*Ad-*
5)	behind it:	*Post-*

6) in front of it: *Ante-*
7) near it: *Apud-*
8) between two (or among many) objects: *Inter-*



At the same time, the idea of localization can be specified with respect to movement—to produce five types of movements, designated below also with Latin terms:

1) rest ('being there'): *-essive*
2) traveling to: *-lative*
3) traveling out of/from: *-elative*
4) traveling through: *-prolative*
5) traveling towards: *-directive*

The combination of eight localizations with five types of movements produces 40 local cases, of which only several examples will be given here:

11. Inessive: 'being within...'
12. Illative: 'traveling into...'
13. Inelative: 'traveling from within...'
14. Improlative: 'traveling through...'
15. Indirective: 'traveling towards within...'
16. Superessive: 'being on/over the upper surface of...'
17. Superlative: 'traveling onto...'
18. Superlative: 'traveling from the upper surface of...'

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.
.

48. Interelative: 'traveling from between/among...'
49. Interprolative: 'traveling through between/among...'
50. Interdirective: 'traveling towards a point between/among...'

Three remarks seem to be in order here:

First, this is by no means a maximal scheme of all possible local cases 2. More distinctions may be made and are actually made in various languages. Thus, there can be cases 2 distinguishing 'being on a vertical surface' vs. 'being on an inclined surface', 'being [somewhere] with contact' vs. 'being [somewhere] with no contact', 'being on an inner surface' vs. 'being on an outer surface', etc.; there can be more localizations (e.g., 'being around' = *Circum-*), and more types of movement (e.g., 'traveling up to' = *-terminative*), and the like.

Second, wild as some of the quoted cases 2 may seem, they do actually occur. I will illustrate one of the local cases 2—the postdirective—from Lak (Žirkov 1955:41):

(15) *qqat-lu-x-un-m-aj* 'in the direction to behind the house',
i.e., 'toward the rear wall/side of the house',

where:

qqat is the root of *qqatta* 'house';
-lu is an empty suffix (of a series of empty suffixes that are added regularly to a nominal root before a case ending);
-x is the marker of 'behind' (= *Post-*);
-un is the marker of 'traveling to' [= *-lative*; the form *qqatluxun* exists and means 'to go behind the house': the final point of this movement must be behind the house];
-m is the assimilated variant of the class marker *-v* (roughly, classes I and III), which refers to the class of the object traveling towards the space behind the house [instead of *-m-*, we could get *-n<-d* (classes II and IV)];
-aj is the marker of ≈ 'not necessarily arriving at the destination' [so that *-un* and *-aj*, taken together, mean 'traveling towards' = *-directive*].

Third, in less developed case systems abbreviated case names are used; let me give the most current ones:

Locative	= Inessive + Adessive + Superessive +...
Ablative	= Inelative + Adelative + Apudelative +...
Delative	= Superelative + Adelative + Apudelative +...
Translative	= Improlative + Superprolative + Apudprolative +...

Now I will list several further adverbial cases 2, which do not form such a nicely organized system:

51.	Comitative:	'(together) with', 'accompanied by'
52.	Privative:	'without'
53.	Causal:	'because of'
54.	Motivative:	'for the sake of'
55.	Distributive:	'*n* [= a number] X ... each'
56.	Comparative:	'compared to' [≃ 'than']
57.	Discussive:	'[speaking] about', 'as for'
58.	Modal/Equative:	'as...', 'in its capacity of'
50.	Temporal:	'in the time of'
60.	Pretemporal:	'before'
61.	Posttemporal:	'after'
62.	Protemporal:	'during'
63.	Vocative:	marks the direct address (normally, to a person).

11.
The Russian Genitive in Numeral Phrases (A Problematic Situation).

As is well known, with the "small" numerals DVA '2', TRI '3' and ČETYRE '4' standing in the nominative or the accusative (the latter with inanimate nouns only), a Russian noun must be in the genitive (singular): *dva stakan-a* 'two glasses', *tri sestr-y* 'three sisters', or *četyre okn-a* 'four windows'. In my analysis of Russian numeral phrases Num + N, it is the numeral that syntactically depends on the noun: Num←——N (Mel'čuk 1984). Therefore, it may be concluded that in such phrases the genitive of the noun marks its role as the SSynt-governor (of the respective numeral)—which contradicts our definition of case 1 as the category called upon to mark the DEPENDENT SSynt-roles of nominals. Note that even if my proposal for the direction of

dependency in the Russian Num + N phrases is not accepted, the problem nevertheless remains, since it is logically feasible that—in some other construction—a SSynt-dependent of a noun influences the choice of its case 2. The solution to the problem, however, seems to be quite straightforward: the case 2 of the head noun N in phrases of this type still marks the dependent role of this noun (with regard to its own SSynt-governor)—but CONDITIONALLY; namely, if and only if N itself has a particular type of dependent. Thus in Russian Num←——N phrases the genitive (singular) of N marks its role as the grammatical subject or the direct object UNDER THE CONDITION that this N syntactically subordinates a "small" numeral (DVA, TRI or ČETYRE). Such conditional case-marking of SSynt-roles is not extremely widespread but it does occur, and the possibility of its occurrence must be accounted for in a general theory of case 1.

It is worth noting that conditional case-marking means that during the synthesis of a text from a given semantic representation, cases 2 can be ascribed to nouns not in one step but in a more complicated way. Suppose that a Russian transitive verb V syntactically subordinates the noun N as its main object; this V governs the accusative of its main object and therefore N must be in the accusative. But N subordinates, in its turn, a "small" numeral Num—which, as we know, requires the genitive of N. Then the following happens: one surface-syntactic rule ascribes the accusative, so to speak, to the entire phrase Num←——N (it is this phrase that plays—as a whole—the SSynt-role of a direct object); then a second SSynt-rule "distributes" this accusative among the constituents of the phrase: namely, the accusative "permeates" to Num, and N receives the genitive. (This hasty description does not, of course, properly represent the two-step case marking; for more details see Mel'čuk 1984:163 ff.)

12.
Main Tendencies in the Study of Case 1.

Two main tendencies can be clearly distinguished in linguistic$_2$ investigations aimed at the theory and description of case 1.

1. The first approach is based exclusively (or at least primarily) on SYNTAGMATIC considerations and tends to treat a case 2 as the class of all nominal forms mutually substitutable in

certain specified governing contexts; cf. Revzin 1967:139–55, Marcus 1967, Zaliznjak 1967:36–55 and 1973, Gladkij 1969:110–23 and 1973. Case 1 is considered a purely syntactic category, virtually meaningless. The goal is to establish the set of relevant contexts and to develop reliable procedures that return the inventory of cases 2 of a given language, based on the ability of several nominal forms to be governed—that is, to be admitted or excluded by diagnostic context frames—in an identical way. As can be expected, this method ensures best results in the domain of syntactic (= abstract or grammatical) cases 2.

2. The second approach is based primarily on PARADIGMATIC considerations and tends to treat a case 2 as a specific meaning, so that a system of cases 2 can be represented in terms of several semantic features; cf., in particular, the work of L. Hjelmslev (1935–37/1972) and R. Jakobson (1936/1971, 1958/1971). Case 1 is considered a semantic category, virtually always meaningful. The goal is to establish the set of case contrasts within nominal paradigms, to isolate the "nuclear", or "underlying", meaning of each case 2 (= Jakobson's *Grundbedeutung*) and to describe the semantic content of specific cases 2. (Here the provocative work of A. Wierzbicka (1980b and 1983) is of particular interest.) This method is especially good in the domain of semantic (= concrete or adverbial) cases 2, primarily when applied to local cases 2.

Personally, I am convinced that only an appropriate combination of both approaches is capable of yielding satisfactory results. Case 1 is mainly a syntactic category, and cases 2 are there, before all, to mark passive SSynt-roles of nominals; at the same time, though, they so often convey a meaning that it is impossible to describe them without accounting for their semantic load. Yet one cannot abstract from their basically syntactic nature either: the majority of cases 2 cannot be described exclusively in terms of their semantic content; they are, as a rule, entailed by particular syntactic constructions or by particular lexical items in particular constructions. Therefore, a double-facetted description, put forth in our definition of case 1, imposes itself.

Now, as a coda to my overstretched improvisation, I will touch upon the notion of "deep case", as launched and developed by Fillmore (1968 and 1977). As a matter of fact, Fillmore's deep cases are SEMANTIC RELATIONS obtaining between lexeme

occurrences in a sentence, more precisely, those between a predicate lexeme and its semantic arguments. These relations can be expressed (on the surface) by cases 2, by prepositions/postpositions or even by word order (as Fillmore himself has repeatedly stated). Just for this reason, I don't think the term *deep case* itself is entirely felicitous; to me, it is rather a misnomer, and if linguists are to use it, they should use it cautiously. (I, for one, would prefer calling semantic relations *semantic relations*.)

As for the notion as such, it has proven extremely fruitful, bringing about a new dimension in semantic research and contributing to the shift from the syntax-centered transformationalism of the 60's to the semantically-based studies of today. True, deep cases in the sense of Fillmore are only tangentially related to case 1 as understood in this paper and consequently they need not be discussed here. However, given the popularity and the importance that the notion "deep case" enjoyed in modern linguistics, I feel that it would be useful to add the following three remarks.

1. A Fillmorean deep case is a semantic relation between a predicate and one of its arguments:

(16) *I cut my foot on a rock*:
EXPERIENCER(*I, cut*)
PATIENT(*foot, cut*)
GOAL(*rock, movement of the foot*)

But '(be) experiencer of', '(be) patient of' and '(be) goal of' (and in general all semantic relations) are, in their turn, predicates. If we strive for a quite homogeneous semantic representation, then the relation of such a predicate to each of its arguments should be expressed as well by a deep case of second order: EXPERIENCER $\rightarrow$ *I* and EXPERIENCER $\rightarrow$ *cut*, etc. These second-order deep cases will face the same problem: how to express the relations between them and their arguments? We will need third-order deep cases, and in this way, we will enter into an infinite regression. The only way to avoid this is to draw ARBITRARILY a line somewhere, e.g., just after the deep cases of the first order. However, such a solution is not to be recommended for a consistent semantic representation. (A preferable solution: never to characterize semantically the relations between a predicate and

its arguments; these relations will be fully specified by the semantic decomposition of the predicate itself—for which it is sufficient to differentiate somehow the arguments of the same predicate and indicate their respective positions in its semantic decomposition.)

2. If a deep case is a genuine meaning, i.e., a full-fledged semanteme, then it could be expressed by an English lexeme or phrase: there are, after all, such English lexemes as EXPERIENCE or GOAL. In this event, the question arises: how should the deep cases of these lexical units be expressed? For instance, *John has experienced hunger and need*: EXPERIENCER(*John; experience*), ACTOR(*hunger and need; experience*)? What is in general the respective status of deep cases and lexemes synonymous to them? Or is a deep case never completely synonymous with at least one (sense of) an English lexical unit? (A possible solution: to express ALL meanings in the same manner, thus providing for a homogeneous semantic representation—which, once again, implies the rejection of deep cases as entities with a distinguished status.)

3. Fillmore has of course seen all of the above mentioned difficulties and has insisted that deep cases belong to a special level of utterance representation: an intermediate level between the genuine semantic representation and the (deep) syntactic representation (e.g., Fillmore 1977:60). I think what is meant is a level where all full lexemes of the sentence appear as such, i.e., semantically not decomposed, but their interdependencies are stated in semantic, rather than syntactic, terms. Impressionistically, such a level seems justifiable; it can be, for instance, a surface-semantic representation (cf. Apresjan 1980). Still, I see several problems in this connection, of which I will mention three:

- Some relations between lexeme occurrences in a sentence are utterly asemantic; notorious instances are the grammatical subject and the direct object. It seems very problematic that such relations could be reduced to a common semantic denominator with other, actually semantic, relations.

- The number of semantic relations obtaining in natural sentences is higher than Fillmore's examples imply. If these relations are really semantic (and not simply conventional labels for

disjunctions of semantic elements), then what is needed is several dozen of them (cf., e.g., the list of "semantic valence slots" in Apresjan 1974:125–26 ff.).

– Some relations hold between a lexeme and a PART OF THE MEANING of another lexeme: cf. (18) above, where *foot* is GOAL of the 'movement', which is a semantic component of *cut* (or maybe not of *cut* but rather of the overall meaning of the whole sentence). How can we ensure a more or less homogenous representation in such situations?

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* *

There are, no doubt, more questions to be asked concerning case 1 and cases 2, but I will only mention, by way of conclusion, several relevant problems that have not been touched upon in this paper:

– Case 1 and paradigmatically related categories in other parts of speech (e.g., the category of case and attributivity in adjectives, or mood in verbs: categories that mark passive SSynt-roles of adjectives and verbs, respectively).

– Case 1 and syntagmatically related categories in nominals (e.g., determinacy, number, animacy: categories that tend to be marked together with case 1 by the same cumulative markers).

– Case 1 and government; in particular, case 1 and verbal diathesis.

– Cases 2 *vs.* phrases "noun + postposition".

– Case marking in particular syntactic constructions (i.e., the choice of cases 2 as the function of context).

NOTES

[1]The present paper was written during my stay as a visiting professor at the Linguistics Department of the University of Vienna; I owe my gratitude to Chairman, Professor W.U. Dressler, who provided encouragement and excellent working conditions for me. The first draft was read by Pamela Dougherty, the subsequent versions by Lidija Iordanskaja, Ian Mackenzie and Nikolaj Pertsov, whose remarks, as always, entailed radical changes and contributed a lot towards an improved presentation. Anna Wierzbicka, James Levine and Richard Brecht agreed to comment on the prefinal version. I thank all these colleagues and friends for their criticisms and suggestions; but, of course, I alone take the brunt of any attack occasioned by blunders and inconsistencies that may have remained.

Finally, special thanks are due to the Faculty of Arts and Sciences, the University of Montreal, for help in typing my very complex manuscript (Mr. B. Landriault, assistant to the Dean, and Mrs. M. Braun, the typist).

[2]The present paper continues and develops the attempt undertaken in Mel'čuk 1977a. It also shares several important points with Hockett MS, which summarizes Professor Hockett's talks given in 1953–55 and whose copy the author kindly sent to me in April 1979.

[3]The English adjective *linguistic* is (very unfortunately) ambiguous between 'relating to language' (= Germ. *sprachlich*) and 'relating/pertaining to linguistics' (= Germ. *sprachwissenschaftlich*). I will use subscripts to distinguish both readings: *linguistic*$_1$ = 'relating to language,' *linguistic*$_2$ = 'relating to linguistics.'

[4]We need to speak not only about signata but about PARTS of signata as well for the following reason. A signatum is something that has a special signans of its own, that is, something that can be expressed (in the language considered) as a separate entity. However, we have very often to deal with content entities that are never expressed separately—only together with other content entities; these are parts of signata. The most obvious example is nominal case 1 or nominal number in Russian or Latin: a Russian or Latin case 2 has no separate signans but is expressed syncretically with number (Latin *-us* 'SG. NOM', *-i* 'PL. NOM', *-o* 'SG. DAT', *-ibus* 'PL. DAT', etc.). Therefore, cases 2 and grammatical numbers in these languages are not signata but parts thereof.

[5]In Mel'čuk 1982:31 (and *passim*) I used the term *grammatical* instead of my current *inflectional*. Now I feel that *grammatical* (as applied to *category, signatum, element*, ...) should rather be used to cover both *inflectional* and *derivational*, and I have changed the terminology accordingly.

[6]Interestingly, Hockett (MS:7–8) has also insisted that marking subject–predicate–object relations is "the quintessence of a case-system". As far as I know, he was the first to promote the importance of major SSynt-relations for the definition of case 1.

[7]The state of affairs, as it concerns caselike nominal forms, is far from being always clear-cut. Thus in Abkhaz, the SSynt-roles of the grammatical subject and of both direct and indirect objects are always expressed by the same (= zero) form of the noun; this form is also used with postpositions. However, the Abkhaz noun has three caselike forms (expressed by specific suffixes): transformative (= 'be transformed into...'), instrumental (= 'by means of...') and privative (= 'without'), so that we find, e.g., the following:

(i) a. *Dara jara ʧarʃ'man -s dqarçeit*
they he interpreter into they-him-made
'They made him an interpreter'.

b. *Sara laba-la ala sasit*
I stick with dog I-it-hit
'I hit the dog with a stick'.

These three forms are traditionally considered nominal derivations (or nouns with postpositions), not forms of cases 2—because they are never governed by particular verbs and are obviously full 'semantic' entities. Intuitively, I agree with this analysis but I realize that a serious study is needed to substantiate it.

[8]I reject (with no discussion or special justification) an older approach, which saw in the English noun at least three cases 2: the nominative, the accusative, and the dative, distinguished by word order, as in (ii):

(ii) *John* [Nom] *sent Mary* [Dat] *a new book* [Acc].

To me, word order IN PRINCIPLE cannot mark cases 2. Word order and cases 2 are two types of linguistic$_1$ expressive means—being on equal footing—used to mark SSynt-dependencies. I refer the reader to R. Jakobson, who as far back as 1936, emphasized [the translation is mine. – I.M.]: "... we have no right to say that word order can express case, since word order can express only syntactic functions of words; case and syntactic function are by no means the same" (Jakobson 1936 [1971:28]).

Equally, I do not discuss all "Latinizing" attempts to interpret English prepositions as cases 2: *of* = Gen, *to* = Dat, *with* = Instr, etc.

[9]English personal pronouns (*I*, ..., *they*) do have cases 2: nominative and oblique (*me*, ..., *them*). A special problem (which I cannot treat here) is whether it is advisable to consider possessive adjective (*my* – *mine*, ..., *their* – *theirs*) as genitive forms of personal pronouns. As for the status of possessive (= Saxon Genitive) forms in Modern English, I am against calling them derivational: I do not think we would be justified in considering *wife* and *wife's* as lexes of two different lexemes (and derivation implies deriving a new lexeme); to me, a possessive form belongs to the same lexeme as the basic forms. In order to accomodate English possessive forms in the same lexemes we have to introduce an intermediate mechanism between inflection (in the strict sense of the term) and derivation: something that could be called, say, quasi-inflection, so that all quasi-inflectional forms would be lexes of the same lexeme as the basic forms. English possessive forms would then fall precisely in the realm of quasi-inflection. There are lots of other morphological phenomena which could be handily described in terms of quasi-inflection (and quasi-grammemes)—but this topic goes far beyond the limits of the present paper.

[10]Cf. the succinct formulation of Goddard 1982:169: "A case is a class of nominal forms which are mutually substitutable in certain syntactic or semantic environments given that any two cases ... are formally distinguished by at least one subclass of nominal. Precisely because cases are set up as classes of mutually interchangeable forms, the concept of case enables simple statements of many morphological patterns."

[11]The Principle of External Autonomy seems to lend itself to a more general formulation: it might be true not only of case 2, but of all grammemes induced by a syntactically governing context, i.e., of grammemes imposed by government or agreement. Since, however, such a generalization would require special research, I prefer to limit myself here to a more cautious statement.

[12]One consequence of our PEACF is that we cannot say, with B. Talibov (1967:594–95), that in Tsakhur the genitive case 2 has three different suffixes, such that the choice depends on the noun N' modified by the genitive form N: if the modified noun N' is in the nominative, then if N' is of Class I–II, the genitive on the modifying N receives the suffix *-na*, but if N' is of

Class IV, the genitive on N is expressed by the suffix – *(i)n*; however, if N' itself is not in the nominative, the genitive suffix on N is *–ni*, independent of the class of N' (e.g., *hammaz* 'friend' – *hammaz–na dek*^{h} [I, NOM] 'friend's father' – *hammaz–in jiķ* [IV, NOM] 'friend's heart' – *hammaz–ni dek–is* [I, DAT]/*jiķ–is* [IV, DAT] 'to friend's father/heart'). Following the PEACF, we are forced to admit that Tsakhur has three DIFFERENT genitive cases 2: the Direct Genitive I, modifying nominative nouns of Class I–II; the Direct Genitive II, modifying nominative nouns of Class IV; and the Oblique Genitive, modifying non–nominative nouns. (Let us note, incidentally, that the distinction of a Direct Genitive vs. an Oblique Genitive is a routine matter in several Daghestan languages, especially in all languages of the Didoy (or Tsez) group: Bokarev 1967:401.)

[13]Let it be emphasized that even strongly governed prepositions and, in an analogous manner, cases 2 can be meaningful (= express semantic contrasts directly), if the governing item does not uniquely specify the preposition or the case 2. The following is a telling illustration. The indirect object of the Russian verb KOLOTIT' '(to) pound' can be expressed by one of the three prepositions: V 'in', PO 'all over', O 'on', with the corresponding differences in meaning:

(iii) a. *Maria kolotila butylkoj v dver'* 'Mary was pounding on the door with a bottle—in order to be heard from inside (and admitted)'.

b. *Marija kolotila butylkoj po dveri'* 'Mary was pounding the door with a bottle—in order to damage the door or to make noise'.

c. *Marija kolotila butylkoj o dver'* 'Mary was pounding the door with a bottle—in order to break the bottle'.

Contrasts such as these are equally possible between strongly governed cases 2. Thus, 'being strongly governed' ≠ 'meaningless'; a function word or a case 2 becomes semantically empty (= 'meaningless') if and only if it is strongly governed AND is unique in the given context.

[14]My presentation of Tagalog data is utterly simplified. In fact, Tagalog case particles fulfill further important functions: they are, so to speak, noun actualizators having to do with determination, specificity, etc. Let it be noted that every personal or deictic pronoun in Tagalog has three synthetic case forms; thus *akó* 'I' distinguishes the subjective *akó*, the oblique *ko*, and the lative *akin*.

[15]The consequences of such a decision are not quite clear now; note, however, that in introducing preliminary notions in Section 2, it was not required that a grammeme should be elementary, i.e., "simple".

[16]Suppose that my analysis of the Russian partitive as a partial case 2 (= valid for a subset of masculine mass and abstract nouns only) is not accepted and the partitive is treated instead as a full case 2. Even then its status as a non–autonomous case 2 is not affected: simply, its forms would coincide either with the dative forms or with the genitive forms.

A further example of a non–autonomous case 2 is the Latin locative (which also happens to be a partial case: practically, only proper names of cities and islands have it). In some names the locative coincides with the genitive (*vivo Romae <Corinthi, Cypri>* 'I live in Rome <in Corinthus, on Cyprus>'), while in others—with the ablative (*vivo Athenis <Carthagine>* 'I live in Athens <Carthago>') (Zaliznjak 1973:71).

[17]The picture can even be much more complicated. As reported by Nicholas Evans ("Modal Case Marking in Kayartilt", manuscript), in Kayartilt, an Australian language, a noun can accumulate up to four case suffixes. Thus the first suffix of a noun N is a case 1 suffix; it marks the

semantico-syntactic role of N in the clause: for example, the instrumental. The second suffix manifests the so-called modal case of N: together with the main verb inflection it signals the general modality of the sentence ('instantiated' [= 'past or present'] ~ 'future' ~ 'low reality status', etc.); for example, the genitive as a modal case signals low reality status. The third suffix (appearing automatically on all the words of the sentence) specifies the connection of the sentence with the preceding discourse; so, for example, the purposive indicates a contradiction to previous remarks (something like the French *Mais si!*). Now, suppose there is a N' depending on N; this N' will "inherit"—by rules of "case agreement" operating within NPs—all these three case suffixes of N and add them after its own case 1 suffix (the possessive or the genitive). Therefore, the result will be four case suffixes in a row! Here is Evans' example:

(iv) *ngijuwa* *yalawu-jarra-* *ntha* *yakuri-naa-* *ntha*
I-NOM-PURP catch IRREAL PURP fish GEN PURP

waytpala- *karra-nguni-* *naa-* *ntha* [=N']
white.man POSS INSTR GEN PURP

mijil-nguni- *naa-* *ntha* [=N],
net INSTR GEN PURP

which means: 'Yes, I did catch some fish with the white man's net' (an answer to an unfounded allegation, such as 'you didn't catch any fish').

It follows from this evidence that we must introduce more case (or caselike?) categories: CASE III—modal case in the sense of Evans and, probably, CASE IV—discourse-bound case. However interesting, these facts do not interfere with our analysis of case I.

[18]Suppose, indeed, that in Georgian there is a semantic difference between the nominative and the ergative, on the one hand, and between the dative-accusative and the nominative, on the other. However, (v a) and (v b) do not show the slightest semantic difference beyond the obvious difference in tense:

(v) a. *Studenti* *çerils* *çers*
Student-NOM letter-DAT.ACC write-PRES
'The student is writing a letter'.

b. *Studentma* *çerili* *daçera*
Student-ERG letter-NOM write-AOR
'The student wrote a letter'.

The alternation "nominative/ergative" (in the grammatical subject) and "dative-accusative/nominative" (in the direct object) is an automatic function of the verbal tense: nominative and dative-accusative with the present; ergative and nominative with the aorist. These trivial facts obviously contradict the hypothesis about semantic differentiation of the said cases 2 (at least, in the construction considered). A further example is provided by Lak, where the grammatical subject of a transitive verb in all tenses and moods is in the genitive, if it is a noun or a 3rd person pronoun and in the nominative otherwise (i.e., if it is a 1st or 2nd person pronoun: see (12) on p. 68. The choice of the subject case 2 is thus also quite automatic in Lak (although contingent on a different factor); I do not see how this fact is compatible with the hypothesis of cases 2 being always semantically loaded. Nevertheless, SOME 'grammatical' cases 2 in SOME contexts do have meaning. Let me mention here an insightful analysis by A. Wierzbicka (following the trail blazed by R. Jakobson); namely, her description of the genitive 'of quick use' in the direct object in Polish, meaning 'I don't think of it as such a big thing' (Wierzbicka 1983):

(vi) a. *Daj mi świeczki!*
Give me candle–DIM–GEN

implies that the speaker wants to do something not very serious and needs a light just for a moment, while

b. *Daj mi świeczkę!*
candle–DIM–ACC

presupposes that the speaker wants the candle. Cf. also her description of possible meanings of the Polish dative: this volume, pp. 386–426.

[19]The following system of local cases 2, including the nomenclature of case labels, is essentially borrowed from the famous work Hjelmslev 1935–37/1972, with a few changes aimed at rationalization and simplification.

On Delimiting Cases[1]

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Introduction

How many cases are there in Russian? One would hope that a general theory of case would provide an unequivocal and motivated answer to a question like this. Yet, anyone familiar with the literature on case in Russian will be aware that there is considerable controversy surrounding the answer to just this simple question. There is, of course, a traditional answer: six, namely nominative, accusative, genitive, dative, instrumental, and prepositional, and this is the answer assumed in most traditional and pedagogical grammars. However, there is some reason for saying that Russian has a separate vocative case, to the extent that such forms as ***bože***, distinct from nominative ***bog*** 'God', are part of the contemporary language, and even more for saying that Russian actually distinguishes two genitives, given that some nouns have distinct forms such as partitive genitive ***syru*** and nonpartitive genitive ***syra*** from ***syr*** 'cheese', and that it makes a distinction between a prepositional and a locative, as in prepositional ***sade*** and locative ***sadu*** from ***sad*** 'garden'. In this article, I will try to investigate in more detail the motivation underlying the traditional array of cases, in particular for the Slavic languages, showing how this traditional characterization combines formal and functional criteria (section 2). I will then argue that this combined formal-functional approach, however advantageous it may seem ***a priori***, in fact leads to immense complications in the description of case as a morphological phenomenon (section 3). I will therefore suggest that the concept of case should be split into two separate concepts, the one formal, the other functional. While some languages happen to have formal case systems and functional case systems that are in one-one correspondence, this is by no means always so, and in some languages the discrepancy between the two systems is great. Finally, the introduction of features will bridge the gap between form and function. Although the presentation concentrates on examples from Slavic languages, I have at times

resorted to genetically less closely related languages, such as Latvian and Latin, or even genetically totally unrelated languages, such as Turkish and Dyirbal, to illustrate particular points that cannot be illustrated, or cannot be illustrated so clearly, with Slavic material. The aim of a general theory of case should, of course, be to deal with the case system of any arbitrary language, which means that it is always necessary to evaluate a proposal against the most difficult testcase—a proposal that just happens to work for an easy set of data is of no general interest.

In attempting to delimit case(s), there are in fact two problems, only one of which will concern us here. The first is how to delimit case from other sets of categories, such as number, gender, definiteness, also prepositional collocation. This first problem is thus the external delimitation of case; this will not be our concern within this article, although occasionally it will impinge on our more central concerns. The external delimitation of case in turn involves two subproblems. First, the conceptual side of defining case, for instance distinguishing case from gender and number. Although this task might seem straightforward at first sight, and there are traditional definitions such as 'establishing a relation between a noun phrase and the rest of the sentence', there do remain problem instances, or at least instances where the traditional listing of cases is not obviously consistent with this definition. For instance, it has often been noted that the vocative is not obviously a case by this definition. The so-called accusative in Turkish expresses not only a relation (direct object of verb), but also the nonrelational category of definiteness, so that a single morphological category straddles the boundary between case and definiteness. Second, it is necessary to delimit case externally in formal terms, in particular to be able to distinguish case forms of a noun phrase from combinations of a noun phrase with a preposition or postposition. Fortunately, in Slavic languages, this particular problem rarely arises, although this does not absolve a general theory of case of the need to treat such apparently intermediate instances as the comitative in many Balto-Finnic languages, where a postposition is in process of being reanalyzed as a case suffix. One related problem that does, however, arise in Slavic languages is the distinction between cases of nominals, especially the genitive, and adjectival derivatives of nominals. Thus in Czech, the same function is carried by the possessive adjective in ***vědcova kniha*** 'the scientist's book' as by the genitive noun phrase in ***kniha toho vědce***

'the book of that scientist'; in Russian, the same function is carried by the possessive adjective in *moja kniga* 'my book' as by the genitive in *kniga studenta* 'the book of the student'.

For the purposes of this article, I will assume that the problem of the external delimitation of case has been solved and concentrate on the internal delimitation of cases, i.e. on the criteria that enable us to establish the number and identity of the cases in a given language. I assume that the solution to this problem must bear some resemblance to the traditional solution, e.g. the traditional cases as listed for the Slavic languages, since my aim is to come to a fuller understanding of a concept that is present intuitively in traditional accounts. However, there is no requirement that the results of this tightening of the intuitive concept should correspond exactly to traditional boundaries among the cases, even where traditional accounts agree on these boundaries. In particular, I believe that traditional accounts have been too conservative in following diachronically based assumptions as to what cases a language ought to have rather than in seeking to establish synchronically what distinctions are actually made. Thus, the reluctance to allow that Russian has a distinct partitive (genitive) and a locative distinct from the prepositional stems in large measure from the fact that these distinctions are innovative, and therefore do not fit in with the traditional assumption as to what cases a Slavic language may have. The fact that these distinctions in Russian only exist for a small number of nouns cannot be the relevant synchronic criterion, since there is no reluctance to continue maintaining that Serbo-Croatian has distinct dative and locative cases, even though the distinction exists (in the form of a prosodic distinction) for only a small number of nouns (and for some speakers not even in these). In traditional grammars of Latvian, the instrumental is still listed as a separate case, even though in the contemporary standard language the instrumental is never distinct from the accusative in the singular and has no distinct form in the plural either, since the so-called instrumental in the modern language occurs only with the preposition *ar* and all Latvian prepositions in the plural take the dative. In some instances, even diachrony seems insufficient as an excuse for the traditional listing of cases: in Latin, traditional grammars are schizophrenic as to whether there is a locative case, although diachronically one would have expected a locative, given the Indo-European background. In the body of this article, I will

return to these examples for fuller discussion.

1. *Formal and functional approaches: a first attempt*

One of the crucial aspects in discussing the internal delimitation of cases is the relation between form and function. First, I will sketch an 'extremist' formal approach to delimiting case, followed by an 'extremist' functional approach. I emphasize that, as far as I am aware, neither of these extremist approaches has even been advocated, and their sole purpose is to provide background against which more 'moderate' (and, in this instance, more adequate) proposals can be considered. Equally, however, there is nothing *a priori* nonsensical about the extremist proposals. It is simply that they do not define anything close to the intuitive concept of case nor, as far as I can see, do they define any useful concept in this area.

The extremist formal approach would simply group together as instances of the same case all words having the same infectional form, where inflectional form is taken to include not only segmental formatives marking case, but also nonsegmental marking, so that a given case might be marked not only by a certain suffix, but also by a certain morphophonemic process (including a certain prosodic process). For certain languages, the results of this approach do not in fact differ from those of the traditional listing, for instance in Turkish, where the traditional cases (nominative, accusative, genitive, dative, locative, ablative) can just as readily be identified by their suffixes, respectively *-∅, -i, -in, -a, -da, -dan.*[2] However, this is true only of languages with case morphology approaching the canonical agglutinative pattern. For fusional languages, including all Slavic languages with case systems, the results of applying this methodology would give results radically different from the traditional listing of cases. We can see this by comparing the declension of the two nouns *sojuz* 'union' and *lapa* 'paw' in Russian in the singular. The traditional presentation is as follows:

Nominative	*sojuz*	*lap-a*
Accusative	*sojuz*	*lap-u*
Genitive	*sojuz-a*	*lap-y*
Dative	*sojuz-u*	*lap-e*
Instrumental	*sojuz-om*	*lap-oj*

Prepositional	*sojuz-e*	*lap-e*

Taking a particular inflection will characterize, in traditional terms, distinct sets of cases for each of these two nouns. Thus *-a* defines genitive for *sojuz*, but nominative for *lapa*; *-u* defines dative for *sojuz*, but accusative for *lapa*; *-e* defines prepositional for *sojuz*, but both dative and prepositional for *lapa*; *-oj* identifies instrumental for *lapa*, but nothing for *sojuz*.

This extremist formal approach thus gives radically different results from the traditional scheme of cases in Russian. However, there is nothing inherently absurd about the extremist formal approach; indeed, it has the advantage that it can be applied with absolute consistency. Its sole disadvantage—and this is a disadvantage so great that it is sufficient to rule this approach out of court—is that the oppositions which it defines as significant play no role elsewhere in the description of Russian, i.e. they are not in fact significant oppositions in the structure of Russian. No (other) rule of Russian refers to the set of nouns with the inflectional suffix *-e*, or to the set of nouns lacking an inflectional suffix.

The extremist functional approach to characterizing case would simply set up a list of functions, i.e. a list of all the possible relations between a noun phrase and the rest of the sentence, and each such function would correspond to a distinct case. There are two problems with this approach. The first is that it is probably unworkable in practice, since it is always possible in principle to continue subdividing functions into finer and finer categories. Indeed, the only way of stemming this proliferation of functional categories seems to be to add formal criteria, such as restricting the set of functions to those that are distinguished formally in at least one language. (Note that this is essentially the problem that beset Case Grammar, where in the absence of formal criteria there are apparently no limits to the imagination of linguists in devising new conceptual distinctions.) The second problem is, once again, that there is no guarantee that the functions established will be of any relevance elsewhere in the structure of the language in question, and indeed one can easily come up with functional distinctions that seem perfectly satisfactory qua functional distinctions but are totally useless in describing other aspects of language structures. A good example would be that between Patient and Effected object, where the former refers to an entity that undergoes a certain process (e.g. *I broke the chair*), whereas

the second refers to an object that only comes into existence as a result of the process described (e.g. *I made the chair*).[3]

2. *Characterizing the traditional approach: distributional criteria*

The bankruptcy of the two extremist approaches suggests that we should try to work towards a compromise between them. The functional approach must be constrained by formal criteria. In particular, a given conceptual functional distinction will only be criterial for distinguishing cases in a given language if at least one nominal in the language also has a corresponding formal distinction. Thus, the distinction between Patient and Effected object will not be relevant for the case system of Russian (or English, or probably for that of any language). While a conceptual distinction will participate in the establishment of distinct accusative and dative cases in Russian (cf. *lapu* versus *lape*), it will not in English, where no nominal shows a corresponding formal distinction. Equally, the formal approach is constrained by functional considerations, namely: forms are identified cross-paradigmatically not in terms of formal identity, but rather in terms of identity of function. Thus, to return to our earlier Russian example, *lapu* is paired with (one instance of) *sojuz* as being in the same case, despite the morphological dissimilarity, because of their identical functional ranges, and not with *sojuzu* which, despite its inflectional identity to *lapu*, does not share its functional range.

It is now possible to make this approach more explicit and in fact to establish a distributional approach to identifying cases, as follows. For each nominal in the language establish the distinct forms that this nominal can show. For each such form of each nominal establish its distribution. Now compare the distributions of all forms of all nominals. If some distribution is of a distinct form for all nominals, then this is a case. If the distribution (a) of some form of some nominal is a proper subpart of the distribution ($a + b$) of some form of any other nominal, then the distribution or subdistribution defined by a and b are distinct cases for all nominals. If the distribution ($c + d$) of some form of some nominal mutually and nonexhaustively overlaps the distribution ($d + e$) of some form of any other nominal, then each of c, d, and e is a distinct case for all nominals.[4]

The effect of this procedure is to say that if a case distinction is made formally in any nominal, then that same case distinction

exists for all nominals. Moreover, the procedure identifies cases of different nominals in terms of identity of distribution. In the case of Russian *sojuz* and *lapa*, this gives us precisely the traditional results. The forms *sojuzom* and *lapoj* have the same distribution, and, therefore, they are in the same case (or set of cases), despite the different suffixes.[5] The distribution of *lapa* is a proper subpart of that of *sojuz*; therefore, the form *sojuz* represents (at least) two distinct cases,[6] one of them being the same as that of *lapa*. Carrying out the same comparison between *lapu* and *sojuz* shows that the form *sojuz* also instantiates another (at least one other) case, the same as that of *lapu*—and, in fact, this exhausts the distributions of *lapa*, *lapu*, and *sojuz*, so that these are the only cases involved. For mutual nonexhaustive overlapping an example from the Australian language Dyirbal can serve as an illustration. In Dyirbal, for intransitive subjects we have the forms *yara* 'man' and *ngaja* 'I'; for transitive agents the forms *yaranggu* and *ngaja*; for transitive patients the forms *yara* and *ngayguna*. Although each individual nominal has only two forms, the mutual nonexhaustive overlapping means that (at least) three cases must be distinguished: one where 'man' is *yara* and 'I' is *ngaja*; one where 'man' is *yaranggu* and 'I' is *ngaja*; and one where 'man' is *yara* and 'I' is *ngayguna*.[7]

I claim that this approach underlies the intuitive establishment of case systems in traditional grammars of, for instance, Latin, Ancient Greek, and in general the Slavic languages. Moreover, it reflects a significant insight that merits admiration. Note in particular that only this procedure, or its equivalent, enables one to take a form like *sojuz* and say that it instantiates two and only two cases; a purely formal approach would say that it instantiates just one case, while a purely functional approach would say that it instantiates an indefinite number of different cases. Only the comparison with *lapa/lapu* (and the observation that no nominal has a form with a distribution more restricted than that of *lapa* or *lapu*) shows that *sojuz* instantiates two and only two cases.

Despite the relative simplicity of applying this procedure, one finds that in the traditional grammar of Slavic languages, and not only of Slavic languages, a number of equivocations are made, i.e. departures from the requirements of the distributional procedure. In some instances, these have a historical basis (the desire to have the same case array in the modern language as in some earlier

stage of the language, or as in some prestigious related language); in other instances, these departures arise from a desire not to have case distinctions that are instantiated in only a small number of nominals. Neither of these potential supplementary criteria is applied consistently, and if they were applied consistently they would undermine the very basis on which cases are established. In the following paragraphs, I will examine some particular instances of such equivocations, from Slavic and other languages.

In Russian, a particularly striking example is the distinction between prepositional and locative.[8] For some nouns, this is a reasonably clear-cut obligatory distinction, cf. prepositional *o sade* 'about the garden' but locative *v sadu* 'in the garden'. The distinction is restricted to a subset of the masculine nouns of the first declension and a subset of nouns of the third declension (where the distinction is prosodic, between stem-stress for the prepositional, e.g. *o króvi* 'about blood' and desinence-stress for the locative, e.g. *v krovi* 'in blood'). Since the relevant forms of these nominals show a distinction in distribution, by the procedure outlined above this is a case distinction for all nominals, i.e. all nominals have distinct prepositional and locative cases, even though for most nominals these two cases have the same form. Note that the sameness of form for other nominals cannot be an argument against the existence of distinct cases, otherwise we should be forced to say that *sojuz* instantiates only one case, which clearly goes against the practice of traditional grammar. The fact that only a small number of nominals make the distinction between prepositional and locative formally is also irrelevant, at least if one is to judge by the practice of traditional grammars. In Russian, the nominative/accusative distinction is realized overtly only for singular nominals of the second declension and for plural animate nominals, but this does not prevent this opposition being extended to the much larger class of nominals that do not make this distinction overtly. In Polish, nominative and accusative are distinct for even fewer nominals, since only male human nouns make the distinction in the plural. In Latin, the vocative is distinct from the nominative only in the singular of nonneuter nominals of the second declension with nominative in *-us*, but the nominative/vocative distinction is extended, by the distributional criterion, to all other nominals. The distinction between prepositional and locative in Russian is, of course, an innovation, but this is irrelevant to the synchronic characterization of the

Russian case system: Russian has this opposition, other Slavic languages do not, and any adequate description of Russian has to take cognizance of this difference.

An added complication is involved when we turn to the locative case in Latin, and, since this complication is not present in the case system of Slavic languages, reference will be made here to Latin, following the general principle that a theory equipped to deal with the more complex instance will also be adequate for less complicated examples. Latin grammars usually list the cases as nominative, vocative, accusative, genitive, dative, and ablative, but then in discussing the declension of individual morphological classes introduce, for most of these classes, a locative case. The main reason for the unusual treatment of the locative seems to be that it is used for only a small subset of nouns (names of towns and small islands, plus a very restricted number of individually specifiable lexical items). For other nouns, this function is expressed by using the preposition *in* 'in', which takes the ablative case. We thus find functional parallelism between *in Italiā* 'in Italy' but *Rōmae* 'in Rome', to take two nouns from the singular of the first declension. In effect, this introduces the problem of the external delimitation of case, because here we have distributional grounds for identifying a prepositional phrase (with one set of nouns) with a case (for another set of nouns). I believe that this consequence of the distributional approach is in fact the correct analysis, but as this involves the external rather than the internal delimitation of cases, it may be left out of account for the purposes of the present discussion. Another characteristic of the Latin locative, for those nouns that have one, is that its form is nearly always identical with some other case form of the same noun, and this may have been a further reason for assigning a marginal position to the locative as case: thus, in the singular of the second declension, *Mīlētī* 'in Miletus' is homophonous with the genitive; in the singular of the fifth declension, the locative is homophonous with the ablative. However, there is one noun which has a formally distinct locative, namely *domus* 'house', locative *domī*.[9] Even without this distinct locative, however, the distributional criterion would lead to the conclusion that the locative is a separate case (or rather: a separate category within the range of cases and prepositional phrases), since consideration of the different declensions, in singular and plural, involves overlapping of the type $a + b$ with $b + c$, where b is thus defined as a separate case, the

locative. Internally to the traditional analysis, there is no motivation for excluding the locative from the set of cases in Latin.

An even more complex example is provided by the instrumental in Latvian. Traditionally, Latvian is said to have a separate instrumental case, which, however, only occurs with the preposition *ar*.[10] In the singular, the form of the nominal that appears after *ar* is identical to the accusative: thus, *rags* 'horn' has accusative *ragu* and instrumental *ar ragu*. In the plural, the form of the nominal that appears after *ar* 'with' is the same as the dative, i.e. *ar ragiem*. This might seem to be evidence for establishing a separate instrumental case, which would be identical to the accusative in the singular, but identical to the dative in the plural, i.e. overall distinguishable formally from both. However, it turns out that (on the traditional account) all Latvian prepositions take the dative in the plural. Thus *par* 'about, concerning', which takes the accusative in the singular (*par ragu*), takes the dative in the plural (*par ragiem*); likewise *bez* 'without', which takes the genitive in the singular (*bez raga*), but the dative in the plural (*bez ragiem*). The solution to this dilemma might seem to be simply to say that modern Latvian has no instrumental, and that the preposition *ar* governs the accusative case (with the proviso that, like all Latvian prepositions, in the plural it governs the dative), and indeed this is probably the best solution within the traditional account of Latvian cases. However, if we apply the distributional criterion strictly, then it turns out that this solution involves an internal contradiction. The inconsistency arises from our saying that a given preposition governs one case in the singular (different prepositions govern accusative, genitive, and dative), but a different case (namely, invariably the dative) in the plural; this has the effect that the distributions of one and the same case are different in singular and plural. We can illustrate this by considering the noun *rags* (a) as recipient, (b) as possessor (in a wide sense), (c) as object of the preposition *bez* 'without', and (d) as object of the preposition *līdz* 'as far as, up to', which in the singular takes the dative. This gives the following system, with the traditional names of the cases:

	singular	plural
(a) recipient	*ragam* (dative)	*ragiem* (dative)
(b) possessor	*raga* (genitive)	*ragu* (genitive)
(c) with *bez*	*raga* (genitive)	*ragiem* (dative)
(d) with *līdz*	*ragam* (dative)	*ragiem* (dative)

By strict application of the distributional criterion, however, it is not possible to have sets like (c), with genitive in the singular and dative in the plural. In fact, the distributional criterion can only lead to the conclusion that the cases occurring after prepositions in Latvian (other than after prepositions that take the dative in the singular) can never be identified with singular cases occurring other than after prepositions. In other words, we are forced to say that Latvian has two accusatives and genitives, one of which occurs other than after prepositions (accusative$_1$, genitive$_1$) and has as its plural correspondent the traditional accusative or genitive, while the other (accusative$_2$, genitive$_2$) occurs only after prepositions and has as its plural correspondent a case which we are forced to call accusative$_2$, genitive$_2$, although these are homonymous with the dative plural. It is important to realize that this is the only solution consistent with the facts of Latvian and the distributional criterion. The fact that it seems needlessly redundant is beside the point, as long as we operate within this set of assumptions. However, this solution does miss an obvious generalization, namely that all prepositions in Latvian are followed by the same form of a plural nominal, and this is a generalization which one would hope a grammar of Latvian should capture. This is one of the reasons for suggesting below that substantial modifications need to be made to the traditional distributional criterion.

Russian shows an even clearer instance of loss of generalization of a similar type. Traditionally, a number of Russian nominals are said to be indeclinable, e.g. *pal'to* 'overcoat'. Strictly speaking, of course, this violates the distributional criterion. Since the distribution of the one form *pal'to* covers the total range of all case forms (and number forms) of other nominals, the distributional criterion forces us to say that *pal'to* has precisely the same number of cases as does any other nominal, except that all the cases of *pal'to* are homonymous. In fact, literal application of the distributional criterion in a language with a morphology as complex as Russian leads to a number of solutions that seem

unnecessarily cumbersome. For instance, since some nominals have distinct forms after the numerals 'two' through 'four', e.g. *dva šagá* 'two steps', cf. genitive *šága*, one is forced to say that all nominals have a distinct case used after these numerals. A few nominals have distinct forms used after some prepositions, such as *s utrá* 'since morning' (cf. genitive *útra*), *k utrú* 'toward morning' (cf. dative *útru*), and one would therefore be forced to say that the case of all nominals occurring after *s* is distinct from the genitive, the case of all nominals occurring after *k* is distinct from the dative. One's initial reaction is that such an analysis would be grotesquely uneconomical, although this is not in itself an argument against the analysis—it might simply be the case that theoretical consistency forces us into this position. However, if there is an alternative analysis that avoids this unwieldiness, it will be preferred.

3. *Form and distribution: towards a synthesis*

In this section, I will outline an approach to the notion of case which, like that rejected in section 2, distinguishes between form and function more radically than does the distributional approach, but which nonetheless attempts to synthesize the formal and functional sides of case in a way that avoids formal characterizations that have no relevance beyond their own existence or functional characterizations that are totally unconstrained except by the imagination of the analyst. As illustrative material, I will concentrate on the relation among the (traditionally named) cases nominative, accusative, and genitive in Russian (and, *mutatis mutandis*, other Slavic languages), though some of the other languages discussed above will recur where relevant. For non-Slavist readers, it should be noted that the traditional account of the formation of the accusative in Russian is as follows: singular nominals of the second declension have a distinct accusative form (in *-u* for nouns); animate nominals which are either masculine singular of the first declension or plural (of any gender or declension) and all personal pronouns have the accusative the same as the genitive; all other nominals have the accusative the same as the nominative. This is illustrated in the table for the nouns *lapa* (second declension) 'paw', *slon* (masculine singular, first declension, animate) 'elephant', and *stol* (masculine singular, first declension, inanimate) 'table'.

	nominative	accusative	genitive
lapa	*lap-a*	*lap-u*	*lap-y*
slon	*slon-ø*	*slon-a*	
stol	*stol-ø*		*stol-a*

It should be noted that no matter how irregular a nominal is morphologically, if it is of the appropriate class nominative and accusative will be homonymous, and if it is of the appropriate class accusative and genitive will be homonymous. This can be used as an argument against the traditional analysis, where the homonymy of accusative with either nominative or genitive is treated as accidental.

In traditional grammar, and I would argue in any grammar, the traditional notion of case serves two conceptionally very different purposes. On the one hand, it is a morphological category, used in order to systematize the morphology of nominals. In particular, within the morphology, it is not sufficient just to know that the word *stol* 'table', for instance, has distinct forms *stol-a, stol-u*, etc., but also to name these forms so that we can refer to them elsewhere in the grammar, and hopefully to be able to set up comparability of these names across different paradigms. On the other hand, case also plays a crucial role in syntax, in that different cases are required in different constructional positions. Thus in Russian, simplifying somewhat, the subject must stand in the nominative, the direct object must stand in the accusative, the possessor must stand in the genitive within a noun phrase, the preposition *iz* requires a governed nominal in the genitive, etc. This second use of cases corresponds essentially to the distributional definition given in section 2: the sum total of all occurrences where the syntax requires/allows a given case is the distribution of that case. An implicit assumption of traditional grammar is that the case distinctions required by the morphology are in one-one correspondence with those required by the syntax. The submission of this paper is that this assumption is incorrect, and more specifically that this assumption is responsible for the problems encountered towards the end of section 2 and for several other instances where significant generalizations are lost.

It should be noted that it is not possible simply to do away with one or other of the functions of case, subsuming the one

under the other. In section 2 we attempted to subsume the formal oppositions under distribution, with the counter-intuitive results catalogued there, to which we can now add the loss of the generalization that accusative and genitive in Russian are identical, for the relevant classes of nominals, no matter how irregular the formation of the genitive may be (one even has suppletion in nominative *on* 'he', accusative-genitive *ego*). Attempting to subsume the distributional oppositions under form, however, leads equally to loss of generalization. Thus, there is no way of stating the distributions of each of the separate forms *lapa, lapu, lapy, slon, slona, stol, stola*, without gross repetition. For instance, a traditional statement of the type "the preposition *čerez* 'through' requires the accusative case" would have to be replaced by three statements, one for each of the three sets of nominals *lapa, slon, stol*. One might think that perhaps the distributions could be stated directly in syntactic terms, thus avoiding the need for an intermediate level of entities between syntactic relations and formal morphological oppositions. However, this does not save the situation. In Russian, there is no single syntactic position, or even small number of syntactic positions, that subsumes the traditional distributional accusative, given that this is used not only for direct objects, but is also governed by a range of prepositions, often idiosyncratically. If direct objects were the only nominals that went into the traditional accusative case, then it might be reasonable to replace the traditional rule by saying that as direct objects nominals like *lapa* go into the accusative, those like *slon* into the genitive, and those like *stol* into the nominative. But in fact one would have to repeat this tripartite statement for each syntactic position where, in the traditional analysis, the accusative is required, clearly losing the generalization that lurks behind the fact that it is precisely the same tripartite statement that is relevant in each of these instances.

Thus, the essence of the proposals made in this section is that the formal and distributional sides of case should be treated differently (although later in the section it will be shown how they need not be so radically divorced from one another as this might seem to suggest). Since the traditional case names were defined in terms of the distributional criterion, I shall continue to use these labels to refer to distributions, rather than to forms, i.e. I will continue to say that the preposition *čerez* governs the accusative, but will have to abandon statements of the kind *'lapu* is the

accusative of *lapa'* or *'slona* is the accusative of *slon'*. For the moment, I will simply use arbitrary labels for the morphological forms of nominals. For our Russian example, let us agree arbitrarily to call forms like *lapa* 1, *lapu* 2, *lapy* 3, *slon* 4, *slona* 5, *stol* 6, and *stola* 7. These arbitrary numbers thus identify forms of nominals and as yet do not permit any comparability across declension types.[11] In the theory in its present form, then, the morphology of a given class of nominals will specify forms and assign to each an arbitrary name. The syntax will specify a set of cases defined in distributional terms. The grammar will then require a mapping between these two sets of 'cases'. Thus, the syntax will say that the preposition *čerez* governs the accusative case. The mapping will say that accusative for nominals of the *lapa* type is form 2, for those of the *slon* type form 5, and for those of the *stol* type form 6. All relevant generalizations are captured within the syntax, since we can continue to use unified statements of the type 'such and such a syntactic position requires the accusative'. All relevant morphological generalizations are also captured, since the traditional nominative and accusative of the *stol* type are now a single formal case 6, while the traditional accusative and genitive of the type *slon* are a single formal case 5; likewise, 'accusative' *ego* 'him' and 'genitive' *ego* 'his' would be a single formal case, and there need be no surpise that they share the same idiosyncratic suppletive relation with *on* 'he'. (Indeed, this analysis predicts that they should share the same suppletive relation.)

This same approach resolves the other problems that were discussed above. For Russian indeclinable nominals like *pal'to* there is only one form, to which we may assign the arbitrary label 8, and this is all there is to their morphology. The mapping between distributional and formal cases will simply say that all distributional cases map onto form 8 for nominals of this class. The Dyirbal case system in its relation to intransitive subjects, transitive agents, and transitive patients, receives a solution similar to that for the nominative/accusative/genitive range in Russian. Let us give the forms the following arbitrary labels: *yara* 9, *yaranggu* 10, *ngaja* 11, *ngayguna* 12. Let us assign the following names to the distributional cases: ergative (including transitive agent), accusative (including transitive patient), neutral (including intransitive subject).[12] Then the mapping between distributional and formal cases will say that the ergative is 10 for nominals of

the *yara* type, but 11 for nominals of the *ngaja* type; accusative is 9 for nominals of the *yara* type, but 12 for nominals of the *ngaja* type; neutral is 9 for nominals of the *yara* type, and 11 for nominals of the *ngaja* type.

It should be noted that, except in instances of straightforward one-one correspondence between distributional and formal cases, the mapping from distributional to formal cases will usually be many-to-one, i.e. several distributional cases will be instantiated by the same formal case in the given class of nominals. One cannot, however, have the same many-to-one mapping for all nominals, for, by the distributional criterion given in section 2, there would then be no motivation for the given distributional case distinction. One-to-many mapping from distributional to formal cases is possible only where the formal cases are in free variation (thus, partitive applied to *syr* gives both *syra* and *syru* for some speakers of Russian); elsewhere it is excluded by the requirement given in section 2 that a distributional case can only be set up if at least one nominal makes a corresponding formal distinction.

I leave it as an exercise for the reader to show that even the Latvian situation, with the rule that all prepositions take the (traditional) dative in the plural, has a comparable solution that does justice to both form and distribution.

Although the theory outlined above in a sense does justice to both distribution and to form, and to the relation between them, there is a clear sense in which it is less satisfactory on the formal side, witness the arbitrary use of numerals to identify the different formally distinct cases. In order to remove this blemish, it is necessary to become aware of one traditional, but almost certainly incorrect, assumption that we have been making all along, namely the assumption that the cases, particularly the distributionally defined cases, are atomic units. In traditional grammar, each case is presented as a category on its own without any explicit attempt to establish relations among cases, i.e. to indicate that some cases are more similar to one another than are other cases or, in more contemporary terminology, to indicate that some cases may share features that are not shared by other cases.[13] Jakobson's major insight into the structure of the Russian case system was that generalizations can be captured by treating the cases not as atomic units, but rather as constellations of features. The issue here is not whether one accepts the particular feature set and feature assignments established by Jakobson—I believe that his particular

proposal can be criticized on a number of grounds—but rather acceptance of the fundamental insight that motivates Jakobson's work on Russian case.

Let us suppose that we have, in a particular language, a many-to-one mapping between distributional cases and some formal case, for a particular class of nominals. Then this provides *prima facie* evidence that the distributional cases in question share a feature or feature set in common which differentiates them from all other distributional cases that do not map onto this formal case. Indeed, the relation between features and many-one mappings can be strengthened by claiming that such a mapping relation provides a sufficient criterion for isolating such a feature or feature set. A simple example is the partitive genitive in Russian. Since some nouns, like *syr* 'cheese', have a formal opposition between nonpartitive genitive *syra* and partitive *syru* (or *syru/ syra* in free variation), Russian has distinct distributional cases nonpartitive genitive and genitive. For other (in fact, most, though the statistics are irrelevant) nominals, however, both nonpartitive genitive and partitive map onto the same form. Therefore, we extract from nonpartitive genitive and partitive a common feature that is not shared by any other distributional case; let us call this feature [genitive].[14] We then establish a feature opposition [partitive]/[nonpartitive] dependent on (hierarchically lower than) [genitive]. This means that the distributional case nonpartitive genitive is more accurately [genitive, nonpartitive], while partitive is more accurately [genitive, partitive]. Given this feature analysis, we can now extend labels from the distributional cases across to the formal cases. *Syra* will be [genitive, nonpartitive]; *syru* will be [genitive, partitive]; for a nominal lacking the partitive/nonpartitive distinction, e.g. *muka* 'flour', we simply say that *muki* is [genitive]. Note that this also provides a neater analysis of the free variation that exists for some Russian speakers with partitive *syra/ syru*: for such speakers, *syra* is [genitive], while *syru* is [genitive, partitive]. Syntactic positions requiring the distributional case partitive genitive will generate the feature complex [genitive, partitive], into which for this variety of Russian either *syra* or *syru* will be insertable, since the feature specification of either of these formal cases is compatible with the distributional case feature set; syntactic positions requiring the distributional case nonpartitive genitive will generate the feature complex [genitive, nonpartitive], with which only *syra* is compatible.

The application of the same procedure can be illustrated with the traditional nominative, accusative, and genitive cases in Russian. Let us assume that nominative and accusative share the feature [direct], while accusative and genitive share the feature [objective]. Then the seven forms given above of *lapa*, *slon*, and *stol* receive the following feature assignments:

lapa - [nominative]
lapu - [accusative]
lapy - [genitive]
slon - [nominative]
slona - [objective]
stol - [direct]
stola - [genitive]

Each of the formal cases of each class of nouns can now be given a principled label, principled in terms of the feature analysis of the distributional cases. Again, I leave it to the reader as an exercise to apply this same technique to the other sets of data discussed above.

4. *Conclusions*

The traditional approach to case embodies a number of assumptions, which are unfortunately rarely made explicit: that case can be delimited (internally) by distributional criteria; that the cases thus delimited are also the cases that need to be discriminated in the morphology; that cases are atomic units; that one can hold these assumptions and arrive at an analysis that is both comprehensive and insightful (i.e. captures all significant generalizations). In this paper, I have tried to show that it is impossible to maintain all of these assumptions simultaneously without engendering internal contradiction. On the other hand, I have also tried to show that there is a consistent and comprehensive approach to case that handles both its distributional and its formal side and the relations between them. This approach relies crucially on the notion of a feature analysis of case: distributional cases are feature constellations, and a given formal case of a particular nominal will be characterizable in terms of the same features as are used in characterizing distributional cases. However, often—especially in languages like the Slavic languages

with complex relations between distributional and formal cases—a given formal case will correspond to a proper subset of the features of a distributional case, thus giving rise to many-to-one mappings between distributional and formal cases.

NOTES

[1]The ideas contained in this paper have crystallized in the course of coming to terms with approaches to case advocated by Igor A. Mel'čuk and Anna Wierzbicka; although I remain unconvinced by much of their argumentation and can in no way hold them responsible for anything contained in this paper, I have benefited enormously from being forced to formulate more carefully the bases of my disagreement. For the crucial idea of a feature approach to case contained in section 3 I am, of course, indebted to the work of Roman Jakobson. I am aware that the present paper, especially section 3, is highly programmatic, but it presents a program that I would like to develop and to see developed, and the ideas are therefore put forward in the spirit of initiating a discussion.

[2]More accurately, of course, the representations would be in terms of a more abstract morphophonemic representation, abstracting away from particular vowel values conditioned by vowel harmony or consonant values determined by voice assimilation, etc.

[3]For English, it has been claimed that a distinction is necessary between Patient and Effected object to account for the different acceptability of *what I did to the chair was break it* versus **what I did to the chair was make it.* However, the unacceptability of the second sentence is connected with violation of the semantic collocation of the expression *do something to*—one cannot do something to something that does not (yet) exist—rather than with the semantic relation between *make* and *chair.*

[4]The procedure as stated applies directly wherever there is an obligatory distinction between two forms of the same nominal. However, it extends equally to instances of an optional distinction. Consider, for instance, the partitive genitive in Russian, at least in those varieties of the language where the marking of partitive as opposed to nonpartitive genitive is optional, i.e. one has both *kusok syru* and *kusok syra* 'a piece of cheese' but only *zapax syra* 'the smell of cheese'. Then there is a certain distribution where the forms *syru* and *syra* are in free variation (as far as the structure of the language is concerned), and a different distribution where only the form *syra* is possible. The two distributions are nonoverlapping, and thus *syru/ syra* and *syra* are defined as separate cases.

[5]The formulation 'case (or set of cases)' is necessary because it is in principle possible that consideration of other nominals might lead to another conclusion. For instance, one might say that the form *lapoj* instantiates more than one case, because some other nominal has distinct forms not in free variation covering this same distribution. In this particular instance, of course, this does not happen.

[6]The formulation '(at least) two distinct cases' is for the same reason as discussed in footnote 5.

[7]These analyses of the Russian and Dyirbal case systems will be modified in section 3.

[8]The same applies to Russian partitive and nonpartitive genitive, though with the added complication that for many speakers use of the distinct partitive is optional; see footnote 4.

[9]The noun *domus* 'house' has an alternative, rarer, genitive form *domī*, alongside more usual *domūs*. However, *domūs* is not possible as the locative of *domus*, so, by the argument of footnote 4, genitive *domūs/domī* and locative *domī* are distinct cases.

[10]Some varieties of Latvian have a distinct, synthetic form of the instrumental for pronouns, e.g. first person singular *manim*; in these varieties there is an instrumental case, by the distributional criterion, although, like the Latin locative, there is the added complication that the distribution of this case form for some nominals compares with the distribution of a prepositional phrase for other nominals. The discussion in the text relates exclusively to varieties of Latvian without a synthetic instrumental. Note the fact that the so-called instrumental in such varieties occurring only after a preposition is not in itself an argument against considering it a distinct case: the locative (prepositional) in most Slavic languages occurs only with prepositions, but is clearly a distinct case by the distributional criterion.

[11]More accurately, a single number should be used for identical forms where the identity of form overlies a significant generalization. I assume that there will also be instances where forms happen to be identical, but where there is no underlying significant generalization, e.g. it seems to be pure chance that the genitive singular of second declension nouns has the same suffix (*-y*) as their nominative-accusative plural. The question of deciding between significant and nonsignificant identity of form is, of course, crucial to the whole enterprise, but a full discussion of this problem would generate (at least) an article in its own right, and I will therefore not pursue the problem to its conclusion here. Factors in favor of treating formal identities as instances of the same formal case rather than as chance homonyms will include the presence of substantial shared semantic and/or syntactic features; later unified diachronic development would also provide after-the-fact evidence for unity. See also the discussion of features below. Another extension of the present proposal that I have not treated here is the question of cross-language comparability of terms for distributional and formal cases. The approach presented here does not depend *a priori* on any assumption about the availability of such comparability, and it is certainly possible that some individual cases (formal and distributional) in some individual languages are highly language-specific, but one would like ultimately to capture the fact that there are also considerable crosslinguistic similarities.

[12]The choice of 'neutral' for the last of these is arbitrary. Note that the usual case nomenclature for Australian languages employs the traditional case labels for forms rather than distributions, i.e. *yara* is absolutive, *yaranggu* ergative, *ngaja* nominative, and *ngayguna* accusative; this means that different cases can occur in the same distributionally defined slot, e.g. absolutive *yara* and accusative *ngayguna* as transitive patients. Since the distributional functions are in, or almost in, one-one correspondence with unitary syntactic characterizations, for languages of this type it would be possible in principle to dispense with the distinction between syntactic characterization and distributionally defined case. But it should be borne in mind that the overall

theory must be able to handle the most difficult instance, and here the Russian situation is more complex than the Dyirbal situation. Therefore one must seek a solution that will handle both situations, which happens to go against the usual description of the Australian situation in that this description relies crucially on a language (-group)-specific simplicity. The discrepancy between the traditional descriptions of the Slavic and Australian situations was, incidentally, largely instrumental in starting my thoughts along the lines indicated in this paper.

[13]This criticism may not be literally true for all traditional accounts of all case distinctions. Thus the use of terms like genitive$_1$ and genitive$_2$ in traditional Russian grammar, or nonpartitive and partitive genitive, contains an implication that these two cases share something in common which is not shared by other cases. Moreover, traditional classifications of cases like those into direct and oblique introduce a partial feature classification. However, traditional grammar does not develop this idea into a consistent and comprehensive classification of cases.

[14]The names given to features in this paper should be treated as arbitrary, although they are of course mnemonic. The program whose initiation is implicit in this paper will obviously require for its completion a more systematic identification and labeling of the relevant features, whether internally to a particular language or (hopefully) crosslinguistically. Likewise, I leave completely open the question of whether the features should be binary or *n*-ary.

Jakobson's Fourth and Fifth Dimensions: On Reconciling the Cube Model of Case Meanings with the Two-Dimensional Matrices for Case Forms

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0. *Prologue.*

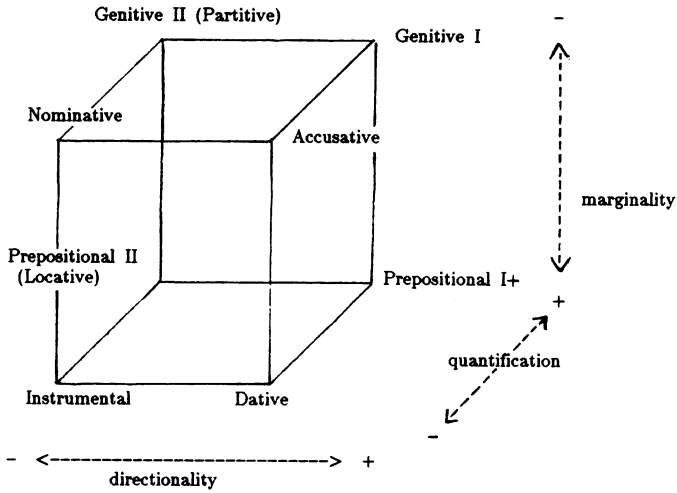
It was my great privilege and pleasure to be a student in Roman Jakobson's Harvard courses in Morphology (1962) and Semantics (1966)—with partial audits in-between. As it undoubtedly did for other contributors, the preparation of a paper for this volume included a nostalgic return to old lecture notes, where two recurrent motifs strike the eye and mind. One of these is in passing references to Saussure, whose suggestions and hypotheses were "changed to dogmas by his followers," who "replaced his question marks with periods." "They placed [.] where Saussure had [?]," Roman Osipovič would say as he drew the huge punctuation marks on the blackboard. This article will examine the case features of 1958, reintroducing some question marks that have been lost in the 25 years since that paper was written. The second recurrent theme, central to all of Jakobson's work, is the dual nature of the sign, whose "***signans*** is observable, ***signatum*** inferable," or—on other occasions—"***signans*** is observable, ***signatum*** translatable." But those memorable aphoristic definitions were pedagogical simplifications, for Roman Jakobson's own most important studies of grammatical form and meaning (1932 and 1957 on the Russian verb and 1936 and 1958 on case) focus on areas where direct sound-meaning correspondences are few.[1] Though Jakobson did uncover a number of striking generalizations about form and meaning in the case system, the ***signans*** of a case is seldom directly observable but is, rather, inferable through contextual cues. In the Russian case system, ***signans*** is almost as abstract as ***signatum***, and that is why the topic has remained controversial.[2] Though a certain degree of isomorphism between case semantics and morphology is undeniable, Jakobson's model of

case forms and his model of case meanings were never fully reconciled. The Acknowledgments section of *Selected Writings* II mentions plans to integrate the earlier analyses in light of more recent discoveries about the historical development of Russian morphology "if time permits." Roman Osipovič was looking forward to contributing a new paper to this volume, which time, unfortunately, did not permit him to write.

1. *Why five paired features for eight cases?*

Jakobson's 1958 integration of the two "extra" cases (Genitive 2 and Prepositional/Locative 2)[3] into the system brought the total number to 8, or 2^3. The three semantic features proposed in 1936—Marginal/Peripheral, Quantifying, and Directional/Ascriptive[4]—became distinctive for each case. This maximal system was represented as a cube (1), exploiting the spatial metaphor of feature-as-dimension.

(1) The famous cube (reproduced from Mel'čuk 1983).



This three-dimensional model, intended as a representation of case semantics (a componential analysis of case *signata*), can also represent the cases as whole signs (*signans* and *signatum*). This heuristic extension is made possible by the semiotic properties of models: the cube is itself a sign, more precisely, a graphic *icon* of a hypothetical system, with a *signans* and *signatum* of its own. When used to translate the hypothetical system, the model's

component signs are available to represent both *signans* and *signatum* (or either one or the other).

The three features can thus specify each case uniquely. That is, N, unmarked for all three features, can be represented as [-,-,-]; L1, marked for all three, as [+,+,+]. Accusative, for instance, is representable as [-MAR/PERI, +DIR/ASCR, -QUANT]—in any of the six possible orders, for, as Mel'čuk points out (1977b and 1983b), Jakobson's features are not hierarchical. Since multiple optional orders are notationally inconvenient, I will adopt the linear order in Neidle 1982b: MAR/PERI, QUANT, DIR/ASCR, a choice to be defended below in §2.31. Accusative is then representable as [-,-,+], Instrumental as [+,-,-], and so on. Configurations of pluses and minuses can also define classes, such as Direct vs. Oblique cases (NA vs. GGLLDI), where NA is representable as [-,-,±] (=[-MAR/PERI, -QUANT, ±DIR/ASCR])—that is, with the feature distinguishing N from A neutralized. NI can be distinguished from AGGLLD by the feature configuration [±MAR/PERI, -QUANT, -DIR/ASCR], or [±,-,-].

But if the three features suffice to specify all that is needed, why did Jakobson propose two additional oppositions to do this work—DIRECT vs. OBLIQUE, and INDEFINITE vs. DEFINITE? He introduced these two pairs at the very end of the 1958 paper without discussion, assigning their names arbitrarily (*uslovno*), without commitment to markedness values. Are they [±Direct] or [±Oblique]? [±Definite] or [±Indefinite]? Or are they simply redundant cover terms for classes specifiable in terms of the three more basic features?

Since they are over the necessary maximum that fits so elegantly on the cube, these features—the second pair especially—have been largely ignored in subsequent work. I will argue that these two extra features, "DIRECT" and "INDEFINITE," redundant as they are, are needed to reconcile the two- and three-dimensional models of case *signantia* with the cube model of *signata*.

2. *Three possible models for signans. Paradoxes.*

Jakobson's brief programmatic papers treat forms and meanings quite separately. Though he claims isomorphism (1971:179-81) between case inflections and the system of meanings depicted in (1), the question of relating the ahierarchical

three-dimensional semantic model to the two-dimensional conflation models remained open, as did the relation between those two models and the hierarchical linear order dictated by the morphology. In general, the two "extra" cases (G2 and L2), while integrated into the system of *signata*, remain outside the systematizations of *signantia*. The resulting incompatibilities will be outlined below.

2.1. *The two-dimensional conflation model. Morphology.*

The sections of Jakobson 1936 and 1958 devoted to case syncretism use two-dimensional conflation diagrams, essentially matrices without labels, incorporating the basic six cases. Since the number of distinct case forms for a paradigm ranges from a maximal 5 to 1 (for indeclinables), the diagrams (2ab) represent syncretism by eliminating the division between adjacent boxes.

(2) a. Declension I inanimates. b. Declension I animates.

stol 'table'

N	A	G
STOL		STOLA
STOLOM	STOLU	STOLE
I	D	L

tigr 'tiger'

N	A	G
TIGR	TIGRA	
TIGROM	TIGRU	TIGRE
I	D	L

(conflation diagrams after Jakobson 1936 and 1958)

The eight-case system—relevant only for inanimates—was omitted from the conflation diagrams for good reason: some syncretic forms are not contiguous, hence cannot be conflated. This is illustrated in (3) with the paradigm for *saxar* 'sugar', which has G2 but no L2.

(3) Unsuccessful conflation in the 8-case system.

N	A	G2	G1
SAXAR		SAXARU	SAXARA
SAXAROM	SAXARU	SAXARE	
I	D	L2	L1

The syncretic D and G2 (shaded) are not contiguous. A word like *sneg* 'snow' does have three contiguous forms in *-u*, but syncretism is not complete, for D and G2 are stem-stressed (*snégu*), while L2 is end-stressed (*snegú*).

I have mentioned the resemblance of the conflation diagrams to matrices without labels. If we try to label the rows and columns, the three features of the cube are a bit awkward, even if they *can* specify each case uniquely, for the matrix (4) has room for only two dimensions.

(4) Attempt to portray the eight-case system in matrix form.

columns / rows		DIR/ASCR	QUANT	QUANT & DIR/ASCR
-MAR/PERI	N	A	G2	G1
+MAR/PERI	I	D	L2	L1

The first column remains unlabeled, the fourth has a double label: a matrix makes no provision for cross-classification. Since G2 and L2 are distinct in only a very few inanimate singular paradigms, and since their syncretisms do not lend themselves to modeling with the other cases, I'll follow Jakobson in leaving them out. The resulting matrix (5) looks much better.

(5) The six-case system in matrix form.

columns / rows	INDEF ↓	DIR/ASCR	QUANT
-MAR/PERI	N	A	G
+MAR/PERI	I	D	L

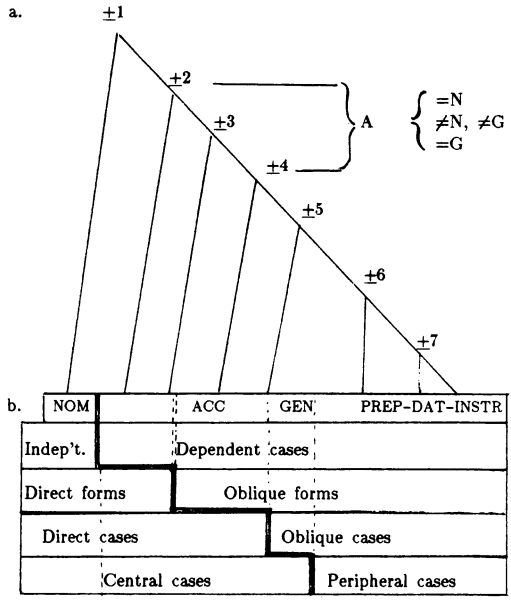
MAR/PERI labels the rows, while the other features imperfectly head the columns: the first column remains unspecified. The two "extra" cases (G2, L2) remain outside the system. The extra "INDEFINITE" feature can be used to label the first column. This matrix represents the extent of the isomorphism between the systems for case forms and case meanings claimed by Jakobson.

2.2. *The taxonomic model. Morphosyntactic linear order NAGLDI.*

The case syncretisms of Russian impose a hierarchical linear order on the cases as syntactic abstractions. This order—well-known through the pedagogical treatments of Lunt, Lipson, and Bitextina-Davidson—is NAGLDI. The three central cases (NAG), which are by far the most frequent, come first, the three marginal cases come last. In (6), the box diagram (b)[5] is

converted into a taxonomic tree (a). As is proper for a true taxonomy, all the nodes carry different labels;[6] in order to avoid mixing in semantics, I use numbers rather than words.

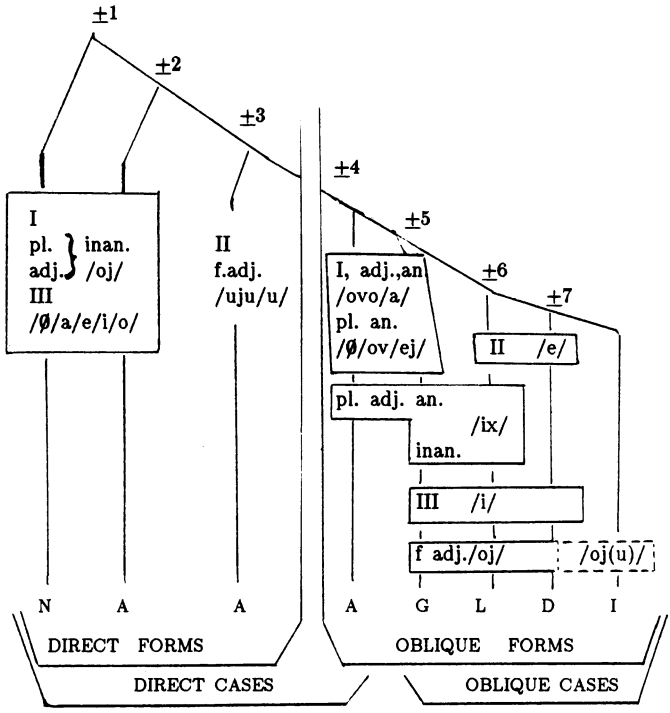
(6) Taxonomic tree. Morphological realizations of syntactic cases.



Even without distinguishing the two Gs and the two Ls (which are problematical for Jakobson's conflation diagrams as well as for this tree), the specification of the syntactic cases in their different forms requires seven paired features, ***three of which subdivide the morphologically least defined accusative:***[7] the minus value of the first feature specifies N; the second specifies A=N; the third, the accusative morphology of Declension II and feminine adjectives. Together the minus values of the first three features define the direct forms (N and A ≠ G), as distinct from direct cases, a division that plays a crucial role in the morphology and syntax of pronouns and numerals. The fourth feature defines A=G, and together the first four minus-valued features define the direct cases, that is, one of Jakobson's extra pairs, DIRECT vs. OBLIQUE. The fifth feature sets off G, and the first five features together set off the central cases from the marginal ones. Further distinctions separate the marginal cases from each other. The grouping of DI as the last pair is reinforced by their common marker /m/ in several paradigms.

The one distinction that is *not crossed by any syncretisms* is the third one [+3], direct form vs. oblique form, which cuts across the Accusative case. This extremely important division in the system is mentioned narratively in Jakobson 1958 but is not formalized.

(7) Taxonomy, with paradigm-internal syncretisms[8] boxed ("I, II, III, pl., an., inan., adj." refer to declension types)



Instrumental is distinct from all other cases in all paradigms of three or more forms, except the feminine adjective: when the optional /u/ drops from *-oju*, the Instrumental ending is syncretic with the other feminine Oblique cases. It is interesting to note that the output of the taxonomy is also 8 (or 2^3) elements. But the roster is N A A A G L D I, as shown in (7), not the expected N A G2 G1 L2 L1 D I.

2.3 *A three-dimensional model for signans. (Neidle's syntactic proposal.)*

2.31. *Another paradox. Two plausible and irreconcilable linear orders.*

The two models of ***signans*** present a double paradox. In the first place, there is the incomplete isomorphism between the cube model of meanings and the conflation model—which works only for the forms of the six basic cases. Second, there is an even greater divergence between the conflation diagrams and the linear order dictated by the taxonomy. In the conflation diagrams (2-5), N and I are as close to each other as A and D or G and L, reflecting Jakobson's claim about their semantics. But in the morphology, N and I are maximally ***distinct*** from each other. They are also maximally ***distant*** in terms of nodes in the model (6a, 7), and at opposite ends of the linear order imposed by the syncretisms.

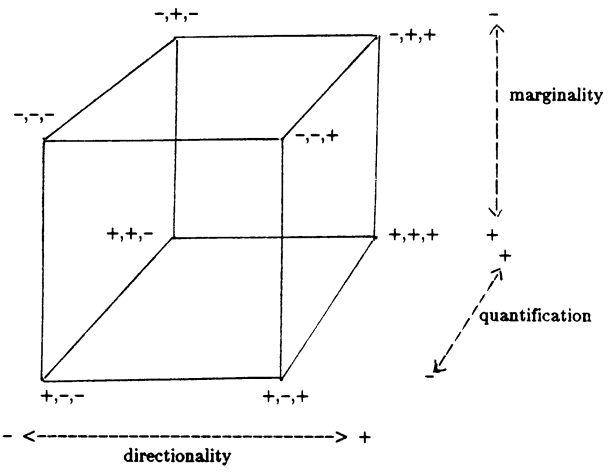
Clearly, the morphonology of the case endings is not a reliable source of observable ***signantia.*** The degenerate relation of case forms to case functions requires a more abstract approach. One possibility is generative grammar, where the SYNTACTIC FEATURE mediates between semantic interpretation and phonological form. This is the approach taken by Neidle (1982), who takes advantage of the fact that the co-variance of ***signans*** and ***signatum*** (and the iconic nature of models) allows the features to represent the ***signantia*** of cases as well as their ***signata.*** The result is a three-dimensional model of ***signantia***, isomorphic with the model of ***signata*** in (1). Below is the grid (8) in Neidle's article, which, as mentioned earlier (§1), imposes a linear order—a hierarchy—on the Jakobsonian features. Except for this hierarchization, the grid is exactly equivalent to the cube as a componential analysis diagram; though the grid model ***could*** show gaps (zeroes instead of pluses and minuses for underutilized features) this one does not.[9]

(8) Grid from Neidle (1982:397)—Assignment of features to cases

	Marginal	Quantifying	Directional /Ascriptive
Nominative	-	-	-
Accusative	-	-	+
Genitive 1	-	+	+
Genitive 2	-	+	-
Locative 2	+	+	-
Locative 1	+	+	+
Dative	+	-	+
Instrumental	+	-	-

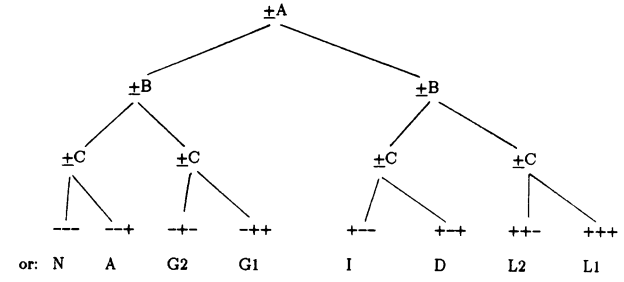
As pointed out above in §1, once the order of the features is fixed, it is possible to specify each case in terms of pluses and minuses alone, as Neidle does in her case-marking rules. The cube, with its labels converted into the configurations of pluses and minuses in (8), is shown in (9).

(9) The cube (cf. (1)) with pluses and minuses as labels.



Another alternative representation of componential analysis, the branching diagram, is frankly hierarchical. Unlike a taxonomic *tree*, whose branches must be mutually exclusive, a diagram for eight terminal items and only three features has to be a ***key***, with the same labels occurring on more than one node (cf. Stewart 1976: Ch. 1). Whatever the feature labels on the nodes, once we adopt the convention that the left branch is the minus-valued one,the distribution of pluses and minuses in a 3-feature key will be the same, as shown in (10).

(10) Componential analysis key and its linear output.



This is the order we get if A=MAR/PERI, B=QUANT, C=DIR/ASCR, the order adopted in (8) and (9). Under the five other possible arrangements, the linear order will differ; the one constant is that the minimally and maximally marked N and L1[10] frame the set. These orderings are shown in (11).

(11) Alternative orderings and their outputs.

If →	A=	B=	C=	Linear order is:
a.	MAR	QUANT	DIR	N A G2 G1 I D L2 L1
b.	MAR	DIR	QUANT	N G2 A G1 I L2 D L1
c.	QUANT	DIR	MAR	N I A D G2 L2 G1 L1
d.	QUANT	MAR	DIR	N A I D G2 L2 G1 L1
e.	DIR	MAR	QUANT	N G2 I L2 A G2 D L1
f.	DIR	QUANT	MAR	N I G2 L2 A D G1 L1

The alternative orders (11b-f) make no sense at all. In (11a), at least, if we group G2 and G1 together, the Direct and Central cases are in the same order as in (6), and NAGID are roughly in the order of their frequency in the spoken language (cf. Nikonov 1961; discussion and further references in Chvany 1982). The prepositional cases are, however, presented outside the expected sequence. The optimal linear order available in the three-feature system is, then, the one with the features hierarchically ordered as in (8) and (11a), that is, MAR/PERI, QUANT, DIR/ASCR. The more basic nature of MAR/PERI is reflected in its position as unique beginner at the top (or "root") of the branching diagram. In the two-dimensional matrix (5), [±MAR/PERI] is also set apart, for it labels the rows, while the other features label columns. The choice made in §1 and in Neidle 1982 is justified: it is the best possibility within this particular three-feature system.

I now repeat this ordered series in (12), with the corresponding configurations of pluses and minuses converted into 0's and 1's for a "hierarchically defined system" according to the Huntington theorem for systems of 2^3 elements (as described in Robertson 1983).

(12)

N	A	G2	G1	I	D	L2	L1
---	--+	-+-	-++	+--	+-+	++-	+++
000	001	010	011	100	101	110	111

or the binary equivalent of the decimal series:

0	1	2	3	4	5	6	7

The output of the hierarchical key and the Huntington-Robertson model of the same system (N A G2 G1 I D L2 L1) produce an imperfect fit with the terminal string of the morphological tree (6a, 7), which is: N A A A G L D I.

Now if the *latter* 8 items are numbered consecutively, and if the processes applied in (12) are repeated, as in (13), the result is incompatible with (12).

(13) The taxonomic order converted.

N	A	A	A	G	L	D	I
0	1	2	3	4	5	6	7
000	001	010	011	100	101	110	111
---	--+	-+-	-++	+--	+-+	++-	+++

cf. (12):

N	A	G2	G1	I	D	L2	L1
---	--+	-+-	-++	+--	+-+	++-	+++

Some readers may protest that the binary (or Huntington-Robertson) notation, which introduces the concept of place, misrepresents Jakobson's pluses, which merely indicate the presence of a specified meaning, regardless of hierarchical placement. But this extra element was not introduced by me: the linear order (12) is the output of the Jakobsonian three-feature system as it falls out of the model (10), under the optimal arrangement of the features, cf. (11). No, the problem is built into the model: As long as the cube (1) portrays only *signata*, as originally intended, there is no conflict, only the open question of relating meanings to forms. But as soon as the cube model is taken to represent *signantia* as well, paradoxes appear.

Aside from the problems with integrating G2 and L2 into any of the systems of *signans*, the major paradox can be summed up as follows. The seven-feature taxonomy of six cases and the three-feature model for eight cases *each specify eight elements, but not the same eight.* In both outputs, the order of the Central cases (NAG) is the same, while the linear orders for the Marginal cases are irreconcilable. The historical syncretism of Central G and Marginal L extends to the Direct and Central A in animate plural noun phrases. These syncretisms cannot be reflected in the three-dimensional model. It is interesting, however, that the order generated by the hierarchization of the three features (NAGGIDLL) does correspond to another reality: it reflects the traditional

(intuitively motivated?) placement of L at the end: the prepositional cases are indeed on the periphery of the inflectional paradigm, on the edge of syntax. Both orders are therefore grounded in observable reality. The question is—how are the features mapped onto morphonological forms?

2.32. *Neidle's three-dimensional account of syncretism.*

The migration of the Jakobsonian semantic features into generative grammar and their reincarnation as syntactic features—a conversion from *signatum* to *signans*—leads to Neidle's interesting attempt to use the features to account for syncretisms.

(14)

> Notice the great economy within the lexicon[11] that derives from feature decomposition of case. Every declension class contains some degree of case syncretism. To account for the fusion of various cases within each paradigm, constraint equations need not contain arbitrary disjunctions, but merely feature specifications. Consider, for example, the class of plural adjectives. There are four endings: *-ye*, *-yx*, *-ym*, and *-ymi*. The first is used for nominative and accusative, the second for genitive 1, genitive 2, locative 1, and locative 2, the third for dative, and the last for instrumental. Thus, they would be associated with constraint equations (a,b,c,d), respectively, where α, β = + or -.
>
> a. (↑CASE) =c (-,-,α)
> b. (↑CASE) =c (α,+,β)
> c. (↑CASE) =c (+,-,+)
> d. (↑CASE) =c (+,-,-)
>
> Further decomposition of nominal and adjectival endings could produce even greater economy and generalization through use of features; the above example is intended solely to illustrate how constraint equations would control the use of case-marked nouns and adjectives.
>
> (Neidle 1982b:398)

(*-yx* = *-ix* in the transcription system used here)

Implicit in the quoted text is the assumption of co-variant ***signans*** and ***signatum***, and the homonymy of ***signantia***, so that each syncretic ***signans*** corresponds to distinct ***signata*** (***-ix***—or [α,+,β]—to "G1G2L1L2" as syntactic cases, for plural Gs and Ls are never distinct). The one constant for ***-ix*** in inanimate plurals is the [+QUANT] feature common to GGLL. But in animate plurals, ***-ix*** also expresses the Accusative which is [-QUANT], hence its specification must have variables for all three features.[12] Since animates never have G2 or L2, the value of the third feature for animate G or L should probably be zero rather than plus (see note 9 above). The invasion of G morphology by A is a filling of that gap. In extending the decomposition to other paradigms, I will use the variables α,β,γ, whose values range over + and - ; parentheses around one of them indicate the possibility of zero as a third value.

(15) Feature decomposition of endings. Decl. I and II.

a. Decl. I.

	Case	Signatum	Signans		Further syncretisms
inan.	N	-,-,-	-,-,α		
an.	A	-,-,+	-,α,(+)		
	G	-,+,∅			
	G2	-,+,-	-,+,α		
	G1	-,+,+			
inan.	L2	+,+,-	+,+,-	+,+,α	+,+,(α)
an.	L1	+,+,+	+,+,+		
	L	+,+,∅	+,+,∅		
	D	+,-,+	+,-,+		
	I	+,-,-	+,-,-		

b. Decl. II.

Case	Signatum	Signans		Further syncretisms
N	-,-,-	-,-,-		
A	-,-,+	-,-,+		
G2	-,+,-	-,+,α		
G1	-,+,(+)	-,+,(+)		
L2	+,+,-	+,+,(α)		
L1	+,+,(+)			+,α,(β)
D	+,-,+	+,-,+		
I	+,-,-	+,-,-		

With Declension III and feminine adjectives, however, the three features are inadequate; as with the animate plural adjective ending

-ix, there are many endings whose syncretisms are reflected in variables for all three features.

(16) Feature decompositions, fem. adjs. and Decl. III.

a. fem. adjs.

Case	Signatum	Signans	Further syncretisms
N	-,-,-	-,-,-	
A	-,-,+	-,-,+	
G1G2	-,+,- / -,+,+ / -,+,Ø	-,+,(α)	/oj/ α,β,(γ)
L2	+,+,-	+,+,(α)	/oj/ α,β,(γ)
L1	+,+,+ / +,+,Ø	+,+,(α)	/oj/ α,β,(γ)
D	+,-,+	+,-,+	/oj/ α,β,(γ)
I	+,-,-	+,-,-	/oj/ α,β,(γ)

b. Decl. III.

N	-,-,-	-,-,α	
A	-,-,+	-,-,α	
G1G2	-,+,- / -,+,+ / -,+,Ø	-,+,(α)	α,β,(γ)
L2	+,+,-	+,+,(α)	α,β,(γ)
L1	+,+,+ / +,+,Ø	+,+,(α)	α,β,(γ)
D	+,-,+	+,-,+	α,β,(γ)
I	+,-,-	+,-,-	α,β,(γ)

The syncretic *-i* for GLD and the feminine adjective's *-oj* are represented in (16) by α, β, (γ).

2.33. *DIRECT and INDEFINITE. The fourth and fifth dimensions.*

The relevant distinction for these paradigms is not Central vs. Marginal, but Direct vs. Oblique. This fact is reflected in the traditional statement: "feminine adjectives end in *-oj* in oblique cases." The QUANT and DIR/ASCR features are of no help in distinguishing the Instrumental from the other forms, since they are neutralized in the other marginal cases. Here, as shown in (17), the two extra features posited by Jakobson in 1958 make much

more sense and do indeed demonstrate the economy of feature decomposition.

(17) Fem. adj. and Decl. III syncretisms in terms of two paired features, DIRECT and INDEFINITE. The tentative assignment of plus values will be discussed in §3 below.

a. Fem. adjs.					b. Decl. III				
Case	/form/	DIR	INDEF	SYNCR	Case	/form/	DIR	INDEF	SYNCR
N	/aja/	+,+			N	/ø/	+,+		+,α
A	/uju/	+,-			A	/ø/	+,-		
G12	/oj/	-,-	-,-	-,α	G12	/i/	-,-	-,-	-,-
L12	/oj/	-,-			L12	/i,i/	-,-		
D	/oj/	-,-			D	/i/	-,-		
I	/oj(u)/	-,+			I	/øju/	-,+		

Feminine adjectives distinguish three or four forms; Declension III has three. The two features, DIRECT and INDEFINITE, allow a maximally economical specification; syncretisms occur in cases with the same or similar configurations. As for the animate plural adjective ending *-ix*, which syncretizes A with G1G2L1L2—it requires a sixth dimension, the one distinguishing direct from oblique forms (rather than cases), which is so important elsewhere in the morphology, see (7).

3. *Conclusions and summary.*

3.1. *Arguments for the fourth and fifth dimensions.*

The two extra features posited by Jakobson lead to a partial reconciliation of the models for *signans* and *signatum.* A plus-valued feature is needed for distinguishing the *signans* of Instrumental from the other Marginal cases in paradigms which syncretize the latter forms with Central cases (as in the feminine paradigms (17) and in the plural adjective). The feature [+Indefinite] serves that purpose, and a marked value reflects the highly marked nature of Instrumental desinences. Such a common feature also reinforces Jakobson's more controversial claim of an equivalence relation between N and I—as we saw, the Indefinite feature provided the missing label for the N-I column in the matrix diagram (5). Such a claimed equivalence must be tested together with the others inherently specified in the model (A=D, G1=L1, G1=L2, modulo MAR/PERI). To what extent the

equivalence relation is justified on semantic or functional grounds is a matter beyond the scope of this paper, as is the question of the adequacy of the term "Indefinite" as a translation of the feature's *signatum.* In the meantime, however, it seems that the contemporary Russian evidence for an equivalence between N and I is stronger than it is for A and D, or for G and L. The several syntactic contrasts (supported by the different semantic values for MAR/PERI and the consistent co-variant morphological difference) also point to an underlying sameness: viz. the alternations in predicate nominals; in active vs. passive agents; in personal vs. impersonal means-or-instrument constructions. A plus-valued feature [+Indefinite] serves to specify that sameness.

As for the Direct vs. Oblique opposition, its importance is clear, not only for typological comparison with other languages (the argument in Jakobson 1958), but also for specifying the syncretisms and distinctions of almost half the Russian paradigms. Its important role in the historical development of the syntax and morphology is also undeniable. For example, Flier's careful 1983 account of the rise and spread of the Genitive-Accusative singular adjective desinence *-ovo* is in terms of a positive value for two features: Quantifying, and Direct (rather than Directional/ Ascriptive). The historical spread of animate direct objects into Genitive morphology—rather than, say, into the Dative (which shares DIR/ASCR with A)—in spite of the semantic incompatibility between QUANT and the individuated animates (Klenin 1980; 1983) is accounted for by the Genitive's status as the only Central Oblique case (Chvany and Brecht 1980). In the modern language, the fact that G is unmarked for both DIRECT and MAR/PERI could explain why G is the most frequent case in expository style (far more than N or A), cf. Nikonov 1961. Also an indication of the unmarked status of G is the fact that, in nominalizations, G is the case of neutralization for N and A (and, more sporadically, for other cases as well). The Direct vs. Oblique distinction, important to the morphology, cf. (6), is also crucial in modern syntax: only the Direct cases can alternate with Genitive under negation; for further arguments see Babby, in this volume and 1985.

I have already mentioned that, semantically, "Directionality" cannot be the invariant meaning of the Accusative. There is much less empirical support for a common semantic or syntactic feature for A and D than for an equivalence between N and I: A and D

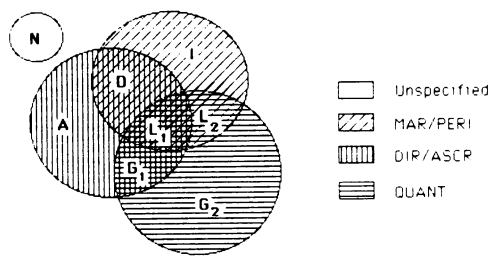
almost never alternate in cognitively synonymous sentences, and the functional load of the contrast is very low (Knorina 1981). Rather, it seems that the cube-shaped model sets up an equivalence between the plus-valued Direct feature of A and the Directional feature of D.

3.2. *Why pluses for the Nominative.*

The plus values of the Direct and Indefinite features, while obviously defensible for Accusative and Instrumental respectively, may raise questions when applied to the Nominative, traditionally "the unmarked case." I cannot at this point provide independent arguments that both features must be plus-valued in the Nominative. But I can provide a compelling reason for at least one plus-valued feature.

The argument comes from the fundamental asymmetry between ***signans*** and ***signatum*** which was revealed when Jakobson transferred the privative oppositions of Trubetzkoy's phonology into systems of ***signantia*** whose ***signata*** are more than mere "otherness." It is only in ***signatum*** that the Nominative is unmarked ("makes no statement of" Marginality, Directionality/Ascriptiveness, or Quantification). Thus, for a model of ***signatum***, specifications such as [-,-,-] or [000] make sense. In order to illustrate this, the cube can be reinterpreted as a network diagram showing shared features (Stewart 1976:130), rather than a componential analysis diagram as was done earlier, i.e., as a model which counts pluses only, avoiding the ambiguity raised by the Huntington-Robertson (or binary) conversion in (12). That meaning of the cube has a synonym in the non-hierarchical Venn diagram (18).

(18) Venn diagram showing shared features

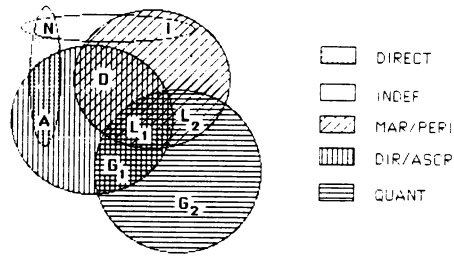


N is left out of the semantic system; the diagram shows that N "makes no statement" of any of three ***signata.*** The situation in

signans is different, however, for N has the *signantia* [-,-,-], which are opposed to the specifications of any other case *X*, identifying N as unambiguously *non-X*. N is not a "non-case," or a "zero-case" in a series ending in 7—cf. (12)(13), it is the first and most privileged of a substitution list of eight cases. Syntactically and morphologically (that is, as *signans*), Nominative case must be distinguished from "no case". Its features must be assigned by rule, to account for the difference between Nominative long adjectives and caseless short adjectives (Babby 1975), and between sentential subjects and predicates that are Nominative NPs and those that are caseless infinitives. A model of *signans* that leaves N isolated is clearly inadequate.

Here one or both of the "extra" features can come to the rescue, linking N to the rest of the system. In order to integrate N in a Venn-like diagram (or other linking model), at least one of the extra features has to be plus-valued, cf. (19).

(19) Linking N to the system with one or both extra features



3.3 *Specifying and describing.*

Occam tells us not to posit entities *praeter necessitatem*. But what constitutes *necessitas* depends on the linguistic task before us. For the purpose of specifying the cases uniquely, a three-feature system (any three-feature system, in any order) is sufficient.[13] The translation of the cube's semantic features into syntactic ones makes them available for the economical and elegant specification (i.e. generation) of syntactic case. I will call this the axiomatic use. Such an approach is fully adequate for the purpose of stating syntactic rules.

But for working out the complex mappings from syntactic feature to semantic interpretation and phonological form, it is clear that many more distinctions are at play. For the descriptive task,

accuracy is more important than economy, and the extra features are needed. The assumption of a one-to-one correspondence between *signans* and *signatum* does not lead to an adequate account. When viewed not as axioms but as empirical claims, the features of the cube are ripe for reevaluation. Not only must their interrelationships be examined in light of the evidence for the "extra" features, but their semantic claims must be reconciled with such developments as the disappearance of G2, the low functional load of L1, and the continuing historical change from synthetic, morphological case marking to an analytic system based on covert syntactic features rather than overt phonological realizations.

4. *Epilogue.*

The extra features resolve some conflicts between the models, but they are only the first steps toward reconciling the incompatible facts. The paradoxes in the systems are due in part to the co-existence of several tendencies. Jakobson's was the first attempt at a holistic integration of morphological conflation with case semiotics. His long-term purpose was to illuminate the effects of historical processes, which could be seen more clearly if the investigator would temporarily "close his eyes to the past (*zakryt' glaza na prošloe*) (1971:155)." The proposal is made "for the sake of discussion (*v diskussionnom porjadke*) (*ibid.*)." In the English summary (179–81), the claim of a "morphological invariant" is made more categorically, as is the separation of a morphological "intension" from syntactic function or "extension," but not without a hedging reference to remaining questions: "A scale of transitional, interdisciplinary problems, and particularly the indissoluble connection of sound and meaning tie together phonemics and grammar." But subsequent generations have, by and large, lost sight of the question marks built into his brilliantly reductionist model.

The reason for this is easy to see. The maximal expansion of the system to eight cases, and its modeling in the metaphoric cube, suddenly made it non-negotiable. Unlike its near-synonyms, the grid and the Venn diagram, the cube cannot add an extra dimension, nor can it show gaps without violating its integrity as a figure. The parts fit together so neatly that to touch any of them would destroy the whole. So, for twenty-five years, controversies have raged while the cube "in its crystalline elegance" (as van

Schooneveld puts it) remained inviolate—and without heuristic power. The asymmetry between the sign's components, introduced when Jakobson transferred the distinctive feature from phonological *signantia* to grammatical *signata*, was for the most part ignored until the features were again reinterpreted as *signantia* in generative syntax (cf. Chvany 1975:II; 1984). Neidle's attempt to account for syncretisms, while only partly successful in terms of the three original features, has serendipitously restored the model's heuristic power by reviving the questions in a particularly explicit way. The question marks replaced here provide an agenda for our future endeavors.

The present reexamination uncovers a historical development in Jakobson's approach to linguistics, and a profound philosophical difference between the 1936 and 1958 papers, a difference that has been obscured by superficial similarities—i.e., by the general framework of markedness theory and the repetition of supporting data. The 1936 paper was mainly concerned with semantic hypotheses within an extension of the theory of markedness. By 1958, however, the concept of markedness in semantic studies was a given, and the more abstract treatment in that paper is focused on economy rather than on new empirical support. As we have seen, the cube's fit with the semiotic model is imperfect. Though the model is adjusted slightly in the direction of accuracy (the "Directional" label is changed to the more extensive "Ascriptive"), and though it remains the best arrangement possible within the constraints of the cube-shaped figure, it is necessarily further from the semantic ground. The 1958 paper is less a claim about case semantics than it is an experiment in modeling. It is a metatheoretical proposal for the optimally economical way to specify each case, i.e., to generate case inflections.

NOTES

[1]Elsewhere in my lecture notes I see musings on the possibility that the development of abstract scientific thought among speakers of Indo-European languages may have been facilitated by the high degree of syncretism in those languages and the relative scarcity of simple one-to-one correspondences between forms and meanings.

[2]This is clearest in the growing number of indeclinable nouns, whose case is always identifiable in context, and in animate masculines, where the syncretic Genitive-Accusative can be disambiguated by substitution or

otherwise: it is clear in context whether *moego dorogogo otca* 'my dear father' [gen.-acc.] is equivalent to *moego dogorogo papu* [acc.] or *moego dorogogo papy* [gen.]. The Genitive 2 ending *-u* is also found in archaic, idiomatic, or colloquial Genitive 1, cf. *ego isključili za kurenie tabaku* (standard *tabaka*) 'he was expelled for the smoking of tobacco' in Čexov, *Moja žizn'*. It is, in fact, uncertain that G2 exists at all in the modern standard language (Švedova, ed. 1966:115). If the cases were always distinguishable as morphological classes, there would not be the perennial controversies about the status of phrases like *v gosti, v soldaty*, which are variously analyzed as N with a preposition, or as A with failure to mark animacy. (See Knorina 1981 for a survey of the problems and an interesting discussion of the functional load of each case.)

[3]It is necessary to reconcile the terminology used in this paper and in my cited sources. The "second genitive" or G2 (in *-u*, Declension I masc. mass nouns only), is sometimes referred to as the "partitive" case. G1 (in *-a* for Declension I, as well as some substandard or archaic uses in *-u*, see note 2 above) is the case normally known as the genitive. The "second prepositional" (Declension I in *-ú*, Declension III in *-í*) is also known as the "locative." The two prepositional cases are referred to interchangeably in the literature as L1, L2, or as P1, P2. In referring to the cases by their initials, I use N A G1 G2 L1 L2 D I for, respectively, Nominative, Accusative, Genitive 1, Genitive 2, Prepositional/Locative 1, Prepositional/Locative 2, Dative, Instrumental. The notation L1 L2 avoids confusion with Pl(ural).

[4]The feature labels present terminological problems as well. The terms "Marginal" and "Peripheral" are used interchangeably in the diagrams of my sources. I will use MAR/PERI as a label for this feature. In narrative use I will call the plus-valued one "Marginal," using "Central" for "Non-marginal." The label "Directional" goes back to the 1936 version and translates the Russian *napravlennost'*; the inclusion of G1 and L1 among the cases marked for that feature entailed a change to "Ascriptive" in the 1958 version. This vaguer term avoids some empirical inaccuracies: there is nothing "directional" about the accusative objects of stative verbs (*imet' pravo* 'have the right'), of "Oper" verbs (*proizvodit' vpečatlenie* 'make an impression'), of subject-directed verbs (*poterpet' neudaču* 'suffer a defeat'; *pitat' uvaženie* 'feel respect'). Other terminological reforms have been suggested, notably in van Schooneveld 1978, but the older term "Directional"—representing a *Hauptbedeutung* rather than the *Gesamtbedeutung* of the accusative—remains popular and familiar. My sources use either DIR or ASCR as labels, and I shall use DIR/ASCR in my own diagrams.

[5]The box diagram is from Chvany 1982, which outlines the morphological, syntactic, lexical, statistical and typological rationale for the order NAGLDI, and the lack of motivation for the traditional ordering borrowed from classical grammars (NGDAIP), particularly the lack of evidence for the placement of Accusative as "the fourth case." It will be noted that none of the possible orderings of the features yield the latter order, see (11) below.

[6]My discussion of graphic models is heavily indebted to the theoretical work of Stewart 1976. A more detailed investigation of the artistic and iconic properties of graphic models of case systems is found in Chvany 1984.

[7]The accusative has an ending of its own (*-u*) only in Decl. II and in feminine adjectives. Its distinctiveness within these paradigms is deceptive, however, for if one looks across at other paradigms, the phonological segment

/u/ appears in the desinences of *all cases except N.* That is, it serves as the expression of *any* of the features, for it is found not only in the [+DIR/ASCR] Dative of Decl. I, but in the [-DIR/ASCR] G2 and L2 of the same paradigm; it is also the final segment of the Instrumental in Decl. III, and the optional final segment of the Instrumental feminine adjective ending *-oj(u).* If one follows Zaliznjak 1977 in considering indeclinable words to be paradigms of homonymous case forms, then /u/ occurs even in N (e.g., *interv'ju* 'interview'). On further cross-paradigmatic syncretisms, see note 8 below. (The transcription system adopted here is that of Jakobson 1958.)

[8]Jakobson's approach to syncretisms assumed the primacy of the paradigm. Many more syncretisms are found across paradigms, as is evident from the lists of segments that can express each case. If one examines the mapping from the morphology to the three features, the following distributions appear: All the vocalic segments (∅, /a/e/i/o/u/) occur as Nominative-Accusative endings. As the only or final segments of desinences, ∅, /a/ and /o/ occur only in Central cases; /u/ occurs in all cases but N (see note 7 above); /i/ occurs as the full ending of all cases but Instrumental, but it is also the segment distinguishing I from D in the plural; /e/ occurs in N (*angličane*), in NA (*vse, te*) and in D and L of Decl. II. Thus, only ∅, /a/, /o/ consistently express [-MAR/PERI]; the rest express any of the feature values. The adjectival desinence /oj/ also expresses all cases: NA in inanimate masculines, GGLLDI in feminines. All the vocalic phonemes also occur as final segments of indeclinables: ∅ in feminine surnames whose masculine forms are declined (*Anna Braun* 'Anne Brown'); the rest in words like *boá kafé, referí, bjuró, menjú.* Case in Russian is a syntactic, not a morphological category.

[9]Animates do not fully utilize the DIR/ASCR feature, for they can never have L2 or G2. Singular count nouns cannot have G2 on semantic grounds; only a few of the eligible mass nouns have distinct G2 forms, and those are becoming optional or are relegated to a few idiomatic collocations (see note 2 above). Plurals never distinguish two Gs or two Ls, though semantically both meanings are possible, even for animates. A more "realistic" (semantically based) account would place some pluses or minuses in parentheses, indicating the possibility of zero specification.

[10]The marking of L1 involves a certain *Systemzwang* for, as the other cases are defined, the system leaves no other option. There is still another paradox here, for L1, the most marked case in the three-dimensional system, has the lowest functional load when measured in terms of syntactic contrasts with the other cases (Knorina 1981). It also seems strange that the most marked (inherently most informative) case should be one that cannot be used without the help of a preposition. But these semantic questions are beyond the scope of this paper.

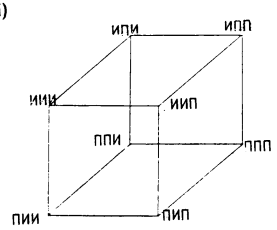
[11]Neidle's work is within the framework of Lexical Functional Grammar developed by Joan Bresnan; in that framework, inflected forms are stored as lexical items, hence the reference to "economy within the lexicon."

[12]Neidle's footnote—not reproduced here—on adjusting the rule for animates is an oversimplification, see note 9 above.

[13]Here I cannot resist a reference to one of Professor Jakobson's favorite little jokes: —"You may call it Ivan Ivanovič, as long as you know what you're saying," he would say as he made fun of terminological disputes. And,

sure enough, the cases can be specified as easily in terms of such names or initials, where *Ivan*, say, is the unmarked name, *Petr* the marked one. Let us call N—*Ivan Ivanovič Ivanov*, L1—*Petr Petrovič Petrov*. Below is the cube (i) with the corners labeled (in Cyrillic, to avoid confusion with the case initials), and the same information in tabular form (ii):

(i)



(ii)

N	ИИИ	ПИИ	I
A	ИИП	ПИП	D
G2	ИПИ	ППИ	L2
G1	ИПП	ППП	L1

The cases are as distinct as they are in (9), the notation as perspicuous. This deliberately facetious example illustrates the difference between ***specification*** (in which the feature complexes are axioms), and ***description***, in which they represent hypotheses about the cases as complex signs. For axiomatic uses, any pair of symbols will do (in threes to specify a set of 8 elements). In other words, it would be just as feasible to specify the 8 elements in (7)(13)—N A A A G L D I—in terms of any 3 pairs of features in any arbitrary order, as it is to specify the Jakobsonian features. Such a system would relate abstract syntactic features to morphology.

Prepositions and Case Government in Russian

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In the earliest reconstructible language there was no case government. According to Meillet, the nouns in a sentence simply co-occurred with the verb and showed the case form required by their case relationship.[1] There were no prepositions either. There was a single category of adverbial particles, which gravitating to the verb developed into verbal prefixes and gravitating to the noun developed into prepositions. In construction with a noun this P added specificity to the case relationship being expressed but did not fundamentally alter it. This original state can still be discerned in modern Russian. The verb has its "case frame" (Fillmore (1968:26)), with the configuration of possible case complements constituting the verb's valence, but case form itself is determined by the case relationship, not the verb. As for Ps, their failure to govern case is clearest in instances where the same P participates in different case relationships.

There is an important sense, however, in which case in an inflected language like Russian is always governed: it is always assigned by rule. This is because case is abstract, not to be identified with a concrete lexical formative (like perhaps *de* in French) or any particular affix. Meillet observed that genitive case in Slavic consists solely in the syntactic identity of diverse word-forms like *vlíka, ženy, domu, vlíkŭ, ženŭ, togo*, and *mene* (1934:460). Since case is reflected in individual word-forms—it is of course not a feature of the word as a lexical unit—it must be assigned in individual sentence environments. For example, in sentences like *pozovi vrača!* and *vrača!* the case form of the noun could be accounted for by a rule which assigns the accusative feature in the environment of a verb, i.e., NP ——> [+Acc] / [$_{VP}$ V ____]. This is traditional verbal government. Otherwise accusative could be viewed as a feature of the object relationship per se, assigned in sentence structures where a noun is dominated by a node labeled O(bject), i.e., NP ——> [+Acc] / [$_{O}$ ____]. The second solution may seem attractive for a sentence like *vrača!*

because it does not require positing an abstract verb which is not realized on the surface.[2] Either way, the accusative feature is assigned by a rule. It will not do simply to state (*Russkaja Grammatika* (*RG*) 2:370) that an accusative case form is a feature of certain sentence schemata. Observed accusative forms like *vrača* must be related to caseless lexical items like VRAČ. It may happen that a given sentence member is not the case form of a noun; for example, *večerom* can be analyzed as an adverb, a separate lexical entry. But when *večerom* is taken to be the instr. sg. form of VEČER, there must be a rule, no matter how ad hoc, which assigns instrumental case.

The subject of this paper is the role of Ps in case government. The traditional view, as just noted, is that it is nil: case markings in P constructions are typically assigned in environments like $[_C$ (P) $[_{NP}$ ____]], where C is the case relationship and P is optional and does not affect case marking. This view is compatible with Jakobson's position on Ps and case in Russian, namely, that P constructions merely offer additional implementations of case oppositions observable apart from Ps (1936/1971:28 and passim). This being so, my paper could end here. But there is an opposing position that needs to be considered.

It is widely held that some occurrences of case in a sentence are less meaningful than others. Kuryłowicz 1960, originally published in 1949 partly in response to Jakobson 1936/1971, offers a forceful statement of this position. Among the cases in Indo-European, Kuryłowicz distinguishes between grammatical cases (nominative, accusative, genitive) and "concrete" cases (instrumental, dative, ablative, locative). The primary function of the grammatical cases is syntactic, but they may occur also in secondary, adverbial functions such as the accusative of time. The primary function of the concrete cases is adverbial, but they occur also in secondary, syntactic functions. Thus *rubit' toporom* shows a primary, concrete use of the instrumental, while in *rasporjažat'sja sredstvami* we see a secondary, syntactic use of the same case. Kuryłowicz goes so far as to claim (136) that *-om* here has meaning while *-ami* does not,[3] and in so doing he seems to have lost sight of the inflectional nature of Indo-European languages. If we accept inflection as a component of the grammar, our syntax will describe sentences in terms of words (or stems) and leave it to inflection to supply word-forms (or endings).[4] In terms of words

our two examples are RUBIT' TOPOR and RASPORJAŽAT'SJA SREDSTVO. Hence the task of syntax is to represent these words in structures which provide the input to inflection. What Kuryłowicz may be understood to claim is that instrumental case in *sredstvami* is merely the reflection of an idiosyncratic property of the verb, that what may be represented as [$_{VP}$ *rasporjažaj-*$_{[+INS]}$ *sredstv-*] is syntactically identical with, say, [$_{VP}$ *imej- sredstv-*]. Instrumental case in *toporom*, on the other hand, is meaningful in that it reflects the semantically concrete, adverbial role of this word in the sentence, which is more or less independent of the verb. The instrumental case of *toporom* is assigned locally, by a dominating C node which may be labeled INS, while the instrumental case of *sredstvami* is more distantly governed, by the verb.

Returning to Ps, it was Peškovskij's view (1956:308) that the instrumental case in *pod stolom* "functions in exactly the same meaning" as the prepositional case in *na stole*, a sign of the atrophy of case meaning accompanying increased use of Ps. If "funkcioniruet soveršenno v tom že značenii" may be taken to claim that *na stole* and *pod stolom* are instances of one and the same C, it follows that instrumental case in *pod stolom* can only be the reflection of an idiosyncratic property of *pod*. Thus *pod* would need to be specified in the lexicon [+INS] and this feature would be assigned to its complement in the environment [$_{PP}$ *pod*$_{[+INS]}$ ____]. Note that this is precisely how grammatical agreement works, as in an adjective-noun construction where certain features of the noun (the lexical feature of gender and the syntactic features of number and case) are copied onto the adjective. The only remaining difference between *pod stolom* and, say, *bol'šim stolom* would be that whereas the agreement features in an adjective are as a rule formally reflected also in the noun head, a P does not formally reflect the case feature which it governs. But government normally involves grammatical features imparted to the governed word mainly on the basis of the governing word's categorial features. Thus in *priezd vrača* genitive case in the complement is determined solely by the category of the head word. The same is true of accusative case in *pozovi vrača*. Therefore, as long as *pod* is categorized as P, along with *skvoz', vozle, vopreki*, and *pri*, which are accompanied by different cases, it cannot be said to govern instrumental case in the strict sense of the term. Now then, if *pod* does not govern instrumental case in

stolom, how is this feature assigned? This question will be addressed in part II of this paper. Part I deals with related preliminary matters.

I

I take as my corpus the 197 items listed in the index to volume 2 of *RG* under the heading "prepositions and prepositional formations." The number is daunting, more than double the 81 items listed in the index to the Academy grammar published just ten years earlier (Švedova 1970).[5] But perhaps not all prepositional formations need to be categorized as P. Prepositional formations, including Ps, might be generally described as semantically depleted sentence segments occurring between semantically full sentence segments.[6] Consider *Smith was arrested* and *the murder of Jones*. When these two semantically full segments occur one after the other in a sentence they are connected by a segment with less semantic content. It can be *for*, but (for reasons having more to do with contemporary American society that English grammar) as often as not it is *in connection with*. There are grounds for regarding *in connection with* as a unit. Police officers and newspaper writers regularly substitute it for the prejudicial *for*. Moreover, there are grounds for dissociating *in connection with* from the noun *connection*. The police officer using the longer string certainly does not wish to assert that there exists a "connection" between Jones's death and Smith's arrest; the reason he is using this set expression is to avoid that assertion. (Alternatively, we could say that *connection* has a different sense in the context *in . . . with* than in other contexts, relating no doubt to frequency of occurrence.) There is also the question of distribution and constituent structure. Claiming that this sentence contains an occurrence of the noun *connection* entails calling *connection with the murder of Jones* an NP. But to the extent that NPs like this almost never occur except as complements of *in*, a different analysis may be indicated, perhaps [[*in connection with*][*the murder of Jones*]].

RG's listing includes many combinations like *in connection with*, for example, the counterpart *v svjazi s*. The reason for considering them sentence constituents, hence Ps, are roughly the same as for *in connection with*. N. Ju. Švedova writes: "The

ongoing enrichment of the class of prepositions via the 'prepositionalization' of semantically full words which name the relationship in question lexically testifies to the development and enrichment of the system of abstract syntactic meanings" (*RG* 1:712). I would propose that the ability to use abstract nouns like *svjaz'* in even more abstract ways is adequate testimony to the speech culture of educated Russian speakers. We do not impugn their ability to express abstract syntactic meanings when we decline to posit 200 Ps in the lexicon of Russian. P is, after all, just an artifact of linguistic description. In my view, the need to account for case use dictates a radical limitation in the number of Ps.

V svjazi s is an example of a so-called complex P, of which 47 are listed. Ožegov's dictionary gives *opozdali v svjazi s zanosami*, which is said to illustrate the meaning "vsledstvie, po povodu." This definition, together with the placement of this phrase at the bottom of the entry for *svjaz'* away from sense 1, "connection," would imply that *v svjazi s* does not instance either the noun *svjaz'* or the P *s* and hence that the relationship between the final segment of *v svjazi s* and instrumental case in the complement has been lost (is only historical). This analysis, if intended, would have serious consequences for the subject of this paper.[7] Use of instrumental case with P is problematic (see below), and the 18 complex Ps ending in *s* would quadruple the number of Ps taking instrumental. But let us look at the constituent structure of *v svjazi s zanosami*. Let us grant that it is not [*v* [*svjazi s zanosami*]] with the last three words constituting an NP. NPs headed by *svjaz'* are in no way unusual; in AS17 (at *svjaz'*) we read *Krasnodol'skij otkryvaet svjaz' svoej ženy s kakim-to projdoxoju švejcarcem*. But the stereotyped use of *svjaz'* with *v* may well have led to their being restructured closer, thus [[*v svjazi*] [*s zanosami*]]. On the other hand, a putative further restructuring, to [[*v svjazi s*] [*zanosami*]], is counterindicated by the alternation of *v svjazi s ètim* with *v ètoj svjazi*, where the interchangeability of *s ètim* with *ètoj* suggests that both are constituents (Křížková 1967:84). A similar judgment is in order for what *RG* calls verbal complex Ps, e.g., *sudja po*: there is no basis for believing that [*sudja* [*po vnešnosti*]] (for example) has been restructured as [[*sudja po*] *vnešnosti*]. My view of complex Ps, nominal and verbal, can be summarized as follows: In *v svjazi s zanosami* and *sudja po vnešnosti* we have untypical uses of P constructions: in the former, one P construction modifies another;[8]

in the latter, a P construction modifies something which is perhaps no longer a productive use of the verb *sudit'*. But there are no new P constituents.

So-called simple deverbal Ps such as *blagodarja, vključaja,* and *pogodja* will not detain us. According to Švedova (*RG* 1:708) the case of the accompanying NP "is predetermined by the character of the strong bond of the corresponding verb." Thus *končaja dekabrem* shows instrumental because *končaju dekabrem* does. There may be respects in which these gerund forms have diverged from the rest of the verbal paradigm, but I take case government to be a cogent reason for regarding the divergence as falling short of recategorization.[9]

Most of the remaining items in the list are so-called denominal Ps like *posredstvom* and *v tečenie.* In the majority of instances the complement is in the genitive case. As an explanation for why so many Ps in Slavic take genitive complements, various scholars have cited their nominal origin (Vaillant 1977:113, Vinogradov 1972:535). We assume that Russian has an adnominal genitive rule, which marks the second NP of a two-NP construction genitive, giving, for example, genitive in *poseščenie vrača* corresponding both to nominative in *vrač poseščaet (kogo-l.)* and to accusative in *(kto-l.) poseščaet vrača.* As an explanation of case use in contemporary Russian, the origin of a P is of course irrelevant. Only if we reject the recategorization of the noun in question as P are we able to consider the accompanying genitive adnominal. (Even as a historical explanation of case use it has its limitations, considering items like *vsled, skvoz',* and *meždu,* which derive from nouns but take cases other than genitive.) The task of accounting for case use forces me to question a large percent of the noun-to-P recategorizations which have been proposed. I will sort through the outer layers of prepositional formations fairly rapidly in order to have space to discuss the problems raised by the core of the P category.

Let us look first at the items in the corpus which correspond to case forms of nouns, for example: *put' porjadka 10.000 km., posredstvom peregovorov, putem složnyx vyčislenij, ustrojstvo tipa centrifugi,* and *cenoju bol'šix poter'* (Ožegov's illustrations). There may be semantic reasons for regarding *porjadka, posredstvom, putem, tipa,* and *cenoju* as other than case forms of the respective nouns. If *porjadka* here means "about, approximately" (AS17), whereas the *Pocket Oxford Russian-English Dictionary* (1975)

translates *porjadok* as "order; sequence; manner, way; procedure," the two are no more than partial homonyms. However, bigger dictionaries (AS17) give a sense 7 for *porjadok*, "variety, type, kind," as in *takogo porjadka mysli*, a sense which is judged broad enough to include "about, approximately" as a subsense. Thus the semantic ground between the homonyms is filled in and the two can be assigned to a single polysemous word. For *posredstvom* the P analysis is supported by the fact that *posredstvo* in many of its uses has been replaced by *posredničestvo*, which suggests that the surviving case and P uses are frozen. But as long as *pri posredstve, čerez posredstvo*, and *bez posredstva* remain in use along with *posredstvom*, the noun status of *posredstvo* is assured (Křížková 1967:85). For *putem*, the seven senses given in Ožegov for the noun *put'* do not include the sense shown above. But AS17 among eight numbered main senses and numerous subsenses for this noun includes the transferred sense "means, way of achieving something; manner of action," as in *izvlečeni[e] dragocennyx metallov . . . èlektroximičeskim putem.* Comparing this citation with the one illustrating the putative P *putem* in the same work, *soedinenija ugleroda putem ximičeskix izmenenij*, we find them almost identical semantically even if they differ somewhat syntactically. For *tipa*, the one dictionary (Ožegov) which states that it is used "in the meaning of a preposition" also identifies it as the genitive of *tip*. Finally *cenoju*: its status as P is enhanced by the dictionaries (AS17, AS4, Ušakov) which define this form directly as "having lost, expended." But in Ožegov the contribution to the meaning made by instrumental case is factored out, so that the definition is "loss, sacrifice," and this sense is easily accommodated within the polysemy of the noun *cena*. The characteristic alternation *cenoju/cenoj* provides morphological support for noun status.

Prepositional formations in which the noun is preceded by a P are much more numerous. Unlike the five items just discussed, they raise the question of constituent structure: does a phrase like *v čislo predstavitelej* instance the primary P *v* or a denominal P *v čislo*? Is it [*v* [*čislo predstavitelej*]] or [[*v čislo*] *predstavitelej*]? The issue is actually not so different from that raised by *putem složnyx vyčislenij*. In both cases we ask whether this is a noun heading an NP or whether it is no longer the form of a noun (possibly a "preposition-case form," *predložno-padežnaja forma*), having undergone recategorization. The difference is that in *putem*

the chief factor in a possible recategorization is case form while in *v čislo* it is case form in relation to a P and also the P itself.

It is hard to ignore orthography. Sixty-five items in the list are spelled open like *v čislo* but only two dozen are spelled solid like *vmesto*. Strings of letters set off by spaces represent words, and if sentences in Russian may be said to consist of words,[10] it is worth noting that conventional spelling represents *vmesto predstavitelej* as two constituents but *v čislo predstavitelej* differently. Indeed, if we compare *v čislo* and *v čisle* with the parallel formations *vmesto* and *vmeste* we see the regular distribution of accusative and prepositional case in the former pair (*izbrat' kogo-l. v čislo predstavitelej* vs. *byt' v čisle prisutstvujuščix* [Ožegov]), but we do not see it in the latter pair. Křížková (1967:85) warns that spelling can be misleading; *v silu* and *v tečenie* should be spelled solid, she claims, because they do not show productive uses of *v* with accusative. This viewpoint finds some support in the dictionaries. Sense 7 of *v* in AS4 is "used with certain nouns in forming adverbial combinations meaning manner, character of action, or state," e.g., in *poklonit'sja v pojas.* Sense 10 of *v* in Ušakov is "in combination with nouns or adjectives used to form expressions with adverbial meaning," e.g., *v razbivku, v tečenie, vnič'ju.* Some accusative-case P constructions must pose a challenge for lexicographers; consider also *v adres, na predmet, v prodolženie,* and *v uščerb* (none of which is found in the index to *RG*). But if they are correct in at least addressing the challenge and in seeing here instances of *v*, then these combinations are not adverbs (nor, with a complement, are they Ps). In what follows I will further limit my attention to prepositional formations which are spelled solid, i.e., represented by standard orthography as sentence constituents. But before proceeding I will consider a class of apparent exceptions to the adnominal genitive rule.

Our corpus includes a number of items taking dative complements. One type is represented by *podobno, soglasno, soobrazno, sootvetstvenno,* and *sorazmerno.* Corresponding to these forms are related adjectives which also occur with the dative. Examples: *kto-nibud' iz podobnyx vam ljudej* (AS4), *[svazi] sočli povedenie devuški vpolne soglasnym obyčaju* (AS17), *[arendnaja plata] byvaet soobrazna tomu, skol'ko doxoda* (AS17), *[xoču] sootvetstvennogo zvaniju mesta* (AS4), *veličina kulakov ego byla sorazmerna ego ispolinskomu rostu* (AS17). There are other adjectives similar in form and/or meaning to the preceding, e.g.,

ravnyj, sovremennyj, soizmerimyj, sootnositel'nyj, sopričastnyj, soputnyj, sosedstvennyj, and *sočuvstvennyj*, which are also attested with dative complements. Adverbs in *-o* from these adjectives either are not attested in the dictionaries or else are not attested with dative complements. In those cases where a dative complement is attested, it is reasonable to assume that the grammar of Russian has a single rule, not one rule for adjectives and another rule for the subset of instances where dative occurs with a related *o*-form which is called P.

The index to *RG* also lists the following items which are accompanied by the dative: *vopreki, vsled, navstreču,* and *naperekor* (the indexer missed *v protivoves* and *ne v primer* found on page 445 of volume 2). Other expressions with similar meanings and syntactic properties can be found in dictionaries, e.g., *nazlo, naperexvat, napererez, naprotiv,* and *v piku.* What these items have in common formally are initial segments which coincide with Ps and final segments resembling accusative-case noun-forms. For several of the items dative form seems to express the meaning of similarity (or lack of it), thus *v kontrast, v protivopoložnost'* (cf. *protivopoložnaja dveri stena*), and *ne v primer*; compare *podobno* and *sootvetstvenno* above. In several others, dative use can be related to the dative of beneficiary or interested party, thus *nazlo komu-l.* like *vredno komu-l.* and *vredit' komu-l.* On the other hand *pojti komu-l. vsled* (or *vsled komu-l.*) may fall into the same class as *perebežat' komu-l. dorogu*, which in turn may share structure with *pljunut' komu-l. v glaza.* Dative is standard for marking inalienable possession, as in the case of parts of the body. The route taken by the body may seem less inalienable than the parts of that body, but in both cases accusative marks the noun denoting that which is directly affected by the verbal action while dative marks the noun denoting that which is indirectly affected. The occurrence of the dative complement appears to be tied to an accusative complement; we find *černaja koška perebežala emu dorogu* but not **emu doroga vela čerez selo*, only *ego doroga* or *doroga* $NP_{(GEN)}$. Thus dative complements structure differently from genitive complements. Compare *popal na sled Gaginyx* (AS17, at *sled*) with *pošel vsled Gaginym* (or *Gaginym vsled*). The genitive represents the complement in a simple adnominal relationship to the noun head, while the dative relates the complement also to other sentence members. *Vsled* and *na sled* offer a contrast in constitutent structure. The first phrase above is

structured [*popal* [*na* [*sled Gaginyx*]]], with an adnominal genitive, the second is [*pošel* [*vsled*] [*Gaginym*]], where *Gaginym* is not constructed with *-sled* and the dative must be accounted for with reference to the entire verb phrase. Two other items in the list show a dative-genitive contrast and may be approached similarly. In *stat' poperek dorogi* and *naxodit'sja naprotiv ozera* we see the more common genitive use. But compare Dostoevskij's *vsegda černoj koškoj norovit perebežat' čeloveku dorogu, vsegda-to poperek da v piku čeloveku* (Slovar' sinonimov, 1:597) and Ostrovskij's *tol'ko, čtob materi naprotiv čto-nibud' sdelat'* (AS17) (also *on vse delaet mne naprotiv*, Ušakov). The genitive forms reflect the adnominal relationship of *dorogi* and *ozera* to *-perek* and *-protiv* respectively. The dative represents *čeloveku* and *materi* in more than a simple spatial relationship; it shows them to be indirectly affected by the verbal action in ways indicated by the larger context. Once the importance of the larger context is accepted, the task of accounting for dative in these dozen-or-so prepositional formations can be seen as a part of the task for accounting for other dative usages, and hence lying beyond the scope of this paper. I conclude that the Ps occurring with dative case are only *k* and *po*.

The suggestion that *vopreki prikazu* and *naperekor želanijam* do NOT show an adnominal relationship between *-preki* and *-perekor* and *prikazu* and *želanijam* respectively, will be easier to accept than the related suggestion that *poperek dorogi* and *naprotiv ozera* do show an adnominal relationship between *-perek* and *-protiv* and *dorogi* and *ozera*. It would be nice if all the items being proposed as environments for the adnominal genitive rule also met other criteria for nounhood. The objection will be raised that *-perek* and *-protiv* are not nouns. In response to this objection, I cite *žurnalist v ipostasi učenogo* and *licemerit' pod ličinoj prjamogo čeloveka* (Ožegov). For speakers of Russian who are familiar with the nouns *ipostas'* and *ličina* only in these constructions, *v ipostasi* and *pod ličinoj* are fixed, P-like units. But in the interests of accounting for case use it is better to recognize nouns of limited distribution (sometimes showing unproductive P use) than to recognize additional Ps with problematical case-governing properties.

The remaining facts separating us from the P core are formations (spelled solid, taking genitive complements) with a P-like part and a nounlike part. Our list includes *nakanune*,

napodobie, nasčet, vmesto, vrode, and *vsledstvie*. In each case the second part coincides with a case form of the corresponding noun and falls within the polysemy of that noun. Thus the meaning of *-mesto* in *ostat'sja vmesto Saši* is no more abstract than in *na vašem meste ja by tak ne delal*. But there are syntactic problems with the noun analysis. *Ostat'sja vmesto Saši* (as noted above) shows an unexpected case use and choice of P; cf. *na meste Saši*. Hence *vmesto* as P N is idiomatic in two respects. For *vzamen* (which AS4 translates as "v obmen") the P N analysis entails positing an otherwise nonoccurring masculine *zamen* next to fem. *zamena*. This would not be unique; fem. *rel'sa* occurs in addition to masc. *rel's*. Next there is *poseredine*, which as P N is idiomatic in that it occurs in contexts involving location rather than movement; we find *poseredine ploščadi stojal kiosk* but not **po ploščadi stojal kiosk*. But the alternative to considering *poseredine* an idiomatic P N is to deny the obvious similarities with *v seredine ploščadi stojal kiosk*. *Okolo* as P N shows the same prepositional use as *bok o bok* and may be compared with *obok dorogi* (AS17; not listed in *RG*). Analyzing *obok dorogi* as [*o* [*bok dorogi*]] rather than [[*obok*] *dorogi*] does not entail extending the meaning of *bok*. The corresponding analysis of *okolo* does, however. For *vokrug* a P N analysis is supported by the existence of *vkrug*, since a *v/vo* alternation is characteristic of the P *v* but not of other word-initial *v*'s. *Sideli ras starateli krug ogon'ka v lesu* (AS17, at *krug*) is also relevant, although an unmarked accusative is idiomatic in a locative function. Moreover, *krug* in this spatial sense is not matched by any of the attested abstract uses, such as *krug zanjatij*.

The analysis of *vnutri* as P N entails positing a noun which occurs only in a narrow range of prepositional and adverbial constructions. The relevant constructions are *vnutr'*, *iznutri*, *knutri*, and *snutri*. The contrast between *poniknut' vnutr' pomeščenija* and *vnutri izby byli dve komnaty* (AS4) offers a formal parallel with *poexat' v step'* and *žit' v stepí* which strengthens the noun status of *-nutr'*. Other nounlike elements figuring in constructions of this kind are *-zad-*, *-p(e)red-*, *-s(e)red-*, *bliz-*, *dal-*, and *verx-*, as in *stal na koleni pozadi doski, gromkij krik speredi plotov, posredi lesa, vdali bregov želannyx, vblizi morja*, and *sverx mery* (all from AS17). In some cases the noun analysis is supported by a stress contrast between *-í* or *-ú* in locative use and stem stress in others, e.g., *naverxú* vs. *svérxu*; in cases like *izblizí* it is not. The P uses

entailed by the noun analysis would be exceptional in many instances. Besides *po* in *poseredine* there is *s* with accusative in *sverx mery* (but for *telegrammu, ležavšuju poverx bumag*, AS17, cf. *po tu storonu*). These seven items thus have both formal and semantic properties which resist their reanalysis as P and support the P N analysis.

How far can we go in this direction? We come next to *krome* and *vne* and to *vdol', vozle, posle,* and *podle.* The first two items, as nouns, would represent P-less locatives, like *sredi* only more isolated in the Russian lexicon. The latter four would show the Ps *v(o)* and *po*, but the noun status of the remaining portions has been eroded by phonetic change.[11] Having almost reached the point of proposing that *vozle reki* has genitive case because of an adnominal relationship between *reki* and the "noun" *-zle* (or *-le*?), it is time to step back and approach from the other direction, from the assumption that these items may be Ps.

To summarize the discussion so far, Ps differ from NPs among other ways in constituent structure. Compare (a) *Saša rabotal čas*, (b) *Saša rabotal s čas*, and (c) *Saša rabotal četvert' časa.* All three sentences consist of a subject, a verb, and time adverbial characterized by accusative case. In sentence (c) the NP marked accusative comprises a head (*četvert'*), which receives the case marking, and a modifier noun (*časa*), which is marked genitive by the adnominal genitive rule. In both (a) and (b) the NP marked accusative is *čas.* In (b) there is another constituent of the time adverbial, *s*, but as P it is not capable either of being case-marked or of serving as the environment for the adnominal genitive rule. The time adverbial *četvert' časa* is an NP, as required by the adnominal genitive rule. But calling *s čas* a prepositional phrase (PP) as traditionally done is misleading, because *s* is not the head and does not determine the case form of the accompanying NP. Neither is the NP the head.[12] Rather, P and NP are both headed by C, which expresses the meaning of this sentence constituent (modified to be sure by the meanings of P and NP) and assigns case to the NP. I consider *s čas* paradigmatic P use in Russian.

II

A description of P constructions in Russian must try to

account for both form and meaning. Regarding form, for every instance of case marking there must be a case-marking rule, because every observable word-form must be related to some lexical word. As for meaning, we must identify the various contributions to the total meaning of the construction, that of the P, that of the other lexical items, and that of C. The task seems feasible when the same P occurs in several Cs and the same C employs different Ps, including no P. Otherwise it is difficult, because the meaning of the P and that of the C are often quite abstract; moreover, they may appear to overlap in some instances.

S and *po* figure in Cs reflected in three different case markings, *s* with accusative, genitive, and instrumental and *po* with accusative, dative, and prepositional. We will consider the shared case marking first. Examples with *s* are ***serebra bylo s pud, syn rostom s otca, vy i teper' so starika znaete,*** and ***žil-to ja ne s tvoe*** (truncated citations from AS17). With *po* we find ***po pojas, po pervoe marta,*** and ***po smert'.*** Several accusative constructions with *v* are relevant here: ***vesom v 5 kg., poklonit'sja v pojas,*** and ***v pjatnicu.*** I propose that this C be labeled M(easure). Thus one of the rules assigning accusative case would apply in the environment $[_{M}$ (P) $[_{NP}$ _____ $]]$. Occurrences of M without a P, besides ***Saša rabotal čas,*** would include ***gruz vesit 10 kg.*** and ***prognali skota 3 versty.*** One of the more obvious reasons for grouping just these constructions together as M is of course shared accusative form.

We may ask whether *s, po,* and *v* occurring in M are the same P as *s, po,* and *v* occurring in other Cs; they could be homonyms. The traditional view is that they are the same P, and I see no reason to challenge it. The task then is to extract the lexical meanings of the Ps from their contextual senses.[13] For *s* the meaning is clearest in the genitive constructions; compare ***iz stola, so stola,*** and ***ot stola,*** where the starting point of the movement is presented as containment (*iz*), surface contact (*so*), and proximity (*ot*). Perhaps "surface contact" can be taken as the meaning of *s* also in M. For ***s čas, s pud,*** and so on, the dictionary gives the meaning "approximately," but clearly this is too specific, overly dependent on the meaning of M. On the basis of contrasts like ***rostom s nego*** and ***xarakterom v otca, so starika*** and ***vsja v mat', s pud*** and ***v 5 kg.,*** it may be said that *s* expresses superficial resemblance while *v* expresses identity; cf. Peškovskij 1956:306 on *s*: "ne toždestvo, a ***približenie,*** i pritom po ***odnomu*** kakomu-nibud' priznaku." With a noun denoting a unit

of measure *s* is optional, but with nouns which do not normally express M *s* is obligatory (no **vy starika znaete* in the relevant sense).

The meaning of *s* in instrumental constructions is hard to isolate. This is because it is the only P occurring in this C; moreover, this C almost always employs it. Just what Cs in Russian assign instrumental case is not known. Jakobson may be right that they all share the meaning of nondirectional, unquantified marginality, but the fact remains we do not know what they are. *Letet' kryl'jami* shows a different C from *letet' verenicej* (Peškovskij's example, p. 299), but between these poles we find a range of instrumental uses representing a still undetermined number of Cs. Within *s* constructions the range is likewise considerable. For example: *borot'sja s vragom, exat' s vozom, stirat' s mylom, vyrvat' s kornem, prijti s dokladom, s bol'nym slučilsja pripadok, vstat' s zareju, s uvaženiem, s novym godom, obščie s tovariščem vzglajady, naše s vami imuščestvo*, and so on. One commonly recognized instrumental-assigning C is COM(itative); I will assume that at least the first of the above examples can be analyzed as COM. No other P occurs with COM, but perhaps there are occurrences of COM without *s*. In OCS the man with an unclean spirit in Mark 1.23 is *člověkŭ nečistomĭ duxomĭ*, and Vaillant (1977:93) cites *iti voi* 'aller en armée.' In Russian there is *gosudar' poexal vsem dvorom na daču*, where the instrumental construction is close in meaning to *so vsem dvorom* and may perhaps be labeled COM. But COM shades off into other Cs; consider *Ivanovy poexali vsej sem'ej na daču, Ivanov poexal so vsej sem'ej na daču, mal'čiški šli tolpoj*, and *utka letela streloj*. In the last two examples the boys and the duck are not accompanied by the crowd and the arrow respectively but are identified or compared with them—hence some kind of predicative instrumental. The line between predication and accompaniment is sometimes hard to draw. In the above sentences the Ivanovs are likewise not so much accompanied by their family as identified with it. On the other hand with a singular *Ivanov* the *so* seems to be obligatory (in these more democratic times). On the basis of *(so) vsem dvorom* we might venture to say that *s* expresses the superficial, rather than intimate, contact of the tsar with the members of his court and emphasizes their discreteness. If so, "lack of contact," which Jakobson (1936/1971:52) saw as the meaning of instrumental P constructions, would in this instance be

the meaning of the P rather than the C. In any event the sense of *s* in COM does not appear to be incompatible with its senses in other Cs.

Now *po*. In M, *po* contrasts with *v* as distributed vs. punctual. *Poklonit'sja v pojas* focuses directly on the waist, while *v vode po pojas* distributes the focus across the submerged parts of the body as far as the waist. Similarly *v pjatnicu* shows punctual focus on a day of the week while *po pjatoe marta* makes reference to a stretch of days through the date specified. Is the same meaning of distribution expressed by *po* in *po ulice, po gorodu, po domam*, and *po četvergam* (where plurality conditions a slightly different view of the distribution)? Perhaps so. Peškovskij (1956:320) observes that *po* with dative, as in *po polju razbrosali navoz*, presents the action as taking place not on the entire surface (at least not at the same time) but at separate points (cf. *na pole razbrosan navoz*). But to confirm this meaning for *po* in this construction we would need to distinguish it from the meaning of the C. This is hard to do because there are no dative-case constructions like *po polju* without *po*. Jakobson (1936/1971:55) in discussing these constructions places the emphasis on case. Contrasts like *vyxožu na pole/idu po polju, v lob/po pleču*, and *strel'ba v utok/po utkam* are said to show the direct object's complete involvement in the action in contrast to the marginal involvement of the indirect object. The same is said of *v les/k lesu*. For *k*, however, although constructions tend to either require the P (*vernut'sja k, podojti k, ljubov' k*) or exclude it (*skazat', pomoč'*), there is a group of constructions where it is optional, e.g., *pis'mo (k) sosedu*. Presumably this is the same C with or without *k*, so let us label it AD(dressee). AD being semantically so concrete, the C of *po polju* has to be different. Since this C occurs always with *po* and only with *po*, I find it impossible to isolate. Rather than give it a label with semantic content like DIS(tribution), which would confuse C meaning with P meaning, it seems preferable to give it a completely arbitrary label, say C_{17}.

The third case use of *po*, with prepositional as in *po okončanii raboty*, raises the question of what C or Cs assign this case. Can a single C underlie such diverse constructions as *v jaščike/v marte, na stole/na kanikulax, pri dome/pri Petre, (stol) o trex nožkax/(pesnja) o ljubvi*, and *po okončanii*? Perhaps so. Since prepositional case never occurs without one of these Ps, there is no P-less use of a C with a concrete meaning which would be

compatible with some of the Ps and not others (cf. dative, above). *V, na,* and *pri* occur in both concrete spatial and abstract (e.g. temporal) senses. If this does not destroy the unity of this C, neither should the fact that *o* and *po* have only abstract senses. *Po* has a single temporal use, which is restricted to verbal nouns (thus no ***po konce raboty*) and is normally translated "after." It may be possible to consider "after" a contextual variant of the meaning "distributed." The relevant contrasts are other time expressions like *v marte, na kanikulax,* and few archaic fixed expressions like *o zare* and *o vesne.* With *v marte* the event is placed at a point within the segment of the time axis denoted by *mart* (the same applies to *na kanikulax* except that *kanikuly* is idiosyncratically presented as a surface). Taking both *zarja* and *okončanie raboty* as points on the time axis, *o* places the event in the general vicinity of *zarja,* as much before the precise moment of sunrise as after it, while *po* distributes the reference from the point of reference forward in time to the time of some other event. Perhaps this is forced, but the fact remains that *po* does not have a sense with the prepositional which would be incompatible with its senses in other case uses. Jakobson would unify the various uses of prepositional case by making them all grammatical (nonconrete in Kuryłowicz's terms), all expressing the extreme limitation of the referent's participation in the action of the verb. This would mean that the semantic contribution of C to the total meaning of constructions like *v jaščike, na stole,* and *pri dome* is nil. I prefer to believe that the C expresses an invariant locational meaning which, however, is contextually attenuated by abstract Ps and NPs.

How should the C which assigns prepositional case be labeled? Some scholars distinguish a prepositional case, found with every occurrence of *pri, o,* and *po* and with some of the occurrences of *v* and *na,* from a locative case, found in phrases like *v lesú* and *v stepí.* For nouns showing this formal contrast, the stressed endings are said to present the place denoted as the literal location of something concrete, while the unstressed endings show abstract or figurative locations. In Jakobson's example (1936/1971:63–64) the insects are *v stepí* but monotony is *v stépi.* This challenging problem only marginally involves Ps and is peripheral to this paper.[14] Here it only needs to be said that we cannot let the semantically pregnant label LOC(ative) be preempted by a small subset of prepositional-case constructions, with the empty label

PREP(ositional) serving the rest, because this would deny the semantic contribution of the C in too many cases. *V dome, na dome,* and *pri dome* share a C meaning location despite the fact that this noun also has a special locative form in *na domu.* Even in Jakobson's *raskajat'sja v žizni* (p. 59) the repentence is temporally included within the life span and the life contains the repentence, no matter how abstractly.[15]

Let us return to the instrumental case, to constructions with *nad, pod, pered, za,* and *meždu.* The literature contains numerous attempts to account for this case use.[16] The chief difficulty is the absence of a related P-less use. The closest thing is the spatial instrumental of *idti polem,* but positing a common C for this construction and *za polem* etc. encounters syntactic difficulties. The two constructions have different co-occurrences: we find *šel polem* but not **rabotal polem, rabotal za polem* but not **šel za polem.* We are faced with the necessity of setting up an arbitrary C—say C_{23}—which assigns instrumental case but does not represent any syntactic generalization. This failure is especially disappointing in view of *mež(du).* This P occurs with both instrumental and genitive cases, with the latter use the original one, explainable with reference to the related noun *meža* (Kopečný 1973:108). The adnominal genitive rule has long been a productive source of genitive-case P-like constructions. Hence the fact that the C of *nad, pod, pered,* and *za* was able to attract *meždu* shows that it was productive at some point. Unproductive patterns can be dismissed as relics, but productive patterns exercise their regularity. How frustrating then not to be able to see it.

The two cases remaining to be considered are genitive and accusative. These are Kuryłowicz's syntactic (nonadverbial, nonconcrete) cases, as well as Jakobson's less marked, nonmarginal cases, and so we should be alert to the possibility that in some of their occurrences they may be governed in the strict sense, i.e., by the category of the head constituent rather than by a meaningful C. Among the accusative-assigning Cs there is GOAL. It seems well motivated in view of the range of Ps it employs and the parallel contrast which it offers with two different Cs, *v dom* and *na daču* with *v dome* and *na dače* and *za/pod stol* with *za/pod stolom.* But it is not supported by any P-less constructions which could be analyzed as GOAL. (*Von,* as in *idi von,* would qualify as a P-less GOAL only if it could be shown to be the same word as *vne,* as in *vne voprosa,* which in turn would have to instance a

P-less LOC providing the environment for the adnominal genitive in *voprosa.*) Some indirect support for GOAL is supplied by *pered.* A century ago Tolstoj could still write *sobačka vybežala pered rjady* (Šaxmatov 1925:383), with accusative. In contemporary Russian *pered* occurs only with instrumental. The fact that *vybežala pered rjady* did not yield to **vybežala pered rjadami* (or, more generally, the fact that one does not say **mašina priexala pered bankom*) shows that the identification of *pered* with instrumental is weaker than the identification of GOAL with accusative. The continued use of *pered* with a different case would disconfirm the assignment of case by C.

Accusative P uses are numerous and varied. For example, 17 senses of *za* with accusative are given in AS4. Starting with concrete *za reku* and *za dver'*, they range to slightly idiomatic goals of movement like *sest' za rabotu*, to abstract goals like *borot'sja za sčast'e*, and finally to uses where it is difficult to see any movement towards a goal at all, e.g., *kupit' tufli za 20 rublej, sdelat' čto-l. za dva časa.* Perhaps the attempt to isolate a semantic element and assign it to some C is misguided in these instances and we should recognize here a purely syntactic (nonconcrete) use of accusative. Consider also distributive *po*, as in *mal'čikam dali po rublju*; it is hard to believe that speakers use a dative-assigning C to express the distribution of single items but switch to a different C for plural items (*mal'čikam dali po pjat' rublej*—accusative). A more likely explanation is the morphological one: higher numerals simply block the case-marking rule associated with this C, leaving the NP unmarked for case.

The question of what happens to NPs which fail to undergo certain case-marking rules is discussed in Babby 1980a. Babby draws an important distinction between deep case-marking on the one hand and surface case-marking, which applies later in the derivation of the sentence in environments where deep case-marking rules for one reason or other have not applied. I propose that deep case-markings are assigned by Cs while surface case-markings are governed by the category of the head constituent. Thus the adnominal genitive rule is a surface rule applying to NPs in the environment $[_{NP}$ NP ____] as in *poseščenie vrača.* It does not apply in the case of *otomščenie vragu* or *torgovlja zolotom* because these NPs already are marked by AD and INS respectively and are, in Babby's phrase, "inert" with respect to further case-marking. Surface case-marking rules assign

the syntactic cases, nominative, accusative, and genitive. One environment for the assignment of accusative is [$_{VP}$ V ____], and I wish now to propose another: [$_{PP}$ P ____]. Thus *po pjat' rublej* shows an accusative surface marking because its deep marking for dative did not take place.

The same is proposed for the remaining accusative P constructions for which there does not seem to be any identifiable C. Here I include some of the *za* constructions mentioned above, several uses of *po* such as *po tu storonu* (cf. the nearly synonymous P use in *poseredine* with its frozen dative), next *pod muzyku* (cf. *pod vlijaniem muzyki*), and miscellaneous accusative uses such as with *čerez* and *skvoz'* (which syntactically have more in common with *polem* and *po polju* than with GOAL) and with *pro* (cf. synonymous *o* with LOC). Accusative is thus the unmarked case use for Ps. This is most clearly applicable to languages like English, which has neutralized oblique-case oppositions and shows only the direct/oblique opposition (*I, he, she* vs. *(with) me, him, her*). I hope it can also be considered for a language with several oblique cases.

Finally, with regard to genitive constructions, the semantically most distinct C is, not surprisingly, ABL(ative), which occurs both with P (*iz jaščika, so stola, ot steny*; also *iz-pod stola* and *iz-za steny*) and without P (with verbs of fleeing and avoidance). *U* occurs only some of the time with ABL, e.g., *vzjat' u kogo-l.*; most of its uses, where it denotes proximity or possession, cannot be analyzed as ABL. The semantic development of *u* constructions from "movement away from" (cf. the meaning of *u-* in *umčat', ubrat', ubyvat'*, etc.) to "location near" has created, it would seem, a new genitive-assigning C. Jakobson's (1936/1971:44) easy dismissal of the problem fails to reassure. He claims that genitive uses with P do not differ in meaning from P-less genitive uses: *nekotorye iz nas* is partitive genitive, *u/okolo/vozle reki* is genitive of limit, *do reki* and *dlja slavy* is genitive of goal, *iz ruž'ja* and *ot reki* is genitive of separation (our ABL), and *bez zabot* and *krome zimy* is genitive of negation. The listing is uncharacteristically atomistic; Šaxmatov (1925:315) unites the first three under "roditel'nyj častičnyj". Apart from ABL (where I would include all occurrences of *iz*), these uses can all be subsumed under what Jakobson elsewhere calls quantification.

The starting point of the analysis should be the most independent (for Peškovskij 1956:298 the most meaningful) genitive

use, namely, in object constructions where it alternates with accusative, e.g., *daj nam xleb/xleba.* Genitive case here is obviously not governed by the verb but is, in Babby's phrase (1980b:47), "NP-internal."[17] The *-a* ending is an optional feature of the object NP, as is *de* in the parallel French *le pain/du pain.* Unlike French, however, the syntax/inflection dichotomy in Russian requires us to posit a more abstract NP constituent than *de.* Let us call it QUANT. The phrase-structure rules of Russian provide for the expansion of NP to allow the optional abstract constituent QUANT, an additional environment for the assignment of genitive case. Optional in *daj xleba,* genitive case is in varying degrees obligatory in *ubyvaet vody, pribav' saxaru, narubi drov, net deneg,* and so on. This could be viewed as a matter of case government, of certain Vs imparting the genitive feature to NPs standing in a certain syntactic relationship. I prefer to view it as a matter of co-occurrence: certain verbs on account of their meaning are, in varying degrees, semantically compatible only with quantified NPs.

A genitive-governing QUANT independent both of governing verbs and of dominating Cs is a powerful device which has much promise with regard to P constructions. We can now assign *bez* to the same C as its antonym *s,* an assignment which is strongly supported by the syntax. Syntactically identical, *bez* and *s* would differ semantically in that *bez* is compatible only with quantified NPs; thus [$_{COM}$ *s masl-*] but [$_{COM}$ *bez* [$_{NP}$ QUANT *masl-*]]; cf. *a slice of bread with some/*any butter* vs. *a slice of bread without *some/any butter. U stola* can now be LOC, like *na/v/pri stole,* only quantified. *Do reki* would *differ* from *na/v reku* as a quantified GOAL. Peškovskij contrasts *sdelaj mne èto* with *sdelaj dlja menja èto* as addressee vs. "oblique addressee" (p. 316); let both be AD, except that with *dlja* the complement is quantified. If *krome, podle, vozle,* and so on no longer provide the environment for the adnominal genitive rule, they are now semantically compatible only with a quantified complement.

In summary, Case in Russian is either assigned by underlying case relationships (including M, COM, AD, LOC, INS, GOAL, ABL; also, alas, C_{17} and C_{23}), or it is governed by the category of the head word (accusative by verbs and prepositions, genitive by nouns), or it reflects an optional NP constituent QUANT. The Cs assign mostly oblique cases, while government (in the strict sense) involves mostly direct cases. Genitive straddles the two, sometimes reflecting a meaningful sentence node, sometimes governed.

NOTES

[1]"Une verbe indo-européen ne 'gouvernait' pas le cas de son complément; mais le nom apposé au verbe se mettait au cas exigé par le sens qu'il exprimait lui-même." (Meillet and Vendryes (1953:576)).

[2]I doubt that the case relationships include O, however; see below.

[3]I have substituted Russian for Kuryłowicz's Latin examples, which are *-u* in *manu dextra* vs. *-um* in *potiri rerum*.

[4]Whether the syntax operates with abstract words like VRAČ or concrete stems like *vrač-* is irrelevant for the present discussion. The matter is discussed in Gladney 1982.

[5]The listing is not exhaustive, owing to oversights by the indexer but more importantly to the general uncertainty of the criteria.

[6]Not exclusively between; cf. *as far as . . . is concerned* and Ger. *um . . . Willen*.

[7]It is apparently not intended. Švedova states disarmingly: "The selection of one or other case [with items like *nezavisimo ot* and *primenitel'no k*] is predetermined by the primary preposition which has final position in the structure of the complex preposition" (*RG* 1:707).

[8]For more on the constituent structure of P constructions see Jackendoff 1973. Not much thought has been given to these matters in Russian. *Iz-pod stola* is routinely assumed to show a fused P, the same as *po-nad Donom* (e.g., *RG* 1:707), although as Łoś observed some time ago (*Gramatyka języka polskiego*, p. 362), it is [*iz* [*pod stola*]] but [[*po-nad*] *Donom*]. As long as case is assigned by C, it doesn't matter for purposes of this paper.

[9]I am aware that *blagodarja* and *ne dozodja* have different complement shapes from *blagodarit'* and *dozodit'* (*čemu* and *čego* vs. *kogo* and *do čego*). I use "government" as a shorthand here; I do not hold that *končat'* governs an instrumental-case complement (or adjunct); see below.

[10]They normally do. Cases like the NP *sorok pjatyj stolb*, in which *pjatyj* is an orthographic word but not a constituent, are isolated. Cf. *forty-fifth post*, where *fifth*, likewise not a constituent, is not an orthographic word.

[11]See Meillet 1934:480. On the subject of nouns undergoing recategorization Meillet observes (472): "Il n'y a d'ailleurs pas de limite précise entre un adverbe et un cas de substantif qui tend à se fixer." This is of course equally applicable to Ps, which are just adverbs with complements. Meillet continues: "On peut parler d'adverbe à coup sur là où la forme casuelle n'existe plus, comme dans le type *dobrě, doma*, ou bien là où le nom n'existe plus isolément, comme dans *vŭn-ǫtrĭ* 'à l'interérieur'." Among scholars concerned with the proper classification of parts of speech, the search for the definitive criterion has a respectable tradition. My colleague Steven P. Hill believes that the presence of *n-* in constructions like *pri nem, vmesto nix*, and *lučše nego* is proof that what precedes is an "actual" P.

[12]An analysis implicit in calling *s čas* a "preposition-case form" of the noun ČAS. Švedova writes (*RG* 1:712) that what I am about to essay is

impossible. "In phrases like, for example, *bez otca, za ogradu, na doroge, pered domom, s druz'jami*, for the contemporary language the meaning of the case form cannot be observed apart from the case form's combination with the preposition; on the level of syntactic semantics the preposition–case form is not segmentable." This idea is traceable in part to Kuryłowicz 1949/1960:131–35, 143, which is included in the sampling of Western works listed in the bibliography of *RG*.

[13]I am afraid this bald statement, in which "lexical" refers to the abstract lexicon which speakers carry around in their heads rather than to actual dictionaries, reflects no awareness on my part of lexicographers' efforts to describe the meanings of Ps. It should be noted that Babkin is critical of Ušakov and of AS17 for separating *v* with accusative from *v* with prepositional, thereby giving the treatment of Ps a different, gratuitously grammatical character compared to other words, and approves of Ožegov's grouping *za škaf* and *za škafom* under the same sense of *za*.

[14]To posit different Cs for *v stépi* and *v stepí* would strike me as syntactic overkill. This syntactic opposition would go unexpressed in the majority of locative expressions like *v gorode, v gorodax, v lesax, v Moskve, na stole*, and so on, which would have to be assigned in each instance to one or the other C. We would almost consider the other extreme, the lexical solution, i.e., calling *step', les*, etc. pairs of partial homonyms which differed in meaning as to literal or figurative. A compromise solution might be to place the differentiation at the NP level. Already on the basis of Jakobson's (1936/1971:63–65) refined analysis of selected examples it is clear that much more fact-gathering is needed first. For instance, is *v xode igry* more abstract then *byt' v xodu*? is *isčislenie v vërstax* vs. *žívet v dvux verstáx* the same opposition? (examples from Avanesov and Ožegov).

[15]Kuryłowicz (1960:139) would no doubt deny that *v žizni* is a LOC, since he believes that *je reverrai mes collègues à l'école* shows a locative but claims that in *croire au Saint Esprit* "la même forme a au contraire une valeur syntaxique". Jakobson's sound teaching of same form, same meaning has recently been endorsed by Langacker 1982, who argues, for example, that the *by* marking the agent of a passive sentence (supposedly a "grammatical morpheme") is the same as the spatial P *by* (as in *by the river*).

[16]For example, Belić (1957–58) and Ivić (1957–58) try to regard the instrumental in *pod stolom* as an instrumental of degree or comparison, like *godom starše*. Thus *kniga ležit pod stolom* would be, roughly, "the book lies under, tablewise/in comparison to the table." Rejecting Belić's analysis, Kopečný (1973:128) notes that the hypothetical **domomí nadú* never meant "higher, by a house."

[17]The example is Kuryłowicz's (1949/1960:142), who writes: "Dans [*daj nam xleba*] il s'agit de nuances qui relévent du domaine de l'article, c.-à-d. qui n'ont aucune fonction syntaxique, mais touchent plutôt le contenu sémantique du substantif."

Accusative Singular Operations on Polish Nouns

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In the following study of case features in Polish, I shall concentrate on the Accusative singular.

Case features are here conceived of as regular minimal differences between nominal word-forms at least one of which, n_1, yields, when complementing a phrase constituted by another expression, e_1, an ungrammatical string such that (1) the substitution of another case form n_2, secures the grammaticality of the resulting string, and (2) grammaticality is not secured by the substitution of another expression, e_2, which is complementary with regard to e_1 in combination with n_1. Thus, Polish *siostra*, *siostrę*, *siostrą*, etc. display case features because the ungrammatical string **Brat bije siostra* is rendered grammatical by substituting *siostrę*, while there is no possibility of keeping *siostra* and replacing *bije* so as to render the string with *siostra* grammatical. On the other hand, *brat* and *bracia* do not show a case difference because **Bracia bije siostrę* is rendered grammatical as soon as we replace *bije* with *biją*.

In Polish the differences characterized in this way are exclusively differences in the final parts of nominal word-forms. Thus, the case features of interest here are ordinary morphological phenomena which have been persistently associated with the term *case* in traditional descriptions. I shall not tackle the problem of "analytical cases" or "deep cases."[1]

What I am going to say about a selected fragment of the case features of Polish is best summarized in the Saussurean idea of *unités concrètes*: the foremost objects which the linguist should establish by disengaging them from the flow of speech and from the potentialities which speakers are prepared to conceive of.

More specifically, I recognize (1) that some observable segments or features of segments are separable from others on the basis of their occurring in open-ended classes of both attested and potential expressions, co-operating in those expressions with entities which display maximally general characteristics (i.e. the entities are not subject to listing and the characteristics involve, if necessary,

maximally short lists of "exceptions"), while other segments or features of segments are not so separable; and (2) that minimal separable entities are opposed to non-minimal ones. Furthermore, I pursue the goal of setting the indicated categories apart and providing the minimal separable items with an adequate characterization of external and semantic conditions of occurrence attached to them, i.e., of their interrelations. I assume that all the other items will be implicitly given together with those minimal separable items endowed with whatever conditions and interrelations are proper to them. For more detailed presentation of this approach to the idea of *unités concrètes*, see Bogusławski 1978.

The task I have laid out is by no means identical with presenting the traditional knowledge of cases. I think it would be fair to say that knowledge consists in (1) the ability to supply any nominal word-form in a text with one of several labels such as Accusative or Instrumental, (2) the ability to produce a word-form with each of those labels which matches an arbitrary word-form and differs from it only as much as the label requires, (3) judgements about the functional traits of the word-form at hand associated with that label.

This traditional approach to Polish yields, among others, correct statements like the following: "***guru*** in ***On zobaczył guru*** 'he saw the guru' is an Accusative" (cf. ***Kogo on zobaczył*** 'whom did he see' with ***kogo*** as opposed to ***kto***) and the corresponding Nominative is ***guru***, where the word-form is given a case assignment without there being the slightest trace of a separate item apart from the lexical segment itself, which needs only be registered as a whole, classed as a noun, and defined. In this way the whole body of possible Polish texts can be described with no distortion of what speakers accept. And the description can even include quite comprehensive (and adequate) generalizations such as: "***widzieć*** 'see' without negation is followed by the Accusative; ***pobłażać*** 'condone' is followed by the Dative; If a masculine noun in the Nominative ends in a consonant and denotes a human being or animal, its Accusative counterpart does not differ from its Genitive counterpart (in the singular);" and so on.

However, there are linguistic properties which require additional analytical steps to be made clear.

For example, some verbs are joined obligatorily, in their second valency place, by Accusatives, others by Instrumentals, still

others by Datives, and so on. But there is a relationship between these groups which opens the possibility of applying to one of them, viz. the verbs with the Accusative, a generalized, albeit negative, characterization. The group with Accusative is obviously by far the largest one, including all the verbs not on any smaller list. This feature goes hand in hand with the fact that transitive verbs represent the most productive class: new verbs (e.g. loan words) with the second valency place are predominantly transitive, and quite special circumstances are necessary to secure another kind of government.

Notice that competing assignments of the "unmarked" character to other government groups of verbs are impossible. The respective verbs would have to be characterized as non-identical with MORE individual verbs (including, above all, those governing the Accusative) than the verbs governing the Accusative; thus, their general feature would rely more heavily on enumeration (involved here indirectly in the form of lists of verbs with other case markings) than the general feature of transitive verbs. This makes the envisaged feature of transitive verbs the only admissible generalization, given the fact than an arbitrary choice of a class of verbs to be negatively characterized is barred by metascientific rules (the statement resulting from such an arbitrary choice would be a statement about a personal attitude towards the facts of language, and not about the facts themselves, and thus would be a statement from a private domain, alien to science) as well as by our notion of separability in open-ended classes adopted above.

Our claim is also a corollary of another assumption: that only one class of verbs can be selected for this sort of negative characterization. To see this more clearly, one may consider, for instance, the idea of an analogous negative characterization applying also to the second largest class of verbs. To distinguish the verbs from the transitive ones, we would need the individual ascription to all respective verbs of that numerical value of the class they belong to. But the corresponding numerical tag would of course be strictly equivalent to the direct individual marking for the appropriate case government. Apart from that, a procedure of this sort would run counter to our metatheoretical assumption concerning the controllability of the features we are describing by speakers: clearly, speakers do not approach particular verbs they use with any kind of word count which would be necessary for the situation we have contemplated.

Consider now the following set of examples:

(a) Przewodnik był w pokoju.
'The guide book was in the room.'
(a') Usunięto przewodnik.
'They removed the guide book.'
(b) Przewodnik był w pokoju.
'The tour guide was in the room.'
(b') Usunięto przewodnika.
'They removed the tour guide.'

It is not enough to say that (a) has its Accusative counterpart in (a'), which is equal to it, while (b) has its Accusative counterpart in (b'), which is modified by the addition of the desinence *-a* (as in the Genitive). The desinence *-a* following a consonant stem stands here in contrast to the lack of it, and the contrast is paired with the difference between the features "animate" and "inanimate." Nothing of this sort is proper to the Nominative. And this distinction is quite general: speakers of Polish are, under appropriate circumstances, prepared to modify any noun ending in a consonant according to this pattern. It is true that *On zobaczył motora* 'He saw the motor' is deviant. But it is deviant only to the extent that we are inclined to take *motor-* to correspond to the familiar Polish noun denoting a power unit for imparting motion. However, the convention of adding the desinence *-a* is by no means restricted to nouns registered in the dictionary. Therefore, the deviance should be considered semantic, not syntactic: what is denoted by *motor-* is inanimate, whereas *-a* suggests that the noun is a name of a living being. This makes the sentence resemble a contradiction; it would be more correct to say that there is a falsity in the sentence. As soon as we take the stem *motor-* to have another meaning (for example, to be a personal proper name, say, a nickname), our sentence becomes fully acceptable.

Therefore we cannot confine ourselves to saying that *motor* after *zobaczył* is an Accusative form which is identical to the corresponding Nominative. We have to say that in this context the lexical item *motor* undergoes a change: it now shows the lack of external modification, this lack being the exponent of inanimacy. Moreover, both these changes are clearly separable items occurring in an open-ended class of nouns as well as in an open-ended class of verbal constructions (provided what we have just said about

transitive verbs is correct).

Our analysis leads to a further observation: the set of word-forms uniformly labeled Accusative on the basis of their being substitutable in certain contexts breaks up into subsets which exhibit concrete, but functionally loaded, features restricted to some lexemes only. Thus, the vast majority of Polish nouns ending in *-a* display the replacement of *-a* by *-e* (orthographically, *-ę*), but this is not paired with any content of the sort observed in the Accusatives in *-a* or a consonant. The only indication it carries is that the noun is not the feminine counterpart of a noun in *-y* or *-i*; cf. ***dyżurną*** (acc. sg.) 'female person on duty' with its counterpart ***dyżurny*** (nom. sg.) 'male person on duty'. Still others, e.g. Accusatives in *-u* like ***Mobutu***, do not show any differences compared to their Nominatives.

From our point of view, i.e. from the vantage point of the stock of minimal tangible entities forming the text, the label Accusative covers, not an abstract and simple (and rather mysterious) entity evenly distributed among nouns (conceived just as abstractly) displaying a set of complementary external traits which are related to each other and to the nouns in a purely technical way, but a series of unequiponderant concrete units which suggest something like Accusative_1, Accusative_2, ..., as the truly irreducible, basic items. In addition, we have nouns whose relation to those concrete Accusatives is totally derivative since they contribute no special elements of language, but merely occur, with no change whatsoever, in the same structures as specifically marked word-forms.

Clearly, what I have drawn attention to are familiar facts accounted for—in one way or another—in any description of Polish; I have garnered no new facts from remote corners of textual stuff. What I take to be at stake here is, rather, the proper format for representing the relevant empirical facts in a consistent and formal way.

The label for the category of phenomena I am concerned with, to which nearly all the objects distinguished below are claimed to belong, is ***operation***. Operations are features which are not ready-made segments capable of bearing a non-quotative sentence stress, but rather are modifications of such segments which are separable from all other elements of the text. (See Bogusławski 1978:37.) Operations may require disambiguation, by which I mean that for any single external property there are as

many operations as there are really different meanings or other functional traits attached to that property. The core of an operation is a relation of (classes of) external shapes, one of which, the Operand, is presented above the line, the other, the Resultant, below. Indices or separate formulations state additional conditions on the operands, conditions of occurrence, semantic implications, and other constraints and features.[2]

This study deals only with a set of operations in a subfield of the Accusative, specifically, Accusative Singular operations on nouns (as opposed to adjectives). Moreover, my description will not be exhaustive. In particular, I shall leave aside more restricted members of sets of strictly complementary units (such as the change *-ek*: *-ka*). I shall also make abstraction from units functioning as higher-order functors with their own valency places, e.g. the Accusative of duration (*czekać godzinę* 'wait an hour').

The vast majority of nouns in the singular are subject to some Accusative operations. The nouns where no Accusative operations apply are (1) nouns ending in a consonant which are marked feminine, either categorially (e.g. nouns in *-ość*) or individually (*Wenus, miss, mysz*); (2) polysyllabic nouns ending in a stressed vowel other than *-e* and without stem expansion, cf. *Monoda, Martineta* (*Moreau, Delacroix, maquis*); the situation of polysyllabic nouns in stressed *-e* is fairly complicated and it requires a separate study; (3) monosyllabic nouns in *-o* or *-e* (*Wo, Klee*); (4) nouns in *-u* (*Mobutu, Papandreu*); (5) nouns with a final nasal vowel *-ę* in bookish pronunciation (*imię, cielę*) (however, we shall be interested in neutral pronunciation and cover these nouns together with nouns in *-e*).

The general formula for the sufficient conditions of occurrence for an operation is the following:

A. The noun appears in an NP valency place other than
   (i) the first valency place of a congruent expression (unless congruence is marked for being connected with a non-first place, or
   (ii) a valency place marked (categorially or individually) for some other change in the noun;
B. The noun meets the conditions on the operand;
C. The noun meets the conditions entailed by the semantic implication.

The order of valency places is assumed to be that which is proper to neutral linearization; operations of movement may of course change the real order of components. The verbal phrase can sometimes be congruent with a non-first valency place, as in *Siostrę boli głowa, Siostrę bolą nogi*, or can be non-congruent, as in *Siostrę mdli, Siostrę mdliło*; for most verbs of this kind, Accusative operations apply to the first valency place.

The categorial markings which exclude Accusative operations in favor of Genitive are: (1) the morpheme *się* with no preposition as in *pytać się siostry* (cf. *pytać siostrę, pytać się o radę*) unless *się* is accompanied by the removal of the first valency place e.g. *buduje się fabrykę* (cf. *pracownicy budują fabrykę*); (2) a verb with the initial morpheme *nie* and with no preposition[3] or a non-finite verb with no preposition embedded in a verb with the initial morpheme *nie*, e.g. *nie pozwolono im budować fabryki* (cf. *nie pozwolono im, by budowali fabrykę*); (3) a noun in place of the verb, e.g., *budowa fabryki przez pracowników.*

I now pass on to a detailed characterization of accusative operations, proceeding from obligatory operations to optional ones and from those affecting larger groups of nouns to those affecting smaller groups. I begin with nouns ending in a consonant which are not marked feminine.

The accusative singular of some of these nouns differs from the basic form not only by the desinence *-a*, but also by other features, e.g. the root alternations *u* : *o* (*wróg* : *wroga*), *ą* : *ę* (*ksiądz* : *księdza*), and *e* : *ø* (*Turek* : *Turka, głuszec* : *głuszca*). There are still further complications: some nouns which may be expected to have these additional features do not have them if they are proper names, *Piróg* : *Piróga*, instead of *Piroga*. Rather than undertake an analysis of these phenomena, I shall confine myself to the remaining nouns and mark their diagnostic feature of final consonant and their failure to belong to the groups of nouns just mentioned by the notation *-C** representing the operands.

With this in mind, we can establish the following operations:

NOUNS ENDING IN A CONSONANT (NOT MARKED 'FEMININE')

Operation 1: $\frac{-C^*}{-C^*a}$

Nonsyllabic *u* and *i* are subsumed under C*. Thus, next to *Landau* we have *Landaua* and next to *Shaw* (pronounced *szou*), *Shawa*; on the other hand, *Papandreu* (pronounced as four syllables) is not inflected, like other nouns ending in syllabic *-u*, e.g. *Mobutu*.

Semantic implication: the noun is either (a) a name of a being, or (b) a name of a dead being, or (c) a name of a dead body, or (d) a name of a mushroom, or (e) a brand name of an automobile, or (f) a brand name of an airplane, or (g) a name of a game, or (h) a name of a kind of dance, or (i) a name of a monetary unit, or (j) a name of a cigarette; and it is not the case that both (a) the noun is the proper name of a being and (b) the being referred to is female.[4]

Examples: (a) *ducha, anioła, elfa, idola, centaura, satyra, Zeusa, człowieka, tygrysa, wirusa*,[5] (b) *nieboszczyka, umarlaka*, (c) *trupa*, (d) *grzyba, borowika, rydza*, (e) *stara, jelcza, volkswagena*, (f) *Ila, Boeinga*, (g) *brydża*, (h) *krakowiaka, poloneza, charlestona* (but *taniec* as the general name), (i) *dolara, franka, funta*, (j) *papierosa, peta, cudzesa, Sporta, Dukata, Pallmalla*.

I find no consistently implemented categorial formula for cases like *spłatać psikusa* 'play a trick' or *wziąć kija* 'grab a stick' or *pomidora* 'tomato', *ogórka* 'cucumber', *irysa* 'iris', *schaboszczaka* 'pork chop'. Some of them may represent set phrases (sometimes including a particular verb).

The operands are characterized as not having the syntactic marker 'feminine.' This is necessary in order to avoid forms like **pięknościa* with reference to a beautiful woman or **Mysza* as a possible automobile name (cf. *mysz* 'mouse'). It is not true that the semantic component "female" by itself necessitates the lack of a desinence: next to *Wenus* we have *babsztyla* 'hag' and *podlotka* 'teen-ager', which are masculine in spite of their denoting females. We also have *gościa* and *profesora*, where the person referred to is not necessarily male, and *ducha*, where the being referred to may be indeterminate for sex. I of course do not deny the possibility of homophonous nouns like *mysz* and *wenus* being coined without the marker 'feminine', which under appropriate semantic conditions would be inflected according to this pattern.[6]

It is important to emphasize that the presupposition stated in the semantic implication concerns not the object spoken of but the noun itself. This allows us to cover situations where the items referred to by the form in *-a* are in fact not beings, cars, etc., but

objects of a different kind. Thus, we use the form *reprezentanta* to refer to inanimate objects, say, in speaking of a text as exemplifying the category of novel. This is because *reprezentant* normally denotes persons, and the desinence *-a* emphasizes the awareness that it is this same noun that is used. A coined name for a sewing machine like *Zelmer* does not take the desinence *-a*, but the names *Singer* and *Łucznik* (lit. "archer") do, evidently because these are recognized as names of persons, one proper, the other common. If we were to name our favorite tree *Muchomor*, after the mushroom *muchomor*, its Accusative would of course be *Muchomora*. The behavior of the names of celestial bodies is instructive: we have *Marsa*, *Neptuna*, *Jowisza*, *Saturna*, transparently named for mythological beings, but *Uran*. Another reason for stating our presuppositions in terms of the noun instead of its referent is that in some instances there is no real object to be characterized by saying (implicitly) "*a* is so-and-so" or "*a* belongs to class C of objects." Thus, a sentence like *On tańczy charlstona* with its two valency places nevertheless shows a one-place relationship between "to charleston" and the personal argument.

The final clause of the semantic implication reminds us that any non-feminine noun ending in a consonant may acquire the Accusative desinence *-a* if it is given one of the meanings listed, for instance, if it is taken as a personal proper name. However, the desinence commits the speaker to the claim that the person referred to by him (provided he does refer to a person) is not female. Notice that our formula deliberately does not exclude hermaphrodites.

Operation 2: $\frac{-C^*}{-C^*}$

Semantic implication: the noun is either (a) a proper name of a being or (b) a professional title, or (c) a name of something different from what is mentioned in (b)—(j) of the semantic implication of Operation 1; and it is not the case that both (a) the noun is characterized by (a)—(b) above and (b) the person referred to is not female.

Example: *panią profesor Alicję Sienkiewicz.*

NOUNS ENDING IN *-a*.

Operation 3: -owa
-ową

Semantic implication: the noun is a name of a female which is not applied to males.

Example: *Częstochową* 'Mrs. Częstoch'. The meaning of this operation is actually broader, applying also to the names of single Czech women.

Operation 4: -owa
-owę

Semantic implication: it is not the case that the noun is a name of a female which is not applied to males and it is not the case that the noun is a feminine counterpart of a nominal expression in *-y*.

Examples: *Częstochowę* (town in SW Poland), *Dąbrowę* (family name of both males and females).

Operation 5: -a
-ą

Semantic implication: the noun is a feminine counterpart of a nominal expression in *-y* or in *-i*.

Examples: *dyżurną* (cf. *dyżurny*), *Spokojną* (a toponym associated with the adjective *spokojny* 'peaceful'). Alternations like *Jezioręę/Jeziorną* reflect fluctuations in the relevant associations.

Operation 6: -a
-e

Condition on the operand: *-a* not preceded by *-ow-*.

Semantic implication: it is not the case that the noun is a feminine counterpart of a nominal expression in *-y* or in *-i*.

NOUNS ENDING IN *-o*

Operation 7: -Cko
-Ckę

Semantic implication: the noun is a Slavic family name and it is not the case that both (a) it refers to a person and (b) the person is female.

Examples: *Kościuszkę*, *Szewczenkę*, *Szyszkę* (but *Sisco*).

Operation 8: $\frac{\text{-Cko}}{\text{-Cko}}$

Semantic implication: it is not the case that both (a) the noun is a Slavic family name or it is a first name and (b) the person referred to is not female.

Examples: *jabłko* 'apple', *Damentko* (a woman).

Nouns in *-o* other than those ending in *-Cko* include very special groups where the replacement of *-o* by *-a* implies that the noun is either a first or family name of a male, e.g. *Boccaccia*. The delimination of these peripheral phenomena requires a separate study.

Operation 9: $\frac{\text{-C}^{+}\text{o}}{\text{-C}^{+}\text{a}}$

Condition on the operand: C^{+} stands for *Ck*, or *ch*, or a soft consonant, or *j*, or *l*, and excludes the groups mentioned above.

Semantic implication: the noun is a first name or a name of an animal and it is not the case that both (a) it refers to a person and (b) the person is female.

Examples: *Mundzia, Maria, Bola, Zbyszka, Zdzicha; piesia, Reksia.*

Operation 10: $\frac{\text{-C}^{++}\text{o}}{\text{-C}^{++}\text{a}}$: optional.

Condition on the operand: C^{++} stands for elements other than in Operation 9.

Semantic implication: same as in Operation 9.

Examples: *Bruno/ Bruna, Aleko/ Aleka, Renzo/ Renza.*

Individual variation in the domain of Operation 9 is considerable. We sometimes observe a lack of inflection in concatenations with inflected nouns, e.g., *Kuno Lorenza.* The

obligatory Accusative *państwa* 'you (ladies and gentlemen)' is commonly held to be completely idiosyncratic. Both this qualification and the description of the domain covered by Operation 10 might need revision in the case of speakers for whom Accusatives like *generałostwa* for the category of names of married couples (*generałostwo, Janostwo*, etc.) are admissible. In certain contexts, one may indeed feel inclined to use the form in *-a*, cf., *zaprosił przemiłych generałostwa Kowalskich.* However, it is difficult to formulate rules where there is very little usage, and such is the case for obsolescent names of married couples in *-stwo.*

NOUNS ENDING IN *-y*

Operation 11: $\frac{\text{-y}}{\text{-ego}}$

Condition on the operand: not obviously foreign.

Semantic implication: same as in Operation 1.

Examples: *Złego* (the devil), *myśliwego, Wesołego, Korfantego, Madanego, zmarłego, prawdziwego* (a mushroom), *chowanego* 'hide-and-seek', *złotego, mocnego* (a cigarette).

Operation 12: $\frac{\text{-y}}{\text{-jego}}$

Condition on the operand: obviously foreign.

Semantic implication: the noun is a name of a being and the being referred to is not female.

Examples: *Ruby'ego, Murphy'ego, Kennedy'ego, Horthy'ego.*

Operation 13: $\frac{\text{-y}}{\text{-y}}$

Semantic implication: the noun is either (a) a name of a being or (b) a name of something different from what is mentioned in (b)—(j) of the semantic implication of Operation 1; and it is not the case that both (a) the noun is a name of a being and (b) the being referred to is not a female.

Thus, names like *Lepszy, Bury* remain uninflected when they refer to women.

NOUNS ENDING IN *-i*

Operation 14: $\frac{\text{-ni}}{\text{-ńę}}$

Condition on the operand: marked as feminine.
Examples: ***gospodynię*** 'housewife', ***boginię*** 'goddess'.

Operation 15: $\frac{\text{-}C_1\text{i}}{\text{-}C_1\text{ego}}$

Conditions on the operand: (1) C_1 is one of the following: *ć, ź, ś, ź, ń, l, j*; (2) not marked as feminine.
Semantic implication: the noun is a name of a being and it is not the case that both (a) a being is referred to by the noun and (b) the being is female.
Examples: ***Idziego, Mandovaniego, Botticellego, Jókaiego.***[7]

Operation 16: $\frac{\text{-}C_2\text{i}}{\text{-}C_2\text{jego}}$

Condition on the operand: C_2 is a consonant other than C_1 in Operation 15.
Semantic implication: same as in Operation 15.
Examples: ***muftiego, Landiego, Hamurabiego, Rossiego.***

Operation 17: $\frac{\text{-i}}{\text{-i}}$

Semantic implication: it is not the case that both (a) the noun is a name of a being and (b) the being referred to is not female.
Examples: ***spaghetti, Olivetti.***

NOUNS ENDING IN *-e* (unstressed)

Operation 18: $\frac{\text{-e}}{\text{-ego}}$

Condition on the operand: bisyllabic.

Condition of occurrence: not in a concatenation with inflected nominal expressions referring to the same object and implying the feature 'non-female'.

Semantic implication: the noun is a proper name of a person and it is not the case that both (a) a person is referred to by the noun and (b) the person is female.

Examples: *Bliklego, Fregego, Bromkego, sierotę Bromkego.*

Operation 19: $\frac{\text{-e}}{\text{-e}}$

Condition on the operand: bisyllabic.

Condition of occurrence: same as in Operation 18.

Semantic implication: it is not the case that both (a) the noun is the proper name of a person and (b) the person referred to is not female.

Examples: *Bromke, sierotę Bromke.*

Operation 20: $\frac{\text{-e}}{\text{-ego}}$: optional

Condition on the operand: bisyllabic

Condition of occurrence: in a concatenation with an inflected nominal expression referring to the same object and implying the feature 'non-female'.

Semantic implication: same as in Operation 18.

Pragmatic (stylistic) feature for non-application: the noun is felt to be alien.

Examples: *pana Standego / pana Stande, Adama Fryciego / Adama Frycie.*

Operation 21: $\frac{\text{-e}}{\text{-ego}}$: optional

Condition on the operand: more than two syllables.

Semantic implication: same as in Operation 18.

Pragmatic (stylistic) feature for application: informal (indicating its resemblance to the common usage of the desinence *-ego* in high-frequency words in *-y* or *-i* as well as in bisyllabic words in *-e*).

Examples: *Tagore / Tagorego, Obote / Obotego, Malaparte /*

Malapartego.

The formulation of Operation 21 is simplified. Apart from individual variation, there may be other factors at work which influence the probability of application; cf. the highly improbable *Nakasonego*, *Castiglionego* and the normal *Malapartego.*

* * * * * * * * * * * * *

Much more needs to be said to reveal all the complexities of the Accusative singular of Polish nouns, even within the limits imposed at the outset. I shall briefly touch upon two problems.

First, there are special Accusative word-forms which cannot be subsumed under the rules formulated here or under any other (non-spurious) rules. On the one hand, some forms do not meet the external conditions for the operations. For example, *ja* : *mnie*, *Książę* : *księcia*, *pani* : *panią*, *Brentano* : *Brentanę* (according to a tradition of inflecting the name of this particular philosopher). On the other hand, some nouns exhibit a regular formal relation but their categorization runs counter to the rules, e.g. *gol* : *gola* 'goal'. The proper treatment of such items consists in registering them all as ready-made units of language alongside of the corresponding Nominatives, with the qualification that they are simply complementary with respect to the Nominatives for the contexts where such-and-such operations or suboperations occur affecting regular nouns. If sets of operations or suboperations are established which occur in the same contexts and are dubbed with abbreviatory symbols like "Acc. sing.," a corresponding index attached to the irregular forms may do the job. Notice that our units need not be entered as many times as there are cases; thus, *księcia* is a single complementary unit for both "Acc. sing." and "Gen. sing." and it should be indexed accordingly (but *panią* is a complementary unit for "Acc. sing." only: the Instrumental *panią* is perfectly regular).

Second, the categorial changes listed in our rules may occur in contexts different from those described in the rules and for which no generalization is available. I cannot point out an example of this in Polish, but I shall draw an example from Russian.

In a stylistically low subcode of Russian there is one verb in

sja which, contrary to other verbs in *-sja*, does not govern the Genitive (or any other case), but the Accusative. This is the verb *slušat'sja* 'obey' as in *On slušaetsja mat'* 'he obeys his mother.' We face here two alternatives. We may drop the restriction against free Accusative operations with verbs in *-sja* (similar to the restriction applying to Polish *się*, discussed earlier). Or, we may keep the restriction and assign the Accusative markers which show up after *slušat'sja* a completely different status: not of representatives of separate units of language but of appendices of that particular verb such that only the combination of that verb and the set of those appendices (overt or latent depending on what nominal expressions occupy the valency place) constitutes a unit of language.

The first solution leads to an unacceptable situation: the nonappearance of the Accusative after verbs in *-sja* would be presented as being on a par with its nonappearance after all other intransitive verbs. Yet there is a profound difference between the two groups: there is a systematic (nearly exceptionless) correlation between the presence of *-sja* and the absence of the Accusative and no such correlation between any other external feature of the remaining intransitive verbs and that absence. Our description would fail to reflect these correlations if we presented the Accusative as a free operation occurring in any second valency place, apart from individual situations as shown in a catalog appended to the rule—a catalog where practically all the *-sja* verbs would be entered.

Thus, we have to opt for the second solution. But a corollary of this solution is the splitting of each externally identical element in our corpus into two items. One item will have the Accusative markers as something separable not only from an open-ended class of nouns but also from an open-ended class of verbs (and other expressions). The other item will have the same Accusative markers regarded as separable only from an open-ended class of nouns, but mentioned together with other, verbal, strings as many times as there are such individually enumerated strings (of the sort illustrated by *slušat'sja*).

Even though the picture may seem strange, it does reflect the real facts of language. Thus, it would be utterly irrational to hesitate to split our morphological changes in the way just described. I would fix this distinction by dubbing the process which occurs in nouns, say, after *čitat'* 'read', an Accusative

operation, and externally the same process after *slušat'sja*, an Accusative suboperation.

Case phenomena constitute a highly intricate fragment of Polish grammar. Our consideration of the Accusative singular of nouns may suggest that these matters are even more complicated than they are usually thought to be. But a detailed study of all the relevant facts, especially those involving competing desinences in identical stem contexts, would most certainly reveal facts which have hitherto escaped analysis.[8]

NOTES

[1]The generalized characterization just given takes a lot for granted. It is assumed that we know what word-forms are, that we can tell nominal elements from non-nominal ones (of course, the distinction between them cannot be based here on the notion of case itself; otherwise, a conception of "nominal expressions" and "case" where some notion of "case" would be definitional for "nominal" is a good possibility), that we properly discriminate between grammatical and ungrammatical strings, that we have some notion of regularity and minimal difference (relative to the situation at hand). Many questions may be raised about all these concepts, but I think the level of understanding I presuppose at this point is sufficient for my present purposes.

[2]It is important to distinguish Operations from Suboperations, which are separable from one side of the context only, in this instance, from nominal word-forms. They are only parts of language units, constituted basically by other expressions such as verbs, prepositions, or verbs together with prepositions. Thus in *kieruje nową fabryką i majątkiem* 'administers a new factory and an estate', the suboperations "*-ą* replaces *-y* in adjectives," "*-ą* replaces *-a* in nouns," and "*-kiem* replaces *-ek* in nouns" are extrinsically identical with Instrumental operations, such as the 'instrument' operation. It is the fixed character of suboperations, which turn up in ever new individual items like verbs with their idiosyncratic government, that justifies the idea of morphology as a special subsystem in language, a subsystem not reducible to syntax.

[3]Our formula can perhaps cover the government of *nienawidzić siostry*, cf. *znienawidzić siostrę* with *nie* after a prefix and so not initial. Notice that we cannot speak of the unit *nie* 'negation' here because *nie* in *nie znosi* 'cannot stand', *nie lubi* 'dislikes', etc. is not an exponent of pure negation but also causes the shift to Genitive. As for prepositions, I find it reasonable to distinguish those with Accusative government (i.e. following the bulk of the verbs) as not individually marked for case changes in the adjacent valency places and to mark the remaining prepositions correspondingly.

[4]It is necessary to define the status of the semantic implication in terms of its place in the thematic-rhematic structure of the sentence: the semantic implication carries a (metatextual) presupposition or thematic dictum and not a rhematic component (it cannot be contrasted with some content presented as inappropriate according to the schema of eliminatory contrast "p and not/

rather than q"). This statement applies to all the semantic implications dealt with in this paper.

[5] *Wirus* is admissible, but at the expense of treating it on a par with, say, the names of trees.

[6] It is true that IF a noun ending in a consonant gets the desinence *-a*, then it is masculine, and IF a noun ending in a consonant remains uninflected, then it is feminine. But this is not the whole truth. If it were, expressions like *tego piękności* would have been grammatical (cf. *tego gościa*), but they are not. There is also another kind of dependency: some nouns are inherently feminine and they do not admit of the inflection; some others are not and the presence or absence of inflection (regulating also the gender differences) is semantically loaded with them (cf. *Sienkiewicz, profesor*).

[7] For those who pronounce *Jókai* as trisyllabic. Otherwise this name undergoes Operation 1: *Jókaia*.

[8] One promising domain is of course the Genitive singular of masculine nouns with its competition of *-a* with *-u*. Among other things, the choice of *-u* with stems in *-in* and *-yn* seems to imply that if the noun is the name of a town, it is not in Poland or adjacent areas; thus *Koszalina, Lublina, Miedzeszyna, Berlina, Tallinna, Bohumina* but *Pekinu, Nankinu, Turynu, Londynu*. Another domain deserving scrutiny is nouns ending in soft consonants: *-ów* in the Genitive plural seems to imply persons (e.g. *leniów, Koniów* (a family name), *rabusiów*), while *-i* seems to imply non-persons (e.g. *kleni, koni, okoni*).

The Locus of Case Assignment and the Direction of Percolation: Case Theory and Russian

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1.0 *Introduction.* N. Chomsky has recently observed that "Case theory deals with assignment of abstract Case and its morphological realization" (Chomsky 1981:6). While the Extended Standard Theory (EST) literature contains extensive discussion of abstract case in languages typologically like English, relatively little has been said about languages in which case is morphologically realized on all the inflected constituents of NP. The main purpose of this paper is to correct this typological imbalance by determining whether current EST case theory needs to be substantially revised in the light of data from a 'case language' like Russian. The paper proceeds as follows: after making explicit the basic assumptions underlying EST case theory, I will argue on the basis of Russian NP-internal case assignment and distribution that a number of revisions in the theory's rules and basic principles is indeed necessary. I then go on to argue that EST case theory is presently inadequate in yet a second way: it has been concerned exclusively with *Syntactic case*, i.e. case whose assignment is uniquely determined by some other category and, therefore, does not figure in the sentence's semantic interpretation. This approach makes no provision for the other major type of case marking, namely, *Semantic case*, i.e. case whose assignment is *not* determined by any other category and, therefore, figures prominently in the sentence's semantic interpretation (see Freidin and Babby 1984; Mel'čuk 1975:40). Semantic case appears to be found only in languages in which case is realized by means of inflectional morphology (see section 11.0 where the relatively severe restrictions on semantic case distribution will be discussed). EST case theory must therefore be expanded to accomodate Semantic as well as Syntactic case if it is to be general enough to account for the behavior of case in case languages.

1.1 *NP-Internal Case Distribution (Assumption I).* It is generally assumed in the literature that case marking is a *bipartite* operation:

A case feature is first assigned to the noun phrase by the category that governs it (case assignment) and this feature is then distributed or spread to the appropriate lexical and phrasal categories (Chomsky 1981). The latter part of this operation is responsible for what is traditionally called case agreement.[1] One of the main concerns of this paper will be to determine the case feature's 'landing site', i.e. the level of X-bar structure at which case is assigned (the locus of case assignment) and how the case feature is distributed inside the noun phrase (direction of percolation).

1.2 *Case and Government (Assumption II).* One of the basic assumptions of EST case theory is that case is assigned to a noun phrase by the category that governs it. Government in EST is a structural relation defined on trees, and can be stated as follows:

(1) α *governs* β if $\beta = X^0$ (in the sense of X-bar theory), α c-commands β, and β is not protected by a maximal projection (Chomsky 1982:19)

In other words, a category governs its complement in a construction of which it is the head (Chomsky 1981:50). Prepositions, for example, govern their noun phrase complements and verbs govern their objects.[2]

Notice, however, that if the case of a noun phrase is uniquely determined by other categories in the sentence, it is entirely predictable and cannot therefore make a direct contribution to the sentence's overall semantic interpretation. EST case theory thus treats case assignment in much the same way as it does, say, subject-verb agreement, where the head of the subject noun phrase determines the features of person, number, and gender on the verb (see Babby 1976). It can be concluded that case assignment in EST has been treated as a strictly redundant syntactic phenomenon.

Assignment of case exclusively in terms of government works for a language like English, which has only syntactic case. But it does not work for a language like Russian, where a noun phrase in certain syntactic configurations can be assigned different cases, and the selection of one or the other of these cases makes a significant contribution to the sentence's semantic interpretation. Case-languages like Russian thus have *semantic* case marking as well as syntactic.

1.3.0 *Inflectional Morphology and Syntax (Assumption III).* In bipartite case theory a case feature is first assigned to a landing site in the noun phrase, and then distributed to the appropriate categories. This approach to case marking requires the following model of inflectional morphology and its relation to the syntax. The lexicon contains only ***basic stems*** of inflected words, i.e., whole words minus their inflectional endings (cf. R. Jakobson 1948/1971). Lexical insertion introduces these stems into phrase-markers where they acquire certain syntactic features, e.g., nouns acquire case, verbs receive the features of person, number, and gender from their subjects. We then need special rules to "spell out" aggregates of inherent and acquired features as inflectional endings. For example, in Russian *čitaj-* 'read' is the basic stem of the verb. If the subject is, say, the first person singular pronoun, *čitaj-* acquires the features First Person and Singular by subject-verb agreement (we can ignore gender here), which is realized or "spelled out" as *čitaj-u* 'I read'. This model of the interaction between syntax and inflectional morphology has most recently been proposed in Anderson 1982; see Babby 1976 for an earlier attempt to account for Russian inflectional morphology in this framework.

1.3.1 *Autonomous Morphology.* There is a competing model of inflectional morphology according to which word paradigms are generated in either the lexicon or in a separate morphological component. This means that only fully specified words in their surface morphological forms may be introduced into syntactic derivations, that syntactic rules cannot affect morphology, and that morphology is autonomous with respect to syntax.[3] Agreement in a theory of autonomous morphology is achieved by checking and matching rules and filters, since there are no rules that copy or transfer inflectional features. In this paper I will accept Assumptions I and III and investigate the consequences of Assumption II for the analysis of case in Russian.

2.0 *The Locus of Case Assignment and Direction of Percolation.* We can now turn our attention to three explicit models of NP-internal case distribution that have been proposed in the recent literature (cf. Assumption I above).

2.1.0 *Downward Percolation.* The most familiar of the three models can be characterized as N^m-to-N^o or "downward" percolation. The case feature is first assigned to N^m, the maximal projection of the head noun N^o, and from there it is percolated down onto the head noun, its modifiers, and all the phrasal categories that dominate them. Safir (1982:424) formulates downward percolation as follows:[4]

(2) If X^m is a maximal projection of X, and X^m has the feature [α F], then for all SPEC X^n and X^n, $n \leq m$, X^n and SPEC X^n are also [α F].

The other two models differ from N^m-to-N^o percolation with respect to locus of case assignment: The case feature is assigned first to the ***head noun*** N^o and distributed from there to the rest of the noun phrase. We will look at each of these two models in considerable detail below.

2.2.0 *Head-to-Modifier Case Agreement Rule.* Chomsky (1965:172-175) proposed a rule of NP-internal case distribution that corresponds most closely to the traditional notion of case agreement. A case feature is first assigned to the head noun and then copied from there directly onto its modifiers (cf. Anderson 1982:593; Lapointe 1980:6): no phrasal categories are assigned case according to this rule.

2.3.0 *Upward Percolation.* According to the third model, a case feature is first assigned to the head noun, as in §2.2.0 above, but it is then percolated or "projected" up to N^m along with the head's other syntactic features (gender, number, and animacy). More specifically, after a case feature is assigned to N^o, it is projected up to N' and the modifiers it dominates, from there to N'' and its modifiers etc., up to but not beyond N^m.[5]

The obvious question to ask at this point is which of the three models presented above best accounts for case distribution in Russian noun phrases. In the immediately following sections I will first eliminate head-to-modifier rules (see section 2.2.0) by demonstrating that they cannot account for certain common data. I will then argue that ***both*** downward percolation and upward case projection are necessary in Russian in order to account for the crucial difference in case distribution found in direct (nominative and accusative) vs. oblique noun phrases containing quantifiers.

3.0 *Head-To-Modifier Agreement Rules.* Rules like the head-to-modifier agreement rule mentioned in §2.2.0 cannot account for the GEN-ACC-GEN case pattern illustrated in 3a or the GEN-NOM-GEN pattern in 4.[6]

(3) a. za ***kakix-nibud'*** paru časov
in only:GEN PL few:ACC SG hours:GEN PL
'in only a few hours'

b. ?za ***kakie-nibud'*** paru časov
only:ACC PL

c. ?za ***kakuju-nibud'*** paru časov
only:ACC SG

d. *za paru ***kakix-nibud'*** časov

(4) a. U nix v zapase [***dobryx*** ***dvadcat'***
by them in reserve good:GEN PL twenty:NOM SG
minut]$_{NP:n}$
minutes:GEN PL
'They have a good twenty minutes to spare.'

b. U tebja vperedi [***celyx*** ***tridcat'***
by you ahead entire:GEN PL thirty:NOM
svobodnyx ***dnej***]$_{NP:n}$
free:GEN PL days:GEN PL
'You have an entire/whole thirty free days ahead of you.'

In 3a, which is the only form of this noun phrase accepted by all native speakers (cf. marginality of 3b and 3c), the adjective ***kakix-nibud'*** is genitive plural, and therefore agrees in case and number with ***časov***, not ***paru***, the apparent head noun. Note also that the crucial GEN-ACC-GEN agreement pattern cannot be accounted for by claiming that ***kakix-nibud'*** and ***časov*** form a deeper constituent where agreement takes place and that ***kakix-nibud'*** is then moved to the left of ***paru*** by a transformation. This is because noun phrases of this form are syntactically ill-formed (see 3d) and, most important, they cannot account for the semantic interpretation of 3a and 4 (see Babby 1984a for details).

No matter how we analyse the internal structure of the noun phrase in 3a, its surface case distribution cannot be accounted for by an agreement rule that copies the case feature from the head noun onto the modifiers: If ***paru*** (ACC SG) is taken as the head

of the noun phrase, it cannot account for the genitive plural of the adjective *kakix-nibud'* (we would expect 3c or perhaps 3b). If *časov* (GEN PL) is taken as the head, a head-to-modifier rule cannot account for the accusative case marking on *paru*. We can conclude that the case distribution in noun phrases like 3a provides straightforward evidence that head-to-modifier agreement rules are inadequate.[7]

4.0 *Downward vs. Upward Percolation.* The bipartite case theory outlined in §1.1 permits a case feature to be assigned either to N^m and percolated down, or be assigned to N° and percolated up to N^m. This section is devoted to a discussion of the relative merits of these two loci of case assignment and the direction of case distribution they determine.

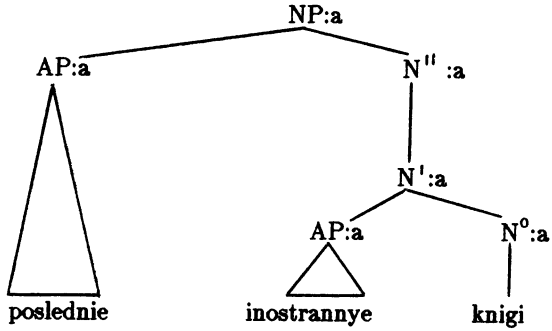
Since the head noun's features of gender, number, and animacy must be projected up to the noun phrase's higher phrasal categories, it might seem *a priori* that case too should be assigned to the head noun and simply projected up to N^m along with its gender, number, and animacy; downward percolation of case would therefore be unnecessary. If, however, we confine our attention to case only, it appears at first to make no difference whether case is assigned to N^m and percolated down or assigned to N° and projected up. In unquantified noun phrases[8], the case marking on all lexical and phrasal categories in both direct (nominative and accusative) and oblique cases is the same, and both loci of case assignment give the same case distribution. In the following examples, 6a and 6b are the X-bar structures of 5a and 5b respectively (notice the *homogeneous* case distribution in both the direct and oblique noun phrases).[9]

(5) *Unquantified Direct and Oblique Noun Phrases*

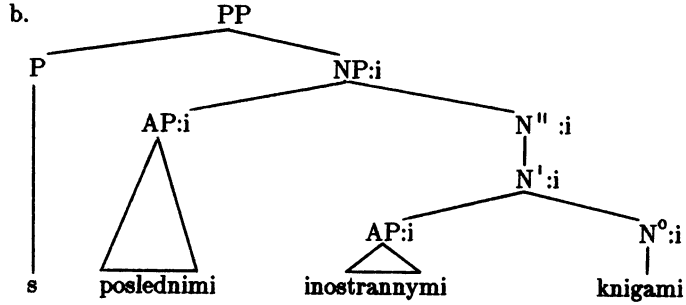
a. *poslednie inostrannye knigi*
last:ACC foreign:ACC books:ACC

b. *s poslednimi inostrannymi knigami*
with last:INST foreign:INST books:INST

(6) a.



b.



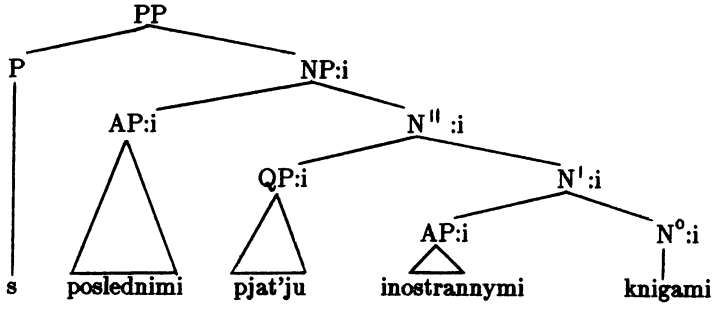
But the locus of case assignment does make a difference in quantified noun phrases. Observe the homogeneous case distribution in 7a and the heterogeneous distribution in 9a.

(7) *Oblique Quantified Noun Phrase*[10]

a. *s poslednimi pjat'ju inostrannymi knigami*
with last:INST five:INST foreign:INST books:INST
'with the last five foreign books'

b. **s poslednimi pjat'ju inostrannyx knig*
INST INST GEN GEN

(8) X-bar structure of 7a.



(9) *Direct Case Quantified Noun Phrase*

a. *Ja im dal [poslednie pjat' inostrannyx*
I them gave last:ACC five:ACC foreign:GEN
knig].
books:GEN
'I gave them the last five foreign books.'

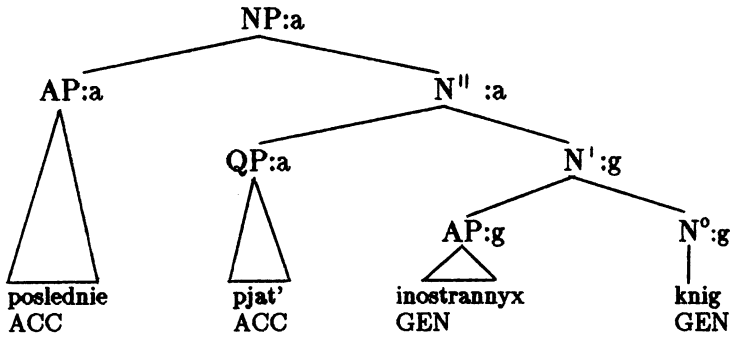
b. **Ja im dal [poslednie pjat' inostrannye knigi]*.
ACC ACC ACC ACC

c. **Ja im dal [poslednix pjati inostrannyx knig]*.
GEN GEN GEN GEN

d. **Ja im dal [poslednix pjat' inostrannyx knig]*.
GEN ACC GEN GEN

(cf. 3 and 4)

(10) *X-bar Structure of the Accusative Direct Object in 9a.*



9a illustrates the fact that in quantified noun phrases with direct case marking, N' and all its constituents must be marked genitive.

4.1.0 *Summary of Data.* If a noun phrase does *not* contain a QP constituent, then the head noun, its maximal projection, and all the intermediate phrasal categories between them must have the same case marking in both direct and oblique cases (see 5 and 6). *Oblique quantified* noun phrases must also have homogeneous internal case distribution (see 7 and 8), and, therefore, do not by themselves provide any direct evidence for deciding whether the oblique case feature is assigned to N^m and percolated down to N° or is assigned to N° and projected upward. But 7a/8 does nevertheless illustrate an important empirical fact about Russian case, namely:

(11) All the modifiers in oblique noun phrases must have the same case marking as the head noun, i.e., oblique noun phrases must have homogeneous case distribution.

It should now be obvious that the crucial evidence for determining the correct formulation of case assignment and distribution is to be found in the $[\text{ACC} - \text{GEN}]_{\text{NP:a}}$ and $[\text{NOM} - \text{GEN}]_{\text{NP:n}}$ case distribution that is characteristic only of quantified noun phrases with direct case marking (see 9a/10). But before attempting to account for the heterogeneous internal case distribution illustrated in 9a, we must first clarify two essential properties of the structures proposed in 8 and 10.

5.0 *Case and X-bar Structure: Uniform Structure Hypothesis.* This section deals with one of the most fundamental questions of case theory: Do differences in case marking necessarily correspond to differences in X-bar structure? Speaking in more concrete terms, must the homogeneous vs. heterogeneous NP-internal case agreement patterns illustrated in 7a and 9a be accounted for by attributing different X-bar structures to oblique and direct case quantified noun phrases?[11] There are two diametrically opposed answers to this question.

Implicit in 8 and 10, the structures I have proposed for 7a and 9a, is the claim that the X-bar structures of oblique and direct quantified noun phrases are ***identical***, even though their case distribution patterns are systematically different.[12] This is an extremely strong claim because of its consequence for case theory: If the noun phrases in 7a and 9a do indeed have the same X-bar structure, it follows that the crucial differences in case marking we are trying to account for ***cannot*** be explained exclusively in terms of government, c-command, or other structural relations since N in both 7a and 9a is governed by the same NP-internal categories (see Assumption II in §1.2). I argue below that the homogeneous case distribution in oblique quantified noun phrases like 7a and the heterogeneous case distribution in direct quantified noun phrases like 9a can be predicted in terms of the same X-bar structure with different loci of case assignment for oblique and direct cases.

5.1 There is, however, a well established tradition which associates differences in case marking like those in 7a and 9a with differences in the noun phrases' internal structure. For example,

according to Vinogradov (1947:296), in the phrase [*pjat'* (ACC) *knig* (GEN)]$_{NP:a}$ 'five books', *pjat'* is the head and it *governs* the genitive case marking on its complement *knig* 'books'. But in the corresponding oblique noun phrase [*pjat'ju* (INST) *knigami* (INST)]$_{NP:i}$ 'five books', *pjat'ju* is said to be a modifier and to *agree* in case with *knigami*, which is now taken to be the head (cf. Šaxmatov 1941:501, Grammatika Russkogo Jazyka 1960, vol. II.1:341, Blinov 1963:74). This means that in order to account for the differences in case distribution in quantified noun phrases, it is necessary to claim that *pjat'* is the head in noun phrases with direct case marking, but is a modifier in the corresponding noun phrases with oblique case marking. Pesetsky's QP-Hypothesis (1982) belongs to this tradition. He argues convincingly that in certain types of sentences the quantifier in direct case noun phrases is the head. However, given X-bar theory, Pesetsky must also claim that when a quantifier is the head, the phrase it heads must be a QP (Q^m), not a noun phrase (N^m). Thus a sentence like 12a would have to have the structure in 12b, not 12c.

(12) a. *Na stole naxodilos'* [*šest' knig*].
on table was-located:NEUT SG six:NOM books:GEN
'There were six books (located) on the table.'

b. [$_S$ [PP V]$_{VP}$ QP]

c. [$_S$ [PP V]$_{VP}$ NP]

The Uniform-Structure Hypothesis implicitly proposed in 8 and 10 appears to be preferable to this approach because: (i) It enables us to show that a great deal of the Russian case data that was previously thought to be anomalous or unsystematic is in fact entirely regular and predictable (cf. §10). (ii) It does not require what I take to be the counterintuitive claim that oblique and direct case noun phrases have different X-bar structures or that subject phrases containing quantifiers are not noun phrases (cf. QP-Hypothesis discussed above).[13]

6.0 *Lexical and Configurational Case.* This section deals with the configurational status of accusative (objective) case marking on "direct" objects of transitive verbs.

There is a relatively small class of verbs in Russian that assign oblique cases to their objects, e.g.: *upravljat'* 'govern' + INST, *zavidovat'* 'envy' + DAT, *izbegat'* 'avoid' + GEN. These verbs can be characterized as *lexical-case assigners* because the

specific oblique cases they assign to the objects they govern are not predictable. These case assignments are for the most part idiosyncratic lexical properties of the verb and must therefore be entered in the lexicon as part of the verb's subcategorization information. This kind of case has also been referred to in the literature as *inherent* case (Chomsky Pisa Lectures, 1981).

Transitive verbs, however, are not lexical-case assigners, and the accusative case on their direct objects is therefore not lexical (inherent) case. A transitive verb can be defined in case theory as a verb that governs its object (as in 1), but does not assign any case to it. The accusative case on direct objects is configurational (structural), not lexical; it is determined by the syntactic environment or configuration that a noun phrase occupies in its phrase-marker, not by the verb that governs it:

(13) *Accusative Case Assignment*
A noun phrase that is contained in a verb phrase is assigned the accusative case if it is *not* governed by a lexical-case assigner.

The nominative case is also configurational and the rule assigning it can be stated in similar terms:

(14) *Nominative Case Assignment*
A noun phrase that is *not* contained in a verb phrase is assigned the nominative case if it is *not* governed by a lexical-case assigner.[14]

It is not a coincidence that 13 and 14 contain negative conditions; they reflect the unmarked, "elsewhere" status of the nominative and accusative cases that has been recognized by linguists for generations (see §11.2 for further discussion).

6.1 The motivation for claiming that accusative marking on direct objects is configurational is quite straightforward: accusative behaves exactly like the nominative case, the configurational case *par excellence*, rather than like lexical case, with respect to a number of case-sensitive syntactic phenomena: (i) In Russian negated sentences only noun phrases that would be nominative or accusative if the sentence were affirmative can be marked genitive when in the scope of negation. Conversely, if a noun phrase is governed by a lexical-case assigner, it cannot be marked genitive when it is in the scope of negation (see §11.1 and Babby 1980b). (ii) The partitive genitive too can be marked only on noun phrases

that would otherwise be nominative or accusative.[15] (iii) Only objects of transitive verbs can be passivized in Russian; if a verb is a lexical case assigner, its oblique object cannot passivize. (iv) Prepositional quantifiers can occur in nominative and accusative noun phrases only (see §10).

The fact that nominative and accusative noun phrases are not governed by lexical-case assigners plays a key role in explaining why it is precisely these noun phrases that have special morphological, syntactic, and semantic properties that set them apart from noun phrases with oblique case marking (see Babby 1980a: part II).[16]

7.0 *Case Distribution in Nominative and Accusative Quantified Noun Phrases.*

Now that we have presented the Uniform Structure Hypothesis (§5) and determined that the accusative on direct objects is not a lexical case, we can begin to account for the crucial *heterogeneous* ACC-GEN and NOM-GEN case distribution in quantified noun phrases like 9a/10.

In modern Russian N' is assigned the genitive case when it is in the scope of the QP node, scope being defined in terms of c-command. In 10, for example, $[\textit{inostrannyx knig}]_{N'}$:g is c-commanded by $[\textit{pjat'}]_{QP:a}$. All lexical and phrasal categories that are not c-commanded by QP receive their accusative case marking by percolation from N^m (see $[\textit{poslednie}]_{AP:a}$ and $[\textit{pjat'}]_{QP:a}$ in 10). I am therefore proposing that nominative and accusative case are assigned configurationally to N^m and percolated down. The genitive case feature on N' appears to serve as a barrier to percolation, i.e., genitive assignment to N' in the scope of QP takes precedence over accusative assignment to N' by percolation from N^m (cf. ungrammaticality of 9b). We will return to case conflicts and their resolution in §9.0.[17]

Notice that case assignment to the *head noun* N^0 in direct-case quantified noun phrases (rather than to N^m as I am proposing) does not result in the *heterogeneous* ACC-GEN case distribution we are trying to account for. If the accusative case in 9a were assigned to the head (*knig-* 'book'), it would be projected up to N^m and all its intermediate categories, giving the ungrammatical 9b (homogeneous accusative distribution). Case assignment to the head noun always results in a noun phrase with homogeneous case distribution because feature-*projection* from N^0

to N^m is obligatory.[18] It is obvious that case assignment to N^o and obligatory projection to N^m is precisely what we need in order to account for the obligatory homogeneous case distribution in *oblique* quantified noun phrases (cf. 11), but first we must look more closely at downward percolation and its formulation.

7.1 *Case Percolation in Russian.* The analysis just proposed for direct-case quantified noun phrases like 9a requires that we reconsider the formulation of downward percolation given in 2. First of all, in Russian, only nominative and accusative, the configurational cases, are percolated from N^m. Second, and most important, case does *not* obligatorily percolate down to the head: in 9a genitive marking on N' blocks accusative percolation to the head noun and its N' modifier (see $[[\textit{inostrannyx}]_{AP:g}$ $[\textit{knig}]_{N^o:g}]_{N:g}$ in 10); accusative in 9a/10 is free to percolate onto the modifiers *poslednie* and *pjat'* only (see Muysken 1983b).

One can of course maintain (cf. §5.1 above) that the case on the head and N^m must always be the same in all types of noun phrases, and, therefore, that the quantifier (*pjat'* in 9a) must be the head in nominative and accusative noun phrases rather than the genitive noun (*knig* in 9a). This is an extremely important theoretical point since the validity of the Uniform Structure Hypothesis depends on the ability of heads to have case marking different from that of their modifiers and maximal projections. It is, however, easy to adduce evidence that the case on the head noun can be different from the case marking on N^m. In Russian, direct case quantified noun phrases are perfectly grammatical when the nominative or accusative case on N^m cannot be percolated down onto *any* of the noun phrase's lexical categories. Since noun phrases containing nouns all presumably have heads, the case on the head noun and N^m *must* be different in these noun phrases. Consider the following examples:

(15) *Total Interruption of Percolation to Lexical Categories.*

a. *Ja im dal* $[[po]_{QP}$ $[bol'šomu\ jabloku]_{N':d}$ $]_{NP:a}$
I to-them gave each big:DAT apple:DAT
'I gave them each a big apple.'

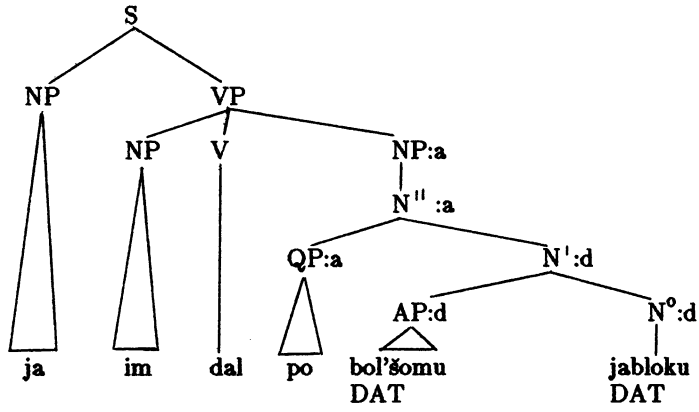
b. $[[bolee\ sta]_{QP}$ $[čelovek)_{N':g}]_{NP:n}$ *pogibli.*
more-than 100:GEN people:GEN died:PL
'More than a hundred people died.'

c. *On nam prines* [[*vdovol'*]$_{QP}$ [*vina*]$_{N':g}$]$_{NP:a}$
he to-us brought enough wine:GEN
'He brought us enough wine.'

d. *On nam prines* [[*kak možno bol'še*]$_{QP}$
he to-us brought as many as possible
[*knig*]$_{N':g}$]$_{NP:a}$
books:GEN
'He brought us as many books as possible.'

The X-bar structure of 15a can be represented by 16:

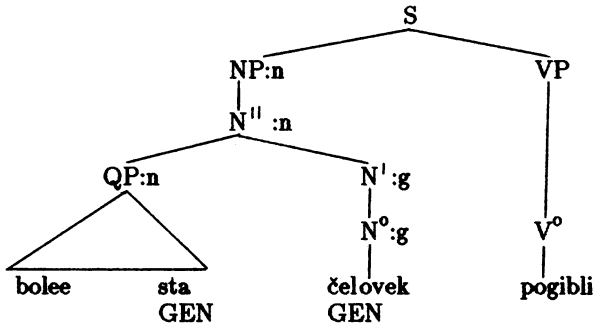
(16) *X-bar Structure of 15a*



Po is a prepositional quantifier that requires the dative case and has a distributive meaning that can be glossed as 'each'. In the direct object noun phrase in 16, *po* assigns its dative case to the head noun *jabloku* and its modifier (we will return to this crucial example in §10.0 below). Since prepositions cannot be marked for case and the head and its modifier are marked dative, the accusative marking on N^m in 15a/16 cannot percolate down to any of the lexical categories (cf. §7.0).

Note that [*po bol'šomu jabloku*] is in fact the direct object of *dal* 'gave' in 15a. Only accusative direct objects passivize in Russian (see §6.1) and 15a does in fact have a passive counterpart: *Im bylo dano* [*po bol'šomu jabloku*]$_{NP:n}$ 'A big apple was given to each of them'.[19]

(17) *X-bar Structure of 15b.*



The head noun *čelovek* (GEN PL) of the nominative subject noun phrase in 15b/17 is marked genitive in the scope of QP; *sta* '100' is genitive because it is the complement of the comparative *bolee* 'more than', which is itself an uninflected word in modern Russian. The nominative marking on N^m (=NP:n) is therefore not percolated down to any of the subject noun phrase's lexical categories. Note that $[$*bolee sta čelovek*$]_{NP:n}$ induces plural agreement on the verb *pogibli*, which is absolute proof that in Russian it is the subject (see Babby 1980b:§2.3) and, therefore, has nominative case marking.[20] In 15c the quantifier *vdovol'* 'enough' is also an uninflected word, but here it is the sole constituent of QP. The head *vina* 'wine' is genitive because it is in the scope of QP, and, therefore, we see once again that the accusative case on the direct object's maximal projection cannot percolate down onto any of the lexical categories.[21]

The facts presented above suggest that percolation from N^m should be reformulated as follows (cf. 2):

(18) *Percolation from* N^m.
If X^n is a projection of X^{n-1}, and X^n has the feature [α F], then all modifiers of X^{n-1} and X^{n-1} are also [α F].

There is no need to mention nominative and accusative in 18 since they are the only cases that are assigned to N^m. Case features will be percolated as far as they can go, i.e., to lexical categories or until they reach a node that is already marked for case in some other way (see §9.0 for further discussion).

7.2 *Different Foci of Case Assignment: An Additional Argument.* Examples like those in 15 constitute additional evidence that nominative and accusative case should be assigned to N^m, and not

to N°. If a noun phrase contains no lexical categories with nominative or accusative case marking (see esp. 15a), it follows that direct case marking on the higher phrasal nodes in this phrase could not possibly have been assigned to the head or any other lexical constituent and projected up. Note, however, that oblique quantified noun phrases in modern Russian must have at least one lexical category with oblique case marking. This is precisely what we would expect to find if lexical case is, as I have suggested above, assigned to N° by the category that governs it and projected up to N^m.[22]

8.0 *Case Distribution in Oblique Quantified Noun Phrases.* An adequate theory of case must be able to account for the following differences between oblique and direct case quantified noun phrases (cf. 7a/8 vs. 9a/10):

(19)	*Oblique Quantified NP*	*Direct Case Quantified NP*
1.	Case distribution is ***homogeneous***, i.e., the head noun, its modifiers, and all the phrasal categories dominating them must have the same case marking.	1. Case distribution is ***heterogeneous*** (see 7.0)
2.	N^1 cannot be marked genitive even though it is c-commanded by QP (see §5.0).	2. N^1 must be marked genitive when it is c-commanded by QP.
3.	Type II quantifiers (e.g. prepositional quantifiers, see note 21) cannot occur.	3. Type II quantifiers can occur.
4.	There must be at least one lexical category with oblique case marking.	4. There need not be any lexical categories with nominative or accusative case marking (see §7.2).
5.	Genitive of negation and partitive genitive are impossible.	5. Genitive of negation and partitive genitive are possible (see §6.1).
6.	Oblique quantified NP's cannot passivize.	6. Accusative quantified noun phrases can passivize.[23]

I will argue below that the striking differences between oblique and direct case quantified noun phrases listed in 19 are the automatic result of the difference between lexical (inherent) and configurational (structural) case assignment that was suggested in §7.0.

Case in oblique quantified noun phrases is distributed as follows: When a noun phrase is governed by a lexical case assigner, the oblique (lexical) case feature ***is assigned directly to the head noun*** N^0 ***and projected up*** along with the head's other syntactic features (gender, number, animacy). Since features ***must*** be projected up as far as the head's maximal projection N^m, including all its intermediate categories, it follows automatically that noun phrases assigned lexical case ***must*** have homogeneous case distribution (cf. 19.1). In other words, the homogeneity of case distribution in oblique quantified noun phrases is directly related to the obligatory nature of the uninterrupted ***projection*** of features from N^0 to N^m. Now, N' cannot be assigned genitive in the scope of QP in oblique quantified noun phrases, as it can in quantified noun phrases with configurational case, because the genitive case marking would block the oblique case feature assigned to N^0 from being projected beyond N' :g (cf. the Pass-Over Principle in note 18). Such a noun phrase would be ill-formed because N^m would not have the same case as N^0, which is a violation of projection (cf. 19.2). A corollary of this is that lexical case will always take precedence over all other types of case when they come into conflict (cf. §9.0). N' can be marked genitive in the scope of QP in nominative and accusative noun phrases because these configurational cases are assigned to N^m and percolated down, and, as we saw in 15, percolation to the head is not obligatory (cf. 19.4).

The rule of case projection can be formulated as follows:

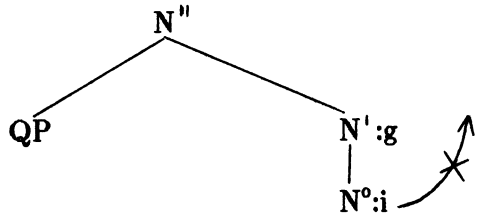
(20) *Case Projection*

If X^m is the maximal projection of X^0, and X^0 has the feature [α C], then for all modifiers X^n and X^n, $n \leq m$, X^n and modifiers of X^n are also [α C].

Let us now look at a concrete example. In 7a/8, the preposition *s* 'with' is a lexical case assigner that assigns the instrumental case to ***knigami*** 'books', the head of the noun phrase it governs. From there the instrumental case feature is projected up to N^m and all its intermediate categories by 20. If N' in 8

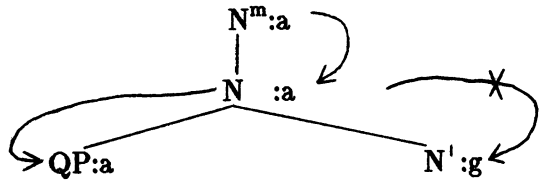
were assigned the genitive case in the scope of $[pjat'ju]_{QP}$, it would block the projection of the instrumental from $[knigami]_{N^o}$ to N^m, and the noun phrase would therefore be ill-formed; 21 is a schematic diagram of this situation:[24]

(21) *Interruption of Case Projection.*



In 9a/10 the configurational accusative is assigned to N^m and, therefore, assignment of genitive case to N' in the scope of $[pjat']_{QP}$ does *not* entail interruption of case projection from N^o. *Percolation* of accusative from N^m to N^o is indeed blocked by N':g in 9a (see diagram in 22), but this does not involve a violation of any of the principles governing case distribution since, as we saw above, percolation to lexical categories, including the head, is *not* obligatory (cf. §7.1 and 15a).

(22) *Interruption of Case Percolation.*



8.1 *Summary.* It has long been recognized that the direct and oblique cases are basically different, and each linguistic tradition has attempted to characterize this difference in its own terms (e.g., R. Jakobson in terms of markedness, and transformational grammar in terms of deep and surface structure). My hypothesis is that the fundamental distinction between direct and oblique case can be captured most naturally in terms of different loci of case assignment and the direction of distribution they determine. The configurational cases (nominative and accusative) are assigned to the highest phrasal node N^m and percolated down to all those

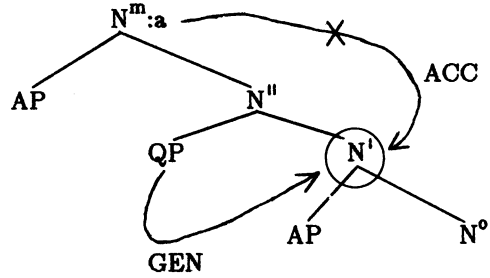
lexical and phrasal categories that do not already have case marking from some other source, e.g. genitive marking on N' in the scope of QP (see §9.0 below for discussion). Lexical case is assigned to the head N° by the case assigning category that governs it and is obligatorily projected up to all lexical and phrasal categories; any other type of case marking at any bar-level in noun phrases with lexical case will block projection of the case feature to N^{m} and the noun phrase will be ill-formed. It is important to bear in mind that percolation and projection follow the same "paths" in the X-bar structure of the noun phrase; they differ in direction and in the consequences of interruption (cf. note 4).

The Percolation/Projection Hypothesis presented here accounts automatically for the crucial homogeneous vs. heterogeneous case distribution in Russian oblique vs. direct case quantified noun phrases, and for a wide range of similar phenomena in other languages (see Babby 1980a:part two). And it does so without having to claim that the internal X-bar structures of quantified noun phrases like those in 7a and 9a are different, or that the quantified phrases in 7a and 9a are projections of different categories, i.e. N^{m} vs. Q^{m} (see QP-Hypothesis in Pesetsky 1982).[25]

9.0 *Case Conflicts and their Resolution.* The Percolation/Projection Hypothesis proposed above to account for the case distribution in quantified noun phrases depends crucially on a set of *precedence relations*: When a node is simultaneously in the domain of two or more case assigning strategies, a case conflict arises, and an adequate theory of case must therefore provide a principled way to resolve these conflicts, i.e., it must specify for each potential conflict which of the competing strategies takes precedence over the others. This is because an unresolved case conflict invariably produces an ill-formed structure (cf. §10.2). Certain precedence relations are universal, while others are language-specific or even dialect-specific.

In 9a/10 we saw that N' is simultaneously in the domain of accusative percolation from N^{m}:a and genitive assignment in the scope of QP, and that genitive assignment takes precedence over accusative percolation (cf. *9b), i.e.:

(23) *Case Conflict in 9a/10.*

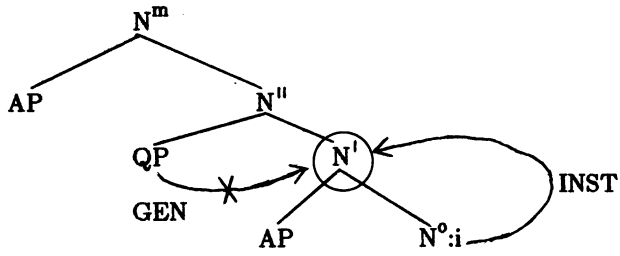


Precedence relations of this kind can be conveniently represented in the form of a Case Hierarchy:

(24) GEN(QP) > NOM/ACC[26]

In 7a/8, which has the same X-bar structure as 9a/10, N' is in the domain of both instrumental case assignment by projection from N° and genitive case assignment in the scope of QP. We saw here that projection of lexical case must take precedence over genitive marking (cf. *7b), i.e.:

(25) *Case Conflict in 7a/8.*



This precedence relation can be represented as:

(26) LEXICAL CASE > GEN(QP)

Since 24 and 26 have a common term, we can set up the following hierarchy of principles governing the resolution of case conflicts (see §10.1 for a noun phrase in which there is a three-way conflict):

(27) *Russian Case Assignment Hierarchy.*

LEXICAL CASE > GEN (QP) > NOM/ACC

Case conflicts are a natural consequence of the hierarchical structure of human language and we should therefore expect to find certain universal or near universal principles governing their resolution. I would like to propose that the peripheral terms in 27

constitute such a universal; it can be stated as follows:

(28) LEXICAL CASE. . . > . . .CONFIGURATIONAL CASE

In other words, lexical case takes precedence over all other types of case assignment and distribution, and all types of case take precedence over the configurational cases (cf. Principle of Lexical Satisfaction in Freidin and Babby 1984). I know of no exceptions to 28.[27]

9.1 *Organization of the Case Hierarchy.* We may now ask why the Russian Case Hierarchy in 27 has the form it does, i.e., what is the principle underlying its organization. It may seem at first glance that we already have part of the answer: If the Percolation/Projection Hypothesis is correct, and lexical case is assigned to N° and projected up to N^{m}, then, given the Pass-Over Principle (cf. note 18), any other case marking at any point on the path from N° to N^{m} will interrupt projection, and the noun phrase will therefore be ill-formed. This would make lexical case's predominance follow automatically from projection. But this approach tells us nothing about the precedence relation between GEN (QP) and percolation. We must therefore seek a more general organizing principle.

Just such a principle was stated in Anderson 1982:593, 606, to account for other phenomena:

(29) a. When two principles conflict, the more specific one takes precedence over the more general one.
b. Lexical specification (subcategorization) is the most specific principle.

The Russian Case Hierarchy proposed in 27 appears to conform completely to 29. Lexical case takes precedence over all other competing case assignment strategies because it is patently the most specific, i.e., it is a largely unpredictable, idiosyncratic property that must be explicitly specified in the lexical entry of the category that assigns it (see note 25). Configurational case is the least specific: It is not assigned by either lexical or phrasal categories and the conditions on its assignment are largely negative (see 13 and 14 in §6.0). GEN (QP) is less specific than lexical case (it is not assigned by a lexical category), but it is far more specific than configurational case since: (i) it is assigned by a specific phrasal category QP; (ii) the conditions on its assignment are specific, i.e., N^{1} must be c-commanded by QP; (iii) GEN (QP)

is assigned to N' (not N^m or N^o), which is the only instance in Russian where case is assigned *directly* to N', i.e., where N' is a case landing site rather than a point on the path of percolation or projection.[28]

10.0 *Prepositional Quantifiers and Case Conflicts.* Russian has a number of "prepositional quantifiers", i.e., prepositions that are constituents of QP (see Babby 1984b for details). I will show in this section that the superficially anomalous behavior of these prepositional quantifiers, including the crucial fact that they occur in nominative and accusative noun phrases only (cf. 19.3), is in fact entirely regular and can be predicted in terms of the Case Hierarchy proposed in 27. Consider the case distribution in the following direct object noun phrases:

(30) Oni nam dali ...:
they to-us gave

a. [[[***inostrannye knigi*** $]_{N'}$ $]_{N''}$ $]_{NP:a}$
foreign:ACC books:ACC

b. [[[***pjat'*** $]_{QP}$ [***inostrannyx knig*** $]_{N'}$ $]_{N''}$ $]_{NP:a}$
five:ACC foreign:GEN books:GEN

c. [[[***po pjati***$]_{QP}$ [***inostrannyx knig*** $]_{N'}$ $]_{N''}$ $]_{NP:a}$
five:DAT foreign:GEN books:GEN

d. [[[***okolo pjati***$]_{QP}$ [***inostrannyx knig*** $]_{N'}$ $]_{N''}$ $]_{NP:a}$
about five:GENforeign:GEN books:GEN

Note that 30c can be glossed as 'They gave us five foreign books each'; the prepositional quantifier *po* is responsible for the meaning 'each' and assigns its complement the dative case (cf. 15a/16).

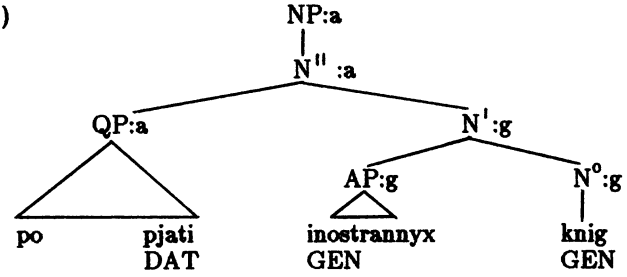
The direct object noun phrase in 30a does not contain a QP, and the configurational accusative assigned to N^m is simply percolated down to all the phrasal and lexical categories, giving a homogeneous case distribution (cf. 6a). There are no case conflicts in 30a.

In 30b, accusative is able to percolate from N^m only to $[pjat']_{QP}$ because N' here is in the scope of QP and, according to 27, GEN(QP) takes precedence over case percolated from N^m. This produces the now familiar ACC-GEN heterogeneous case distribution we saw in 9a/10. There is only one case conflict in 30b.

30c contains a prepositional quantifier and is therefore of special interest. N' is assigned the genitive case in the scope of

QP, just as in 30b. The prepositional quantifier *po* 'each' is a lexical case assigner and assigns its dative case to *pjati*, which it c-commands in QP. This produces *DAT*-GEN heterogeneous 'case agreement'. 30c can be represented as follows (details of the internal X-bar structure of QP are omitted).

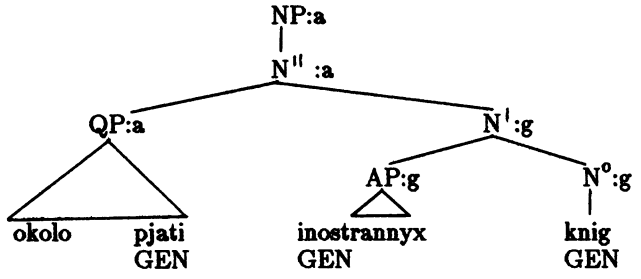
(31)



The noun phrase in 30c/31 contains *two* case conflicts, something we have not yet seen, but the Case Hierarchy nevertheless correctly predicts its DAT-GEN 'case agreement' pattern. Accusative cannot percolate to *pjati* because *pjati* is in the domain of *po*, a lexical case assigner, and 27 stipulates that lexical case takes precedence over configurational case. Accusative cannot percolate to N' because N' is c-commanded by QP, and 27 also stipulates that GEN(QP) > NOM/ACC. Accusative percolation loses out in both conflicts, which is why the direct object in 30c has no accusative case marking on any of its lexical categories (cf. 15 and note 22).

The case relations and X-bar structure in 30d are the same as in 30c, the only difference being that the prepositional quantifier *okolo* 'around' assigns the *genitive* case to the category it c-commands:

(32)



I am claiming here that 30d/32 does *not* have homogeneous case distribution despite the fact that *all* its lexical categories are

marked genitive. This is because the higher phrasal categories in 32, including N^m, have accusative marking. A noun phrase can be said to have homogeneous case distribution if and only if *all* phrasal and lexical categories in the path of percolation/projection have the same case marking (cf. 7a/8). 32 appears to be the correct representation of 30d because it captures the crucial fact that the noun phrase as a whole does in fact behave syntactically like an accusative direct object, e.g., it can passivize (see §7.1 and note 22). Recall that a noun phrase's syntactic relations to the rest of the sentence are determined by the case marking on N^m (which is the reason why nominative and accusative, the syntactic cases *par excellence*, are assigned to N^m, not N^o).[29]

10.1 *Three-way Case Conflicts.* In 30c and 30d we saw a noun phrase that contained two two-way case conflicts. In this section we will look at a particularly interesting situation, namely, a direct object noun phrase containing one *three-way* case conflict. Once again the Case Hierarchy proposed in 27 predicts the correct case distribution, and therefore demonstrates that the case distribution in this rather 'exotic' type of noun phrase is not an anomaly. Consider the following example, which can be glossed 'They gave us *one* foreign book each'; 33d is the passive of 33a (cf. 15a/16).

(33) Oni nam dali ...: 'They gave us ...:'

a. [[[***po***]$_{QP}$ [***inostrannoj*** ***knige***]$_{N'}$]$_{N''}$]$_{NP:a}$[30]
foreign:DAT book:DAT

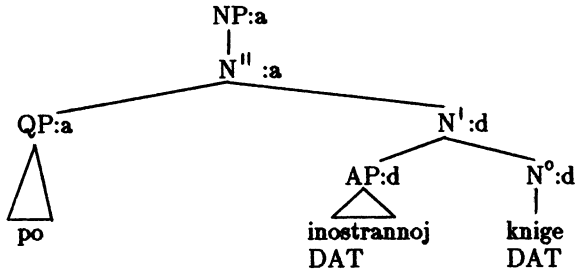
b. *[[[***po***]$_{QP}$ [***inostrannoj*** ***knigi***]$_{N'}$]$_{N''}$]$_{NP:a}$
GEN GEN

c. *[[[***po***]$_{QP}$ [***inostrannuju*** ***knigu***]$_{N'}$]$_{N''}$]$_{NP:a}$
ACC ACC

d. ***Nam bylo dano*** [***po inostrannoj knige***]$_{NP:n}$
'One foreign book was given to each of us.'

The structure of the direct object in 33a is represented in 34; here the constituents of N are *dative* (cf. 30c/31). Note that 33a/34, like 30d/31, does not have a homogeneous case distribution despite the fact that all its lexical categories have the same case marking.

(34)



Note that in 30c/31 above, the lexical case assigner *po* c-commands *pjati* 'five' (QP is the first branching node dominating them both), and *po* therefore assigns its dative case to *pjati*; N' is marked genitive because it is c-commanded by the QP (Q^m) node. But the structure in 34 is radically different from 31: *po* is the sole constituent of QP in 34, which means that here the prepositional quantifier *po* c-commands ***the head noun*** since now it is N'' that is the first branching node determining the c-command relation. *Po* must therefore assign its dative case marking to the head noun ***knige***; from there it is projected up to N'.[31]

10.1.1 This raises an important question: If *po* assigns dative case to the head noun ***knige*** 'book' in 34, why is the dative marking projected only as far as N', i.e., what prevents it from being projected all the way up to N^m, producing a noun phrase with homogeneous dative case distribution?[32] C-command also provides a straightforward answer to this question. It appears to be a universal principle of case theory that ***case cannot be projected beyond the domain of the category assigning it***, 'domain' being defined simply as the first branching node that determines the c-command relation between the case assigning category and the nominal (+N) category that case is assigned to. In ordinary prepositional phrases, i.e., $[P^\circ\ [\ .\ .\ .N^\circ.\ .\ .]_N m\ ]_P m$, lexical case is assigned by P° to N° and is then projected up to N^m, which is the highest nominal node in the 'domain' of P° (P^m is the crucial 'first branching node' here).[33] We saw above, however, that the 'domain' of the prepositional quantifier *po* in 34 is determined by N'', not by N^m, i.e., $[[po]_P o\ [\ .\ .\ .N^\circ.\ .\ .]_{N'}\ ]_{N''}$. Dative in 34 is therefore projected only as far as N' because here it is N' that is the highest nominal node in the 'domain' of *po* (N'' is the 'first branching node'). There is no interruption of projection in 34 since dative has been projected as far as it can go without going

beyond the 'domain' of its case assigning category. We can conclude that the rules and principles of case assignment and distribution apply here in precisely the same way they apply everywhere else in Russian. The only extraordinary thing about 33a/34 is the fact that *po* is the sole constituent of QP (because *odin* 'one' is an adjectival modifier in N', see note 30); everything else follows automatically. In other words, the atypical internal case distribution in noun phrases like 33a/34 and their syntactic behavior should not be written off as asyntactic, idiosyncratic properties of the preposition *po* in its distributive ('each') meaning. As a matter of fact, 33a/34 is a crucial example because it is in a real sense the exception that proves the rule: It is the syntax of *odin* 'one' that is exceptional (see note 30), i.e., given the fact that *odin* is the only number that is a constituent of N' and, therefore, that it is only with *odin* that a QP containing *po* does not branch, all the rules and principles of case assignment apply in a regular manner. Thus, the case distribution in 33a/34, including the dative marking on the head of an 'accusative noun phrase', is entirely predictable.

The head noun in 33a/34 involves a three-way case conflict, i.e., it is subject to *dative* assignment from the lexical case assigner *po* (33a), *genitive* assignment from the QP node (cf. 33b), and *accusative* assignment in the path of percolation from N^m (cf. 33c). The Case Hierarchy in 27 once again correctly predicts that lexical case will take precedence over all other types of case marking.

10.2 *Irresolvable Case Conflicts.* The Case Hierarchy in 27 further predicts that if a nominal category is simultaneously in the domain of *two* lexical case assigners, the noun phrase containing this conflict will be ill-formed. Consider the following data:

(35) a. *Oni znajut* [*pjat'* *inostrannyx*
they know five:ACC foreign:GEN
jazykov]$_{NP:a}$
languages:GEN
'They know five foreign languages.'

b. *Oni znajut* [*po inostrannomu jazyku*]$_{NP:a}$
they know foreign:DAT language:DAT
'They know one foreign language each.'

(36) *Oni vladejut* [*pjat'ju inostrannymi*
they know five:INST foreign:INST
jazykami]$_{NP:i}$
languages:INST
'They know five foreign languages.'

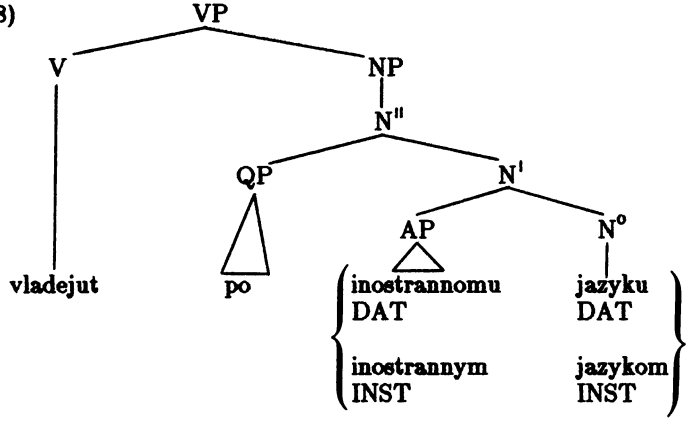
(37) a. **Oni vladejut* [*po inostrannomu jazyku*]$_{NP}$
they know foreign:DAT language:DAT
'They know one foreign language each.'

b. **Oni vladejut* [*po inostrannym jazykom*]$_{NP}$
they know foreign:INST language:INST
'They know one foreign language each.'

The examples in 35 contain nothing new: *znajut* 'they-know' is not a lexical case assigner; the accusative assigned configurationally to N^m is distributed in accordance with the Case Hierarchy in 27 (cf. 30b and 33a). Sentence (36) is also entirely straightforward: *vladejut* 'they-know (lit. 'possess')' is a lexical case assigner that assigns instrumental case to the head of its object noun phrase. This case is then projected up to all phrasal categories, producing a homogeneous instrumental noun phrase (cf. 5b/6b).

Notice, however, that 37, which is parallel to 35b, is ungrammatical in both versions. More specifically, the object noun phrases in 37 are ill-formed. To see why this should be so, consider 38, which represents the structure of the verb phrase in 37.

(38)



The problem with 37/38 is that the head noun *jazyk-* is

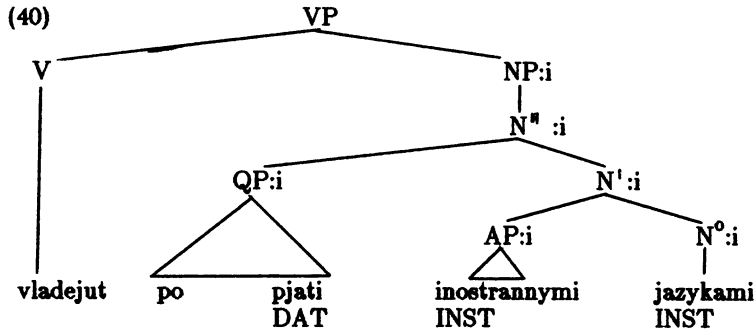
simultaneously c-commanded by two lexical case assigners (*vladejut* + INST and *po* + DAT). No matter which of the two lexical cases is selected, the noun phrase is ill-formed because the Case Hierarchy is violated, i.e., 27 does not provide for the principled selection of one lexical case and the exclusion of the other.[34] In other words, the object noun phrases in 37 are ill-formed because they contain unresolved case conflicts. A speaker of Russian must simply avoid using prepositional quantifiers in the objects of verbs that are lexical case assigners (cf. Rozental' 1965:271). This accounts for the striking fact mentioned above that prepositional quantifiers are restricted to nominative and accusative noun phrases only (see 19.3): Nominative and accusative are configurational cases and, therefore, it is only here that prepositional quantifiers are not involved in irresolvable case conflicts.[35]

10.2.1 *Locus of Case Conflicts.* The object noun phrase in 39 is also ill-formed, but it is considered by native speakers to be somewhat better than structures like those in 37.

(39) **Oni vladejut* [*po pjati inostrannymi*
they know five:DAT foreign:INST
jazykami]$_{NP:i}$
languages:INST
'They know five foreign languages each.'

The verb phrase in 39 can be represented as follows:

(40)



It might seem at first glance that 40 should be well-formed: *po* c-commands *pjati* and assigns it dative case marking (cf. 37/38) and *vladejut* c-commands *jazykami*, its object's head noun, and assigns it instrumental case marking. Thus there does not appear to be a case conflict involving the two lexical case assigners *po* and

vladejut. But recall that case projection from the head noun must produce a homogeneous noun phrase, i.e., all the unsubcategorized lexical and phrasal categories in the path of projection must be marked with the head's case feature (see 20); any deviation constitutes an interruption of projection and the noun phrase is consequently ill-formed. This means that the defect in 39/40 is located in the QP (in 37/38 it involved the head noun). If *pjati* is assigned dative by *po*, instrumental case projection from the head is interrupted. There *is* therefore an irresolvable case conflict here after all: *pjati* is assigned dative directly by *po*, but it is also in the path of projection of instrumental, which is also a lexical case. If we substitute instrumental for dative, or dative for instrumental, the noun phrase is even worse:

(41) a. *Oni vladejut [po pjat'ju inostrannymi jazykami]$_{NP:i}$
INST INST INST

b. *Oni vladejut [po pjati inostrannym jazykam]$_{NP:d}$
DAT DAT DAT

There is no way to resolve these case conflicts and the object noun phrase is therefore ill-formed. Thus the Case Hierarchy in 27 and case projection (see 21) combine to make precisely the correct prediction in the case of 39 and 41.

The object noun phrase in 39 is better than the one in 37 for the following reason: While the case conflict in 37 involves the direct assignment of two lexical cases to the head noun, the conflict in 39 is 'peripheral', i.e., it is centered in a modifier (QP) and involves a conflict between dative case *assignment* (by *po*) and instrumental case *projection* (from the head *jazykami*). I assume that (i) case conflict involving the head of a phrase is more 'serious' than one involving a modifier, and (ii) a case conflict involving case assignment of two lexical cases is more 'serious' than one involving lexical case assignment and projection.

11.0 *Syntactic and Semantic Case.* Up to now we have been concerned exclusively with lexical, configurational, and GEN(QP) case. These three types of case can be referred to collectively as Syntactic Case because they share the following crucial properties:

(42) a. Syntactic Case assignment to a nominal category is determined by the category's position in syntactic structure with respect to other lexical or phrasal

categories (see note 31 for discussion of the relative significance of c-command and government in case theory).

b. Assignment of Syntactic Case is ***obligatory***, i.e., it must be assigned to a nominal category when all the conditions for its assignment have been satisfied (case conflicts are resolved by the Case Hierarchy).

c. Syntactic Case makes no contribution to the sentence's semantic interpretation (42c is actually a corollary of 42a and 42b). For example, the preposition *k* 'to, towards' is a dative case assigner and, therefore, the dative marking on its complement makes no semantic contribution to the sentence because its occurrence is entirely predictable.

In addition to Syntactic Case, case languages like Russian have a second type of case which can be referred to as Semantic Case (see Freidin and Babby 1984). The properties of Semantic Case are demonstrably different from those of Syntactic Case (cf. 42), the most striking difference being its ability to contribute to the sentence's overall semantic interpretation (cf. §1.2). EST case theory has for the most part limited its attention to Syntactic Case, and has therefore presented only one side of the story. An explanatory theory of case must incorporate all the basic principles governing the assignment, distribution, and interpretation of case in natural language. It is therefore necessary that EST case theory be modified and expanded to include Semantic Case if it is to be comprehensive enough to account for the properties of case in languages typologically different from English.[36]

In this section I will give several examples of Semantic Case in Russian, point out how it differs from Syntactic Case, discuss its place in the Case Hierarchy 27, and account for its restriction only to those noun phrases that would be assigned nominative or accusative case if they were not assigned Semantic Case.

11.1 *Genitive of Negation.* It is a well-known fact that in Russian the subject of intransitive verbs and the direct object of transitives may be assigned ***genitive*** case when they are in the scope of negation (see Babby 1980b, Timberlake 1975 for details). Thus the genitive of negation (GEN(NEG)) is restricted to noun phrases that would be nominative or accusative if the sentence

were not negated.[37] The following are examples of GEN(NEG) (*ne* is the primary negative 'particle'):

(43) *GEN(NEG): Direct Object.*

a. *Brat est mjaso.*
brother:NOM eat meat:ACC
'My brother eats meat/is eating the meat.'

b. *Brat ne est mjaso.*
brother:NOM NEG eat meat:ACC
'My brother isn't eating the meat.'

c. *Brat ne est mjasa.*
brother:NOM NEG eat meat:GEN
'My brother doesn't eat meat.'

(44) *GEN(NEG): Subject.*

a. *V tot den' poslednij urok sostojalsja.*
on that day last:NOM lesson:NOM took-place
'On that day the last lesson took place.'

b. *V tot den' poslednij urok ne sostojalsja.*
on that day last:NOM lesson:NOM NEG took-place
'On that day the last lesson did not take place.'

c. *V tot den' poslednego uroka ne sostojalos'.*
on that day last:GEN lesson:GEN NEG took-place
'On that day there was no last lesson.' (cf. Babby 1980b for details)

It seems most natural to begin our analysis of Semantic Case by comparing GEN(NEG) with GEN(QP) since the former is Semantic and the latter is Syntactic (cf. 9a/10). (i) While GEN(QP) is determined NP-internally and is limited to N' and its constituents, GEN(NEG) is not a NP-internal case phenomenon and it is obligatorily distributed to all lexical and phrasal categories in the path of percolation/projection—i.e., like lexical case, it has homogeneous case distribution and the genitive of negation is therefore marked on N^m as well as N^o. Thus GEN(QP) is assigned inside noun phrases with nominative or accusative case (see 9a/10), while GEN(NEG) is assigned to noun phrases *instead* of nominative and accusative.

(ii) As the b- and c-sentences in 43 and 44 show, assignment of GEN(NEG) is *not obligatory* (cf. 42b above). In 43 for example, the sentences in b and c have identical structures, i.e., their direct object noun phrases are in the same syntactic configurations, are governed by the same categories, have the same X-bar structures,

and are both in the scope of negation, yet they have different case marking (see Babby 1980b:171a). This means that a noun phrase's location in the scope of negation is a necessary but not sufficient condition for assignment of GEN(NEG), and that assignment of GEN vs. ACC to the direct object in a negated sentence cannot be determined automatically in structural terms (cf. §1.2). Descriptive grammars of Russian speak of *preference* (predpočtitel'nost') for GEN vs. ACC marking in a given negated sentence rather than obligatoriness (objazatel'nost') (see Graudina et al. 1976:35; Rozental' 1967:336). In contrast, assignment of GEN(QP) is obligatory when its structural conditions are satisfied.

(iii) Since assignment of GEN(QP) to N' is structurally predictable and obligatory, it does not figure in the sentence's semantic interpretation; but, as we just saw, this is not true of GEN(NEG). There is a systematic difference in meaning associated with the selection of GEN vs. ACC on the same noun phrase in negated sentences, the former usually inducing an indefinite/nonreferential reading (see Babby 1980b:§3.9), while the latter is normally associated with a definite/referential reading (cf. glosses in 43 and 44). The same relation holds for GEN vs. NOM on subject noun phrases in the scope of negation.[38]

In summary, GEN(NEG) must be classified as a Semantic Case because its assignment is not predictable in terms of other lexical or phrasal categories and is not obligatory, and its selection is associated with a specific semantic interpretation.[39]

11.2 *Semantic Case and the Case Hierarchy.* Semantic Case is confined just to those noun phrases that would otherwise be marked nominative or accusative and, therefore, has the same distributional constraints on its occurrence as do prepositional quantifiers, GEN(QP), and 'uninflected' quantifiers (cf. 15b–d) (this constraint is called the Direct Case Condition in Babby 1980a, 1980b). This striking distributional fact of Russian can be explained under the entirely natural assumption that ***lexical case also takes precedence over Semantic Case*** where the two come into conflict. Semantic case is thus confined to noun phrases that would otherwise be assigned NOM or ACC because these are the only noun phrases that are not governed by lexical case assigners. As a matter of fact, the Direct Case Condition follows directly from the predominance of lexical case over all other types of case assignment.

Our hypothesis that lexical case takes precedence over Semantic Case correctly predicts that if a verb is a lexical case assigner, its object noun phrase cannot be assigned GEN(NEG), even when all the conditions for its assignment are satisfied. In the following examples, *znaet* is not a lexical case assigner; *vladeet* assigns the instrumental case and *zaviduet* the dative (cf. 35–37):

(45) a. *On ne znaet nikakix inostrannyx*
he:NOM NEG knows any:GEN foreign:GEN
jazykov.
languages:GEN
'He doesn't know any foreign languages.'

b. **On ne vladeet nikakix inostrannyx*
he:NOM NEG knows any:GEN foreign:GEN
jazykov.
languages:GEN
'He doesn't know any foreign languages.'

c. *On ne vladeet nikakimi inostrannymi*
he:NOM NEG knows any:INST foreign:INST
jazykami.
languages:INST
'He doesn't know any foreign languages.'

(46) a. **On ne zaviduet nikogo.*
he:NOM NEG envy anyone:GEN
'He doesn't envy anyone.'

b. *On ne zaviduet nikomu.*
he:NOM NEG envy anyone:DAT
'He doesn't envy anyone.'

Semantic case must take precedence over GEN(QP) because, as was pointed out above in §11.1(i), Semantic case must have homogeneous distribution. If GEN(QP) were assigned to N' in a noun phrase with Semantic Case marking, homogeneous case distribution would be impossible (and the noun phrase ill-formed) because the path of percolation/projection between N° and N^{m} would be blocked by N':GEN. Finally, Semantic Case can be said to take precedence over NOM and ACC only if we assume that these are 'default cases', i.e., that configurational case is assigned to those noun phrases that would otherwise not receive any other type of case marking (cf. §6.0).

The Case Hierarchy proposed in 27 is based on Syntactic Case only; the facts presented in this section show that it must be

expanded in the following way in order to accomodate Semantic Case:

(47) *Revised Russian Case Assignment Hierarchy.*
Lexical Case > Semantic Case > GEN(QP) > Configurational Case

11.3 *Oblique vs. Nonoblique Case.* We have seen above that in addition to lexical case, the adnominal genitive, which appears to be configurational (see notes 14 and 27), and the GEN(NEG), which is a Semantic Case, all require that the noun phrase they are assigned to have ***homogeneous*** case distribution (see §10.1.1 for status of GEN(QP)). It is only in the NOM and ACC, the nonoblique configurational cases, that ***heterogeneous*** case distribution is tolerated. This suggests that the analysis proposed above in §8.1 to account for the differences in case distribution between oblique and nonoblique *quantified* noun phrases can in fact serve to characterize the more fundamental distinction between oblique and nonoblique case in general: If all oblique case marking is assigned to the head N°, it will be distributed NP-internally by ***projection***, which ensures the oblique homogeneity we are trying to account for, since interruption of projection results in an ill-formed noun phrase (cf. §8). If only the nonoblique cases, i.e., NOM and ACC, are assigned to the maximal projection N^m, then it is only these two cases that will be distributed by ***percolation***. Since percolation tolerates interruption (cf. §7.1), NOM and ACC noun phrases permit heterogeneous case distribution.[40]

11.4 *Partitive Genitive.* In this section we will look briefly at another example of a Semantic Case—the partitive genitive GEN(PART). Consider the following examples (word order is not significant):

Direct Object: ACC vs. GEN(PART)

(48) a. *Oni* ***prinesli*** *jabloki.*
they:NOM brought apples:ACC
'They brought the apples.'

b. *Oni* ***prinesli*** *jablok.*
they:NOM brought apples:GEN
'They brought some apples.'

(49) a. *Oni vypili vodu.*
they:NOM drank water:ACC
'They drank the water.'
b. *Oni vypili vody.*
they:NOM drank water:GEN
'They drank some water.'

Subject: NOM vs. GEN(PART)

(50) a. *Xolodnyj vozdux popal emu v rot.*
cold:NOM air:NOM fell to-him:DAT in mouth:ACC
'The cold air got into his mouth.'
b. *Emu v rot popalo xolodnogo vozduxa.*
to-him:DAT in mouth:ACC fell cold:GEN air:GEN
'Some cold air got into his mouth.'

(51) a. *Xleb ostalsja.*
bread:NOM remained
'The bread was left over.'
b. *Xleba ostalos'.*
bread:GEN remained
'Some bread was left over.'

The GEN(PART) is a particularly good example of Semantic Case: Its assignment is clearly not determined by other lexical or phrasal categories (cf. 42a); for example, the only difference between 48a and 48b is the case marking on the direct object noun phrase.[41] It is not obligatory (cf. 42b), and it contributes to the sentence's semantic interpretation (a noun phrase marked with GEN(PART) is normally interpreted as having a referent denoting an indefinite quantity (see Babby 1980b:§4.3 for details)). GEN(PART), like GEN(NEG), is confined to noun phrases that are not governed by lexical case assigners (cf. Case Hierarchy in 47).

11.5 *Semantic vs. Configurational Case.* When discussing sentence pairs like 43–44 and 48–51, we normally contrast the meaning of the GEN(NEG) and GEN(PART) with the meaning associated with NOM or ACC marking in the corresponding sentence pair. For example, the GEN in 48b denotes indefinite quantity, while ACC marking on the same noun phrase in the corresponding a-sentence is usually said to denote a definite or specific quantity. Statements like the latter are, however, misleading: NOM and ACC are Syntactic Cases and therefore are not associated with a specific

meaning (cf. 42c), i.e., they do not in fact invariably denote definite quantity in sentences like 48a–51a (or referentiality in 43b and 44b); they simply lack the meaning associated with the corresponding Semantic Case (e.g. they bear no information about quantity or referentiality in 48–51 and 43–44). But, in the proper context, they can be assigned a 'contrastive interpretation', i.e., assigned a meaning which is opposite the one associated with the Semantic Case that can be marked on the same noun phrase.

The semantic relations that hold between configurational vs. Semantic Case in these sentence pairs can be conveniently described in terms of the privative grammatical oppositions that figure so prominently in the work of R. Jakobson (cf. Jakobson 1971). Semantic Case is the marked member of the opposition because it contributes a certain meaning X to the sentence's interpretation. The corresponding configurational case is the unmarked member: it either makes no reference to the meaning contributed by the Semantic case (non-expression of X), or, in the right context, it may be interpreted as denoting its opposite (expression of non-X).

11.6 *The Adverse Instrumental.* The semantic relation between Semantic case and NOM/ACC described in the preceding section is particularly clear in the case of 'adverse instrumental' constructions: The subject noun phrase of a Russian transitive sentence may be assigned the INST rather than the NOM when the speaker wishes to state explicitly or emphasize that the sentence denotes a 'natural' event (agentless act of nature) which may entail unpleasant, undesirable, or even calamitous consequences. Consider the following sentence pairs:

(52) a. *Volna razbila lodku.*
wave:NOM smashed boat:ACC
'The wave damaged the boat.'

b. *Volnoj razbilo lodku.*
wave:INST smashed boat:ACC

(53) a. *Snarjad otorval emu uxo.*
shell:NOM tore-off to-him:DAT ear:ACC
'The artillery shell tore off his ear.'

b. *Snarjadom otorvalo emu uxo.*
shell:INST tore-off to-him:DAT ear:ACC (I. Mel'čuk)

(54) a. *Veter zadul spičku.*
wind:NOM blew-out match:ACC
'The wind blew out the match.'
b. *Vetrom zadulo spičku.*
wind:INST blew-out match

Traditional Russian grammar has had a great deal of difficulty characterizing the meaning of the sentences with NOM marking on the subject in these pairs (see Green 1980). This difficulty stems from the attempt to assign a fixed semantic interpretation to the NOM, a configurational case, as well as to the INST. For example, it is usually claimed that the NOM in these sentences contributes an 'agentive' meaning while the corresponding INST is 'nonagentive' and emphasizes the action (cf. Rozental' and Telenkova 1972:263).

The semantic relation between the configurational NOM vs. semantic INST in 52–54 is essentially the same type as the relation between NOM/ACC vs. GEN(PART) discussed above: The INST in the b-sentences expresses explicitly that the speaker associates the action denoted by the verb with a natural event, frequently with adverse consequences. The a-sentences with NOM marking on the subject simply do not have this meaning, i.e., they report the same event without focusing on the speaker's evaluation of the action's consequences. In other words, the NOM is unmarked with respect to the adverse meaning associated with the corresponding INST.[42]

11.7.0 *Semantic Case and Adverbials.* Up to now we have looked only at Semantic Case that has been assigned to 'arguments' of the verb, i.e., to noun phrases which are subcategorized by the verb. When Semantic case is assigned to a noun phrase that is not an argument, it normally receives an adverbial interpretation, e.g.:

(55) a. *On šel lesom.*
he:NOM went forest:INST
'He went by way of the woods.'
b. *On priexal utrom.*
he:NOM arrived morning:INST
'He arrived in the morning.'

The Dative Absolute construction, which has been lost in modern Russian, is another example of the adverbial use of Semantic case (cf. note 39). As the following Old Russian

examples show, this construction is a type of nominalized sentence with dative marking on both the 'subject' noun phrase and the predicate, which is a participle that agrees with the subject in gender and number as well as dative case marking. These constructions are the equivalent of subordinate clauses of time in modern Russian. In the following examples, which come from Sprinčak 1960 and Borkovskij 1978, the Dative Absolute construction is enclosed in square brackets:

(56) [*Antoninu že prišedšu* *so mnogimi*
Antony:DAT having-arrived:DAT with many:INST
voi ...] *posla Kleopatra* *ko Antoninu* ...
warriors:INST sent Cleopatra:NOM to Antony:DAT
'When (Marc) Antony arrived with many warriors, Cleopatra sent to him ...'

(57) [*Dmitrovi* *ranenu* *byvšu,*]
Dimitry:DAT wounded:DAT having-been:DAT
vziidoša *tatarě* *po* *stěny.*
went-up:PL Tatars:NOM/PL along walls
'When Dimitry was wounded, the Tatars climbed up the walls.'

(58) [*Umeršu* *Rjurikovi*] *predast'* *svoe* *knjaženie*
dying:DAT Rurik:DAT gave his:ACC reign:ACC
Olgovi.
Oleg:DAT
'When Rurik was dying, he handed his reign over to Oleg.'

There are no lexical or phrasal categories in the matrix sentence containing the Dative Absolute construction that the dative marking can be governed by or associated with.[43]

12.0 *Conclusions.* It has been argued above that current EST case theory must be substantially revised and expanded in order to account for case in case languages. Specifically, I have demonstrated that the central assumption of EST case theory, namely, that case assignment can be formulated exclusively in terms of government (see section 1.2), is untenable for the following reasons: (i) It cannot account for certain aspects of Syntactic case distribution (e.g. the properties of prepositional quantifiers and of GEN(QP). (ii) It does not provide for Semantic case, which involves assignment of oblique case to a noun phrase that can also be assigned a configurational case. In other words, EST case

theory does not provide for 'case competition'—the possibility that more than one case can be assigned to a noun phrase in a given syntactic configuration. (iii) It cannot account for case marking on nominal adverb constructions since the heads of these constructions are patently not governed by case assigning categories (see section 11.7).

I have also demonstrated that the crucial differences between the NP-internal case structures of oblique vs. direct quantified noun phrases in Russian, which traditionally have been treated as anomalies, turn out to be entirely regular and predictable in a theory of case which incorporates the revisions suggested above. The key to understanding the surface complexities of the assignment and distribution of morphological case in Russian is the distinction between noun phrases whose case marking is a lexical property of another category (i.e. lexical case) and noun phrases whose case is not assigned by a lexical case assigner (i.e. Semantic case and non-lexical Syntactic case).

NOTES

[1]This paper is concerned primarily with case agreement between constituents of the same noun phrase, a topic which has received relatively little attention in the recent literature. Case agreement between different noun phrases involves a different set of issues, and has been treated in a number of recent articles, e.g., Andrews 1982, Greenberg 1983, Lapointe 1980, Neidle 1982b, Van Riemsdijk 1981. Agreement in number, gender, animacy, etc. will be considered only when relevant to case.

[2]Note also that in order to account for nominative case assignment to subject noun phrases *in terms of government*, EST case theory has found it necessary to claim that INFL governs the subject when the subject is tensed and that INFL is the head of S (Chomsky 1981:50, 140). But this analysis of nominative case assignment is patently inadequate for languages like Turkish, where adverbial clauses are non-finite, tenseless constructions with uninflected verb forms, yet they have nominative (absolute) subjects (which can be different from the matrix subject). In the following example, *gelince*, the main verb in the adverbial clause, is a tenseless, uninflected form which consists of the stem *gel-* 'come' and the suffix *-ince*, which gives the clause temporal meaning equivalent to 'when':

Yemek zamanı	*gel-ince,*	*hizmetçi*	*yemeği*	*getirdi*
dinner-time:NOM	come-when	servant:NOM	food:ACC	brought

'When dinner time came, the servant brought the food.'

The suffix *-ince* can be assigned an oblique case when the clause is followed by a postposition, but the subject noun phrase remains in the nominative case. In the following example, the postposition *dek* 'until' governs the dative case:

Ali Baba, Haramiler iyice uzaklaş-mca-ya dek bekledi.
A.B.:NOM thieves:NOM goodly depart-when:DAT until waited:SG
'Ali Baba waited until the thieves were well gone.'

See §6.0 for a configuration treatment of nominative and accusative case assignment.

[3]For discussion of autonomous morphology in the current literature, see Anderson 1982, Bowers 1984, Halle 1973, Lapointe 1980, Selkirk 1982.

[4]Case is percolated onto the head noun and its *modifiers* (determiners, adjectives, quantifiers, participles, etc.), i.e., onto all the inflected lexical categories of the noun phrase *not subcategorized* by the head noun (Bowers 1984). The case marking on subcategorized noun phrase complements of the head noun or any of its modifiers is determined independently, and subcategorized constituents therefore form a natural barrier to percolation. Note that this barrier effect cannot be captured by simply claiming that case cannot percolate into maximal projections (cf. Freidin and Babby 1984) because adjective, participle, and quantifier phrases are presumably maximal projections, yet their heads are obviously assigned case by percolation.

In the following example, *čitavšij* 'reading' is the active participle of the transitive verb *čitat'* 'to read'; it agrees in gender, number, and *nominative* case with *čelovek* 'person', which is the head noun of the subject noun phrase:

[Čelovek, čitavšij gazetu]$_{NP:n}$ *vyšel iz biblioteki.*
person:NOM reading:NOM paper:ACC went-out from library
'The person reading the newspaper left the library.'

Notice that *gazetu* 'paper', the direct object of *čitavšij*, is accusative, not nominative. This is because the direct object's case is assigned "locally", not by percolation.

[5]For discussion of upward percolation in the recent literature, see Bowers 1984, Chomsky 1981:51, Muysken 1983b, Selkirk 1982, Williams 1983.

[6]*kakix-nibud'* is an indefinite *adjective* that can be glossed as 'only', 'some', or 'no more than'. Prepositional phrases like 3a normally function as adverbs, e.g. *On razberetsja v ètoj probleme* [$_{PP}$ *za* [*kakix-nibud' paru časov*]$_{NP:a}$] 'He will solve this problem [$_{PP}$ in only a few hours]'. *Paru* and *časov* are both nouns; the complement of the preposition *za* 'in' is in the accusative case. A thorough analysis of this data can be found in Babby 1984a.

[7]I argue in Babby 1984a that *paru* in 3a is a constituent of the quantifier phrase QP and that both the head noun of N^m *časov* and the "prequantifier" *kakix-nibud'* are assigned the genitive case because both are c-commanded by the QP node; there is no linear transfer of case features between them. The accusative marking on *paru* comes from percolation from N^m and the plural agreement between *kakix-nibud'* and *časov* is therefore ordinary number agreement between an adjectival modifier and its head.

[8]A noun phrase is "quantified" if it contains a quantifier phrase QP that modifies N'. The minimal internal structure of a quantified noun phrase is [$_N$m . . .[$_N$ … QP N']. . .], where QP and N' are sisters.

[9]In the tree diagrams presented below, n = nominative, a = accusative, g = genitive, d = dative, and i = instrumental. Thus N':i stands for a

N-bar node with instrumental case marking. I am using X^m to represent the absolute maximal projection of the head X, and XP to represent the highest projection of X that is relevant to a given discussion; this distinction is necessary because it is not yet clear how many X-bar levels Russian phrases have.

[10]Adjectives in Russian are inflected for case and number; gender is marked in the singular only (Babby 1976). Numbers, with the exception of *odin* 'one' (see note 30), are QP constituents and are inflected for case only. Certain nouns (cf. 3a and note 7), prepositions (cf. §10 and Babby 1984b), uninflected words, comparatives, and adjectives can also be QP constituents, but they are restricted to direct case noun phrases only (see §10). Since there are a number of facts about the internal X-bar structure of QP that are still unclear, it is not specified in the tree diagrams; this does not affect the claims made in this paper (see Babby 1980, 1984b).

Word order in Russian sentences is "free", i.e., its primary function is to express focus, not grammatical relations. But the order of elements in the noun phrase is *not* "free": a constituent cannot normally be moved to another position in the noun phrase without either changing the phrase's meaning or producing an ill-formed structure.

[11]This question can be stated in another, perhaps clearer, way: If we have a string of words that forms a noun phrase, and if the NP-internal case relations between these words changes from homogeneous to heterogeneous when we change the noun phrase's case marking from oblique to direct, must we conclude that oblique and direct case noun phrases have different X-bar structures? Do we still have the "same noun phrase" when we replace the oblique case on a quantified noun phrase with direct case marking?

[12]9a also entails the claim that the case marking on the head noun is different from the case marking on its maximal projection in nominative and accusative quantified NP's; see §7 for discussion.

[13]I am not suggesting that *all* case distribution differences in noun phrases containing the same string of words must be accounted for by positing the same X-bar structure and different foci of case assignment. In Babby 1984a, for example, I argue that the differences in case distribution noted in 3a, 3b, and 3c above must be accounted for in terms of three different X-bar structures (cf. also different structures for iii *vs.* iv in note 22).

[14]If the highest node in a sentence is S and not V^m or a projection of INFL (see note 2), 13 and 14 can be restated as (i) and (ii):

(i) Accusative Case Assignment
A noun phrase that is governed by a lexical category that is *not* a case assigner is assigned the accusative case.

(ii) Nominative Case Assignment
A noun phrase that is *not* governed by a lexical category is assigned the nominative case.

Note that (ii) accounts for the nominative case marking on subjects, topics, vocatives, and citation forms.

I am assuming that once a case feature is assigned to a category, it cannot be removed or replaced with other case marking (cf. Inertness Principle in Babby 1980a), i.e., a category can be assigned case only once in the

derivation of a sentence and a given category cannot have two cases associated with it (Principle of Monovalence).

There are a number of complex issues that arise in connection with the hypothesis that nominative and accusative are configurational cases. There is room here to mention only the more interesting ones: (i) The proper treatment of nominative case marking on predicate nominals depends on how we treat the copula *byt'* 'be' in these constructions (see Chvany 1975, Freidin and Babby 1984). (ii) Accusative case on the objects of certain prepositions can also be treated as configurational case, i.e., these prepositions are the equivalent of transitive verbs (see Babby 1980a). (iii) Finally, the genitive marking on the noun phrase in adnominal constructions should most likely be treated as configurational case (see note 27).

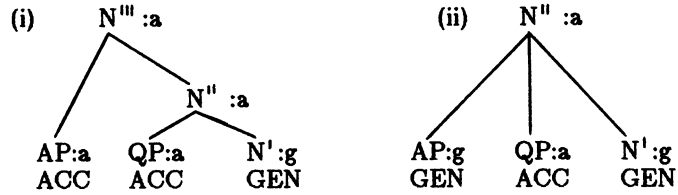
[15]The genitive of negation and the partitive genitive do not *replace* nominative and accusative case on subject and direct object noun phrases; they are assigned *instead of* nominative and accusative (see note 14).

[16]In this section I have tried to give an explicit treatment to what Chomsky (1980) was getting at when he proposed that a noun phrase is (i) *objective* (accusative) when it is "governed by a verb" [=verbs that are not lexical case assigners]; (ii) *oblique* when governed by a preposition and "certain marked verbs" [=verbs that are lexical-case assigners].

It should also be pointed out that in addition to certain verbs and prepositions, adjectives and nouns in Russian may also be lexical-case assigners.

[17]The reason for not claiming that N' is marked genitive in the scope of the quantifier phrase's *head* will be made clear below in §10.

Notice that the adjective $[poslednie]_{AP:a}$ in 10 is a N''' modifier and is therefore not c-commanded by QP (cf. i below). I argue in Babby 1984a that $[kakix\text{-}nibud']_{AP:g}$ in 3a, $[dobryx]_{AP:g}$ in 4a, and $[celyx]_{AP:g}$ in 4b are N'' modifiers; they are c-commanded by QP and are therefore marked genitive in the same way that N' is (cf. ii below). This analysis accounts not only for the curious GEN-ACC-GEN and GEN-NOM-GEN case distribution in 3a and 4 (cf. *9d), but for the semantic interpretation of these phrases as well: *kakix-nibud'*, *dobryx*, and *celyx* modify the quantifier, not the head noun.



This is a situation where a difference in case distribution corresponds to a difference in X-bar structure (see note 13).

[18]I am of course assuming here that projection obligatorily spreads all the inflectional features associated with the head up to N^m and all its intermediate categories. A corollary of this is: if feature projection from N^0 does not have access to N^m, the phrase is necessarily ill-formed.

If accusative were assigned to N^0 and genitive to N' (in scope of QP), the genitive marking on the N' node would block the projection of accusative

and the noun phrase would be ill-formed. Accusative cannot "pass over" the N^{1} node and continue up to N^{m} (cf. note 14). This Pass-Over Principle is most likely a universal.

[19]See Sidorov and Il'inskaja 1949:345.

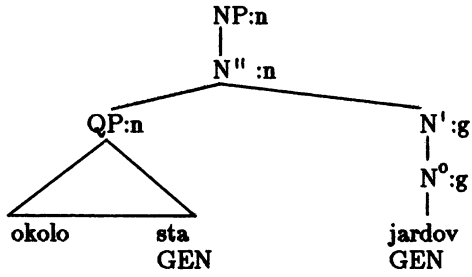
[20]See Graudina, *et al.* 1976 for discussion of neuter singular vs. plural agreement on verbs with quantified subjects.

[21]There are essentially two types of NP-internal quantifiers in Russian: (i) numbers, which are inflected for case and can occur in both direct and oblique phrases (see *pjat'* 'five' in 7 and 9); (ii) all the others, which can occur in nominative and accusative noun phrases only. While nominal quantifiers like *paru* 'few' in 3a (note 7) clearly have direct case marking, it is doubtful that uninflected quantifiers like *vdovol'* in 15c, *bolee* in 15b, or *kak možno bol'še* in 15d can be said to be nominative/ accusative forms with defective paradigms. One of the reasons that 15a is so important for understanding how case works in Russian noun phrases is that it provides us with unequivocal evidence that there are direct case quantified noun phrases in which the nominative and accusative case on N^{m} cannot percolate to any of the phrase's lexical categories.

[22]The evidence presented so far that N^{m} in quantified noun phrases like those in 15 is marked with nominative or accusative case has been indirect. More direct evidence, however, does exist: The X-bar structure of (i) is (ii); *okolo* 'about' is a prepositional quantifier that governs the genitive case (cf. 15b/17).

(i) *okolo* *sta* *jardov*
about/around hundred:GEN yards:GEN
'Approximately a hundred yards.'

(ii)



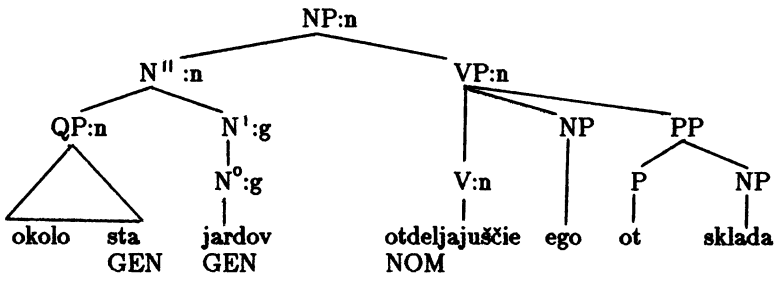
The noun phrase in (i) has essentially the same structure as 15b/17, i.e., N^{m} (= NP) has nominative case marking, but none of the lexical categories do. Now, participal modifiers in Russian are basically adjectival forms of the verb; they are inflected for gender, number, and case, and are normally placed after the head. For most speakers, participle phrases are N^{1} or N^{11}constituents, and are therefore marked genitive when added to (i), which gives us no information about the case marking on N^{m} (if the participle phrase is a constituent of N^{11} , it is marked genitive because it is c-commanded by QP (cf. 3a and note 17)):

(iii) *okolo* *sta* *jardov,* *otdeljajuščix* *ego* *ot* *sklada*
around 100:GEN yards:GEN separating:GEN him from warehouse
'the approximately 100 yards separating him from the warehouse'

But for some speakers participle phrases can be $N^{'''}$ modifiers, i.e., they are immediately dominated by the same node that dominates *poslednie* in 9a/10 (see Babby, 1984b: note 7; Iomdin 1979). These phrases provide the direct evidence for the direct case marking on N^{m} alluded to above: ***the participles are marked nominative when attached at the*** $X^{'''}$ ***level***; this is because they are not in $N^{'}$:g or in the scope of QP, and receive their case by percolation from the noun phrase's maximal projection (cf. note 4):

(iv) okolo sta jardov, *otdeljajuščie* ego ot sklada
GEN GEN separating:NOM him from warehouse

(v)



The problem of representing the correct X-bar structure of participle phrases (and quantifier phrases) is treated in Babby, In progress.

[23]The last two differences hold for all oblique and direct noun phrases, regardless of quantification (the significance of 19.6 is discussed in Freidin and Babby 1984).

[24]Note that this noun phrase might also involve a violation of the Case Filter (cf. Chomsky 1982) since N^{m} would not have any case marking on it.

There is some evidence indicating that the assignment of genitive case to $N^{'}$ in the scope of QP is configurational, not lexical: QP (Q^{m}) is a phrasal, not a lexical category, and we would not expect it to assign lexical case.

[25]There is a deeper question that must be raised in connection with the Percolation/Projection Hypothesis: Why should configurational case be assigned to N^{m} and lexical case to N^{o}? The answer to this question is quite straightforward in the former case. Since configurational case may be percolated down to all (5a), some (9a), or none (15a) of the lexical categories, it is clearly a property of the noun phrase as a whole, not just of the head, and it is therefore entirely natural that it should be obligatorily associated with N^{m}, which is the only node dominating *all* the categories in the noun phrase.

The question why lexical case is assigned to N^{o} rather than N^{m} is a more difficult one. I suspect that the answer lies ultimately in the fact that information about lexical case must be specified in the case assigning category's lexical entry, while configurational case by definition cannot be (see §6.0). More specifically, both verbs that are lexical case assigners and transitive verbs are subcategorized for their object noun phrases; the difference between them is that verbs that are lexical case assigners must also specify which oblique case their object must be marked with, while transitive verbs leave their objects unspecified for case (see §6.0). This suggests that the oblique case feature on objects of case assigning verbs is a selectional property of the verb. If we in fact treat lexical case as a selection restriction imposed

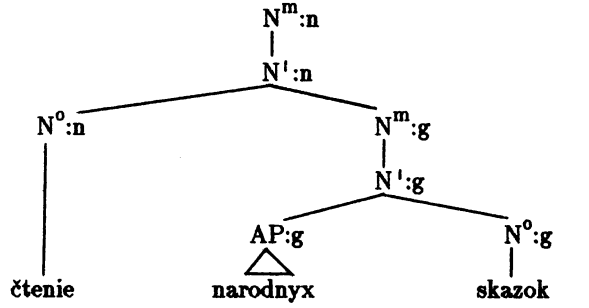
on object noun phrases by the case assigning verbs that govern them, we have an explanation for why lexical case is assigned to heads: selection restrictions are imposed on heads of phrases not on phrases as a whole. Subcategorization specifies the presence vs. absence of an object noun phrase, and selectional restrictions specify the presence of relevant *syntactic features* (see Chomsky 1965:75) like case, animacy etc. on the head noun of these objects.

[26]24 should be read: genitive assignment in the scope of QP takes precedence over percolation from N^m.

[27]In Babby 1980a I argue that ergative/absolute are also configurational cases and that "mixed" ergative/absolute and nominative/accusative languages use two different configurational case assignment strategies to mark subject and object, the selection depending on some "external" factor like tense or the subject's definiteness.

It was suggested above in note 14 that the adnominal genitive should also be considered a configurational case. The following facts seem to lend support to this: If the head of the noun phrase containing the adnominal noun phrase in Russian is a verbal noun derived from a transitive verb (a verb which does not assign case to its subcategorized object), the "adnominal genitive" is used:

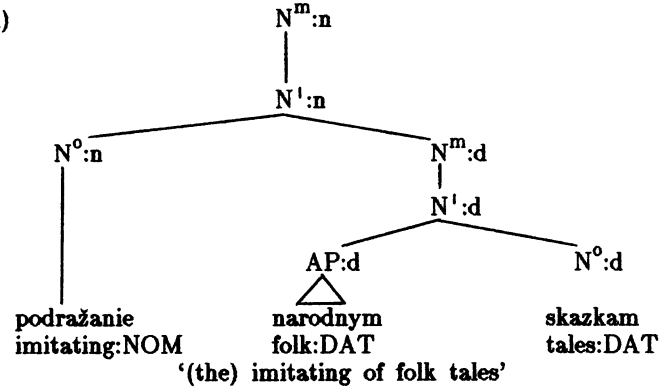
(i)



'(the) reading of folk tales'

But if the verbal noun is derived from a verb that is a lexical case assigner, the oblique case required by the verb is used instead of the adnominal genitive. For example, the verb *podražat'* 'to imitate' assigns the dative case to its object and, therefore, so does its verbal noun:

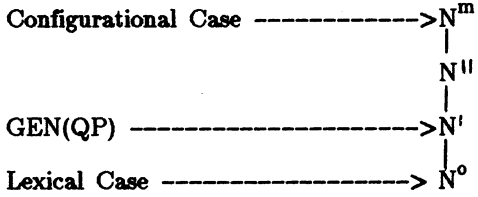
(ii)



'(the) imitating of folk tales'

These case relations are entirely regular and predictable in terms of the Case Hierarchy in 27 provided that the adnominal genitive is indeed a configurational case. Note also that nominative marking from N^m:n cannot percolate into the adnominal noun phrase because the latter is not in the path of percolation; it is the head's complement, not its modifier (see note 4).

[28]Note that there is a striking correspondence between the left-to-right positioning of the terms in 27 and X-bar level at which these cases are assigned:



I am, however, not sure of the significance of this correlation. It seems premature to claim, for example, that there is a natural affinity between degree of specificness and bar-level.

[29]There are other instances in Russian when a direct object noun phrase has genitive marking on all its lexical categories, but accusative on its maximal projection. For example, animate singular masculine first declension nouns and their modifiers are marked with the 'animate genitive' instead of the accusative, i.e.:

(i) a. *On ubil* [*moego* *druga*]$_{NP:a}$
he killed my:GEN SG friend:GEN SG
'He killed my friend.'

*b. *On ubil* [*moj* *drug*]$_{NP:a}$
my:ACC SG friend:ACC SG

These 'animate genitive' noun phrases are clearly accusative, i.e., have accusative marking on N^m: Sentences like (ia) passivize (*Moj drug byl ubit* 'My friend was killed'), and, most important, accusative marking on N^m is essential in accounting for the occurrence of the 'animate genitive' on modifiers in direct objects whose heads are *second* declension masculine singular animate

nouns, and therefore, have *accusative* marking, i.e.:

(ii) a. *On ubil* [*moego* *djadju*]$_{NP:a}$
he killed my:GEN SG uncle:ACC SG

*b. *On ubil* [*moju* *djadju*]$_{NP:a}$
my:ACC SG uncle:ACC SG

There are several other prepositional quantifiers in addition to *po* and *okolo*; see Babby 1984b for details. Note also that in modern Russian there is a growing tendency to use accusative instead of dative case with *po* (except with the number *odin* 'one' (see below)).

[30]The number *odin* 'one' is exceptional in modern Russian: It is the only number that is syntactically a N –level *adjective* (all the others are QP constituents). It therefore 'agrees' in gender, number, and case with the head noun and, most important, cannot assign genitive to N (see example in i).

(i) *Oni nam dali* [[[*odnu* *knigu*]$_{N'}$]$_{N''}$]$_{NP:a}$
they us gave one:ACC F SG book:ACC F SG
'They gave us one book.' (i.e. one book for everyone; cf. 33a)

Note that (i) does *not* have a QP.

Odin is normally omitted when the prepositional quantifier *po* is present and, therefore, 33a is more colloquial than (ii) (both are fully grammatical and have the same meaning):

(ii) [[[*po*]$_{QP}$ [*odnoj* *inostrannoj* *knige*]$_{N'}$]$_{N''}$]$_{NP:a}$
one:DAT foreign:DAT book:DAT

If *odin* were a constituent of QP, we would expect something like (iii), which is completely ungrammatical:

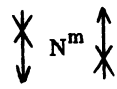
(iii) *[[[*po odnoj*]$_{QP}$ [*inostrannoj* *knigi*]$_{N'}$]$_{N''}$]$_{NP:a}$
one:DAT foreign:GEN book:GEN

Sto '100' and *tysjača* '1000' are syntactically nouns, but the latter is beginning to show signs of being reanalysed as a constituent of QP (see Babby 1984a).

[31]I am describing case assignment in terms of c–command rather than government because the latter stipulates that the case–assigning category must be the head of its phrase, and it is obvious that the Q^m node, which controls genitive assignment to N', is not a head. In 33a/34 *po*, which is clearly a case assigner, assigns dative case *to the head* of the noun phrase, which cannot be construed as a complement of *po*. Thus the Russian data presented in this paper points unambiguously to c–command as the key structural relation in case theory.

[32]33d, the passive of 33a, tells us that N^m in 33a *cannot* have dative marking: oblique objects in Russian do not passivize.

[33]It appears to hold universally that case can neither percolate into nor be projected out of N^m, i.e.:



[34]It is entirely possible that in other languages conflicts involving lexical case are resolved by supplementing the Case Hierarchy with *locality principles*, e.g., the case assigner 'closest' to the head might take precedence over a more 'remote' case assigner, 'distance' from the head being determined by the height of the 'first branching node' that figures in the c–command relation. Russian does not make use of such locality principles; it is an empirical issue whether other languages do (I am presently not aware of any). Note that the Principle of Lexical Satisfaction proposed in Freidin and Babby 1984 predicts that there should be no such language.

[35]The Case Hierarchy also explains why in Russian there are no constructions in which the head of a noun phrase is governed by two case assigning prepositions. Russian, however, permits double–preposition time constructions like the following (*v* 'at' takes the accusative case and *bez* 'without' the genitive):

(i) *Èto slučilos'* [*v bez pjati desjat'*]$_{PP}$
that happened at without five:GEN ten:ACC
'That happened at five minutes to ten.'

What appears to be happening in (i) is this: *bez* assigns its genitive case to *pjati* and *v* assigns its accusative case to the entire noun phrase, but it is realized only on *desjat'* 'ten'. The well–formedness of (i) and its case distribution turn out to be regular if we adopt the proposal made in Babby 1980a that prepositions that 'require' the accusative case are in fact *not* case assigners. Under this hypothesis, *v* 'at' is the prepositional equivalent of a 'transitive' verb, i.e., it does not assign case to the noun phrase it governs. The accusative case associated with *v* is therefore assigned configurationally to N^m (cf. note 14(i)) and then *percolated* down. This analysis seems correct because it accounts for the following facts: Sentence (i) is well–formed (there is no case lexical conflict since *bez* is the only case assigner); the heterogeneous case distribution in (i) is typical of noun phrases with configurational case marking (accusative is percolated down to *desjat'*, but not to *pjati*, which is in the domain of the lexical case assigner *bez* (cf. 27)). It is therefore not a coincidence that 'double–preposition' constructions in Russian invariably have one preposition that 'takes' the accusative: since they contain only one lexical case assigner, they do not involve an irresolvable case conflict.

[36]Note that I am *not* claiming that all languages have Semantic Case; English obviously does not. I am claiming only that all theories of case in natural language must allow for Semantic Case.

[37]The ergative–like distribution of the genitive of negation is discussed in Babby 1980b: §7.6; §7.7.7. See note 43.

[38]We cannot simply say that GEN(NEG) is obligatorily assigned to a

noun phrase in the scope of negation if its head is nonreferential because the correlation between GEN vs. ACC/NOM and nonreferential vs. referential is *not* perfect: Some speakers readily accept negative sentences in which certain classes of referential nouns are marked genitive (see Babby 1980b:161g and 161h).

[39]A Semantic Case can in the course of time become a Syntactic Case when its occurrence becomes structurally predictable and it loses its meaning in the process. This, for example, is precisely what happened to the Old Russian locative case: Its use without a preposition grew increasingly more restricted; in modern Russian it is a Syntactic Case since it can occur only on the noun phrase complement of certain prepositions and is therefore appropriately called the 'prepositional case'. There is in fact a marked tendency in the history of the Russian language for Semantic Case to be lost (cf. loss of dative absolute constructions (§11.7); the predicate instrumental in modern Russian also appears to be losing its status as a Semantic case (cf. Kamynina 1958)).

[40]Note that the distinction between Syntactic vs. Semantic case is not meant to replace the familiar distinction between oblique and nonoblique. A complete characterization of a noun phrase's case marking must include information about both distinctions.

[41]In order to account for the case marking in 48 – 51, EST case theory would have to claim the GEN noun phrases in the b–sentences contain a partitive quantifier that i) *governs* the GEN case and ii) has no phonetic realization in surface structure (cf. EST case theory Assumption II in §1.2).

[42]If the analysis of case proposed above is correct, (i) configurational case should always be the unmarked member in grammatical oppositions because it is Syntactic and, therefore, cannot contribute directly to the sentence's semantic interpretation (cf. 42c); (ii) lexical case should not enter into this type of grammatical opposition at all because it is obligatory (cf. 42b) and takes precedence over all other types of case assignment (cf. 47; 45/46 vs. 43/44; the principle of Lexical Satisfaction in Freidin and Babby 1984). In other words, sentence pairs like 48 and 49 are not possible when the verb is a lexical case assigner.

[43]Accusative case in Russian is assigned to unsubcategorized noun phrases which function as temporal adverbs, e.g.:

(i) *On spal vsju noč'.*
he:NOM slept all:ACC night:ACC
'He slept all night.'

It is not entirely clear whether the accusative case in sentences like (i) should be considered configurational (cf. 13) or Semantic. But the fact that these noun phrases can be assigned the genitive of negation when the sentence is negated strongly suggests that the ACC must in fact be configurational here too. If it were Semantic there would be an irresolvable case conflict since, as we saw above in §11.1, GEN(NEG) meets all the criteria for Semantic case (cf. §10.2). The following are examples of genitive marking on noun phrases with adverbial function in negated sentences.

(ii) a. *Ja ni odnoj minuty ne somnevajus' v ètom.*
I:NOM not one:GEN minute:GEN NEG doubt in this
'I don't doubt this for a single minute.'

b. *Ty u nas ešče i mesjaca ne rabotaeš'.*
you:NOM at us yet even month:GEN NEG work
'You haven't even worked for us a month yet.'

See Babby 1980b:150 for details.

Case and the Structure of NP

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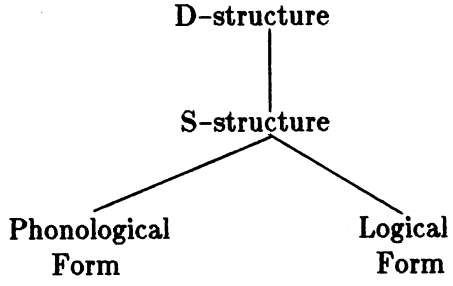
1. *Introduction.* The term 'case', familiar as a morphological category of traditional grammar, has been extended in recent linguistic studies to refer to an abstract property of Noun Phrases. As such, abstract case will be present regardless of the existence of morphological case endings in any particular language. Abstract case has been used to encompass a variety of concepts rooted in diverse theoretical stances. It is not our goal here to attempt to reconcile these notions, many of which are admirably represented in the present volume. Instead, I focus on the abstract theoretical construct 'case', as employed in the *Government-Binding* theory being developed by Chomsky and his colleagues. To my mind there exists a disturbing discrepancy between this construct and the morphological sense of the term. Clearly, the validity of abstract case should to no mean degree be reflected in its relevance to analyses of morphological case. This paper has been written with the aim of relating morphological case to abstract case. Firstly, I present the rudiments of a formal theory of morphological case, and offer some speculations about the internal mechanics of case. In the following section I discuss 'bare genitive' constructions in Russian, and contrast case marking strategies within Noun Phrases in Russian and English.

One early and influential adaptation of case as a covert category is Fillmore's (1968) *Case Grammar*, in which abstract case is a semantic relationship holding between a verb and its arguments. In this system exactly one case relationship (e.g. Agent, Patient, Goal) is associated with each argument. Whether this kind of case is actually expressed morphologically in any given instance is a language-specific matter. The question, however, of how abstract case may be morphologically realized demands careful attention. Subsequent theories continued to make use of the relations Fillmore called 'cases', so that in *Relational Grammar* (cf. Perlmutter 1983) some (but not all) of them are regarded as 'oblique' grammatical relations. In Bresnan's *Lexical-Functional Grammar* (cf. Bresnan 1982b) they are listed in a verb's 'predicate argument structure' and mapped onto 'grammatical functions' such

as Subject and Object.

In Government-Binding theory semantic roles like Agent and Patient are known as *'theta' roles.* According to the *Theta-Criterion*, every argument must have one and only one theta-role. These are assigned by the verb to positions in the syntactic tree, and must, by the *Projection Principle*, be consistent throughout a derivation. By this I mean that the same theta-roles must be associated with the same syntactic positions at all levels of syntactic representation. The levels assumed in Chomsky 1981 are represented in (1).

(1)



The level of *D-structure* is a pure representation of the pairing of grammatical relations (e.g. Subject, Object) and theta-roles (e.g. Agent, Patient). The rule *Move alpha* operates to transform D-structures into *S-structures*, where NP's occupy the positions in which they can be assigned their surface grammatical relations. The two interpretative components, *Phonological Form* (PF) and *Logical Form* (LF), are read off of S-structures.

In Government-Binding theory the notion of abstract case is distinct from that of theta-roles, which roughly correspond to what Fillmore had in mind with his Case Grammar. For Chomsky, case is an abstract property that all Noun Phrases must have in order to be well-formed at LF (regardless of whether they exhibit it morphologically). He accomplishes this by requiring that NP's have case at LF in order to bear a theta-role. Case thus makes arguments 'visible' at LF, enabling them to satisfy the Theta-Criterion. If an NP lacks case, then it cannot be assigned a theta-role. If the NP is to have a theta-role, then it must have case.

In Government-Binding theory case helps to determine the distribution of NP's. The idea is essentially that only certain positions are 'cased', and so overt NP's can only appear in these

positions (if they are to bear a theta-role). Cased positions, such as object of a verb or preposition, are configurationally defined. Without delimiting the precise conditions under which case may be assigned, we may observe that the major properties of the abstract case system devised for English are also true of English's minimal morphological case system. In particular, complements of V and P are objective, subjects of S are nominative and subjects of NP are genitive. Since these are exactly the cased positions in English, these are the only positions a theta-marked NP can occupy. Moreover, the choice of case seems to be determined configurationally, rather than on the basis of semantic role; agentive (and other) subjects are nominative, agentive (and other) complements of *by* are objective, despite their common theta-role. It thus seems that it should be much easier to find an algorithm to derive morphological case from the abstract case of Government-Binding theory, than, say, that of Case Grammar. Of course, the picture becomes considerably more complex when we consider a language like Russian, with a much more extensive morphological case system than English.

2. *Tasks.* Let me begin with two observations which, I consider, any adequate theory of morphology should cover. We will want our account of case to capture the fact that case is one of a limited set of morphological properties, traditionally called '*categories*'. One of the tasks, then, of our theory will be to represent morphological categories properly. Secondly, the fact that morphological categories exhibit *government* and *agreement* phenomena should be expressed by our analysis. It ought to embody appropriate devices for representing these relationships explicitly.

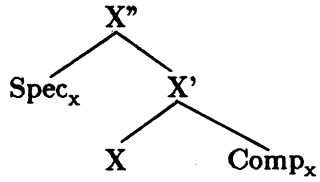
2.1. *Phrase Structure.* In order to do this I will exploit two basic properties of the *X-bar theory* of phrase structure (cf. Jackendoff 1977). Firstly, part-of-speech category terms such as N, V, A, and P are actually abbreviations for *feature complexes.* Cross-category generalizations can then be easily captured by expressing phrase structure expansions in terms of collapsed feature complexes. Here we will adopt Chomsky's original formulation (1970), as in (2), rather than Jackendoff's alternative proposal where V and N share the feature [+Subject].

(2)

	[+V]	[-V]
[+N]	A	N
[-N]	V	P

Good reason for this preference can be found in Stowell 1981, and other arguments can be adduced from the study of morphological systems.[1] Secondly, phrasal nodes are viewed as *projections* of terminal nodes, so that relations between constituents internal to a phrase can be hierarchically represented. The *maximal projection* X^{max} of a lexical node X (where X stands for N, V, A, or P) is the phrasal node XP.[2] For the purposes of this paper X^{max} can be equated with X". A typical phrase will permit complement and specifier, organized as shown in (3).

(3)



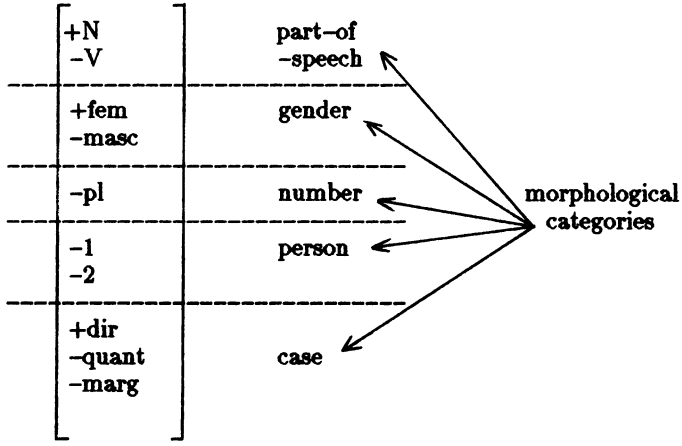
(4) X^n---> ...X^{n-1}...

Crucial to the X-bar theory is the principle that X^n must always expand to something that includes at least X^{n-1}, as in (4). Thus, X" will invariably immediately dominate X' and X' will in turn immediately dominate X.

2.2. *Feature Submatrices.* Given these rudiments of an already well-established and widely-accepted theory of phrase structure, it will be relatively easy to extend the theory to satisfy the requirements stated in section two.[3] Consider first of all that syntactic nodes are actually feature bundles. Minimally, X-bar theory tells us that N abbreviates the complex [+N, -V]. This, however, only supplies part-of-speech information, whereas there is typically much more at stake. For example, for the Russian form *ženščinu* fem. acc. sg. 'woman', we probably want to include the following kinds of morphosyntactic information: part-of-speech, gender, number, person, and case.[4] Now, just as part-of-speech category can be broken down into features, so can all these other morphological properties be reduced to their distinctive components.

The form *ženščinu* might then be represented as in (5).

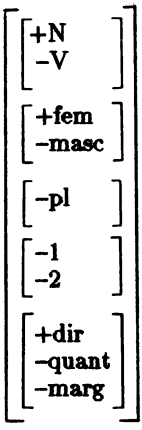
(5)



Notice that for the category of case I have used Jakobson's features, as presented in his two seminal articles (1936/1971, 1958/1971). I assume these features without argumentation. The issue at hand is not whether precisely his features are appropriate as the building blocks of the Russian case system, but whether morphosyntactic features are the right approach at all.

If indeed a treatment as in (5) is to be successful, then some further structure will have to be imposed. Within the larger matrix corresponding to *ženščinu* we will group every feature pertaining to a single morphological category into a single '*submatrix*'. With this additional organization, all the features of case, for example, can be referred to as a unit.

(6)



Since the bundle of case features in (6) constitutes a submatrix, we will be able to state processes like agreement and government that involve case succinctly and directly. In fact, the very term 'case' means all the case features. I would like to claim that agreement is with an entire category. It does not selectively ignore certain features. Either agreement in case obtains, or it does not.

2.3. *The Lexicon and Lexical Insertion.* The *Lexicon* contains all idiosyncratic information for lexical items. Following Halle (1973), I assume both derivational word-formation and inflectional morphology are done in the Lexicon, prior to *lexical insertion.* The regularities expressed by Jakobson's feature analysis of Russian case pertain to the Lexicon, and it is there that they have an independent existence. In this paper, then, we will treat lexical entries as fully-formed, consisting of complete morphosyntactic matrices and associated phonological representations.

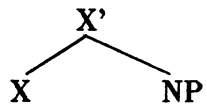
One natural question that arises within this model is where lexical insertion takes place. I would like to suggest that the actual insertion of a phonological 'word-form' is the first rule of PF.[5] By this I mean that at S-structure fully-formed morphosyntactic representations, as in (6), are available. Since these are composites of inherent and syntactically-dependent information, all the feature values do not arise in a uniform manner. Part-of-speech, from which phrases are projected, is represented at D-structure. Non-distinct morphosyntactic representations are then inserted from the Lexicon. These contain semantic information and morphological feature submatrices. The values of the features in any submatrix may be fixed at D-structure insertion, or left open as variables (ranging over plus and minus), dependent on whether or not they are inherent.

For example, the morphosyntactic matrix corresponding to *ženščinu* in (6) would be inserted with all but case features fixed, since, if *ženščinu* is the direct object of a regular transitive verb, these will be set by that verb. By S-structure all government and agreement processes will have taken place, ensuring that the morphosyntactic representation has plus or minus values for all the features in all of its submatrices. The first rule of the PF then replaces these morphosyntactic representations with non-distinct phonological ones, thus enabling the post-lexical phonological rules to operate.[6] This view of lexical insertion supports the branching model of the grammar in (1), in which PF and LF are independent

components. Morphosyntactic representations are visible to the rules of LF. However, once they have been mapped into phonological representations they are no longer available to the LF component. Rules of the LF component cannot operate on phonological representations, just as rules of the PF cannot operate on morphosyntactic representations. Our conception of lexical insertion thus serves to derive the bifurcation shown in (1), since PF and LF representations are mutually opaque.

2.4. *Government and Case.* Certain aspects of the morphosyntactic representation described in the previous sections can only be specified after some syntactic rules have applied to D-structure representations. Case, in particular, typically has this property. Whereas the gender features of *ženščinu* in (6) are intrinsic to the lexical item, the case features will be whatever the syntactic environment demands. In general, inflectional morphology is precisely that which is relevant to the syntax.[7] The particular case of a lexical item is typically demanded by its syntactic position; it depends on whether the NP in which the item occurs is a complement of a N, A, P, or V, as well as on lexical properties of the category that governs it. The general schema for the configuration relevant to case-assignment is given in (7) (compare (3)).

(7)



We will say that X *governs* NP in (7). Tentatively, it appears that case is assigned under sisterhood to a lexical head X.[8]

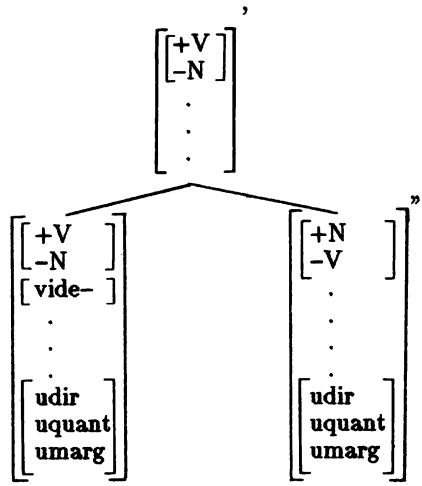
The part-of-speech of that head helps to determine the case of the NP it governs, so that there is often an 'unmarked' (or 'default') case assigned by any particular governer. If, for example, X is V, then NP is ordinarily accusative. If X is P, then NP may be any one of several cases, the unmarked member of which is by no means clear.[9] In Russian, unlike English, the position of complement to a noun is also case-marked; for X in (7) equals N, some NP may always be genitive, although of course many nouns require other possibilities for complements with certain theta-roles. The point is that we can regard case as dependent on configuration.

Consider the simple example of a transitive verb and its object, as in (8).

(8) Ivan videl ženščinu.
saw woman(ACC)
'John saw a woman.'

The verb *videl* 'saw' accepts a complement NP with a certain theta-role that allows the NP to refer to 'that which is seen'. Likewise, it assigns the accusative case. Given that the ability of a verb to assign case at all is to some extent idiosyncratic, let us endow *vide-* 'see' with the case-assigning property.[10] This property should, I believe, be expressed in terms of the case features themselves. We might represent this as in (9), taking the VP in (8) and providing its constituents with features as in (6).

(9)



The ellipsis represents irrelevant submatrices, such as, for V, feature complexes indicating person, number, and gender (acquired from the subject) and tense and mood (acquired from the inflection element 'INFL', which in Government-Binding theory is a separate node resulting from the expansion of S----> NP INFL VP). I have tentatively used 'u' for 'unmarked' in (9), rather than positive and negative specifications, because verbs like *vide-* that assign accusative to their objects seem to do this by default. In the unmarked situation, where nothing special need be said about the particular case a verb assigns, its object NP will be accusative. Some other verbs require specific oblique cases on their complement NP's. For such verbs we specify the particular case governed in the case submatrix. For example, *upravljat'* 'to manage' governs

the instrumental and thus has [-dir, -quant, +marg] rather than u feature values. The u's are replaced by pluses and minuses at S-structure, thus allowing oblique cases to pre-empt genitive in negation and quantification constructions, as discussed in Babby (1980a, this volume), Franks (1981, 1985), and Freidin and Babby (1984).

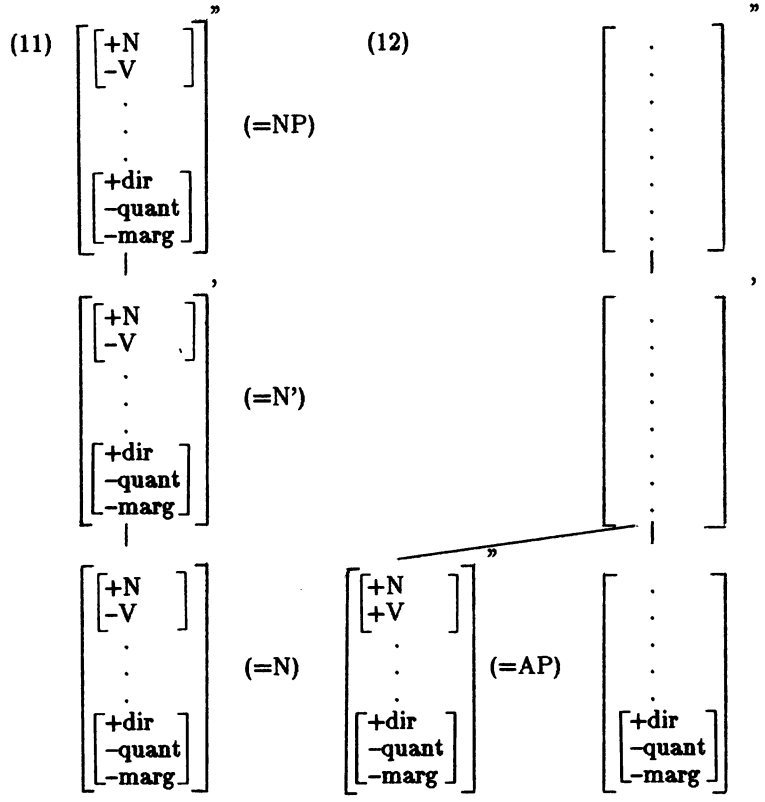
2.5. *Percolation.* At this point our model simply says that case is assigned by a case assigner to an NP under government, defined as sisterhood. An additional mechanism is needed to account for how the abstract case of NP is morphologically realized. Notice that in principle it need not be morphologically realized at all, as is true for Chinese. In the minimal situation it appears only on those nouns that are in themselves complete NP's, so that in English only pronouns show morphological case and in Macedonian only pronouns and some proper names do. Next there is the possibility of showing case morphologically once per NP, as in Japanese or Turkish. The process of conveying case features from NP to N is known as *percolation* (cf. e.g. Babby 1980a, this volume or Chomsky 1981). If N has features to express a given morphological category in some language, then, everything else being equal, it will have the same values for those features as the NP dominating it. In Russian N has a case submatrix and hence shows morphological case. Percolation is the mechanism by which feature values are transmitted from a phrasal node to its head.

(10) Everything else being equal, the values of the features in a submatrix of N^n will be the same as those of N^{n+1}.

As an illustration, consider once again the accusative singular form *ženščinu* 'woman' (cf. (6)). If the NP containing the noun *ženščin-* is accusative, perhaps by dint of being in the configuration (9), then the head noun will ordinarily be accusative, as in (11).

The case features match throughout the projection. Notice, however, that percolation is to heads, and not to agreeing phrases, such as AP's. Although percolation ensures that, everything else being equal, the values of case features will be consistent throughout the projection, it leaves the problem of adjective agreement open. I propose that this process be subsumed under case assignment by government, as in (12), in that the case submatrix of the head N governs that of the modifying AP. In

this way, the case of AP will match that of the NP it is in not by percolation, but through the mediation of case on N. The traditional notions of 'agreement' and 'government' can thus be reduced to a single device.[11]



3. *Bare Genitives.* I would like now to discuss a peculiarity of Russian syntax in light of the theory of morphological case advanced in the previous section. The relevant construction may be called that of the *'bare genitive'*, which, I will argue, is able to exist precisely because of the 'everything else being equal' clause of (10). There are what have traditionally been regarded as three distinct bare genitive constructions, although I will maintain that they do not differ syntactically. Our treatment will hinge on the case properties of the NP-specifier position. These constructions in Russian differ from those in English in such a way as to accommodate our analysis of 'bare genitives' in Russian, while predicting their impossibility in English.

3.1. *Partitive and Large Quantity NP's.* The first two instances of bare genitives can be examined together, since it is not hard to see that they are variants of a single structure. Parallel to accusative objects in (13a) and nominative subjects (of intransitive verbs) in (14a), we also find bare genitives.

(13) a. Nalivajte mne čaj.
pour(IMPV) me(DAT) tea(ACC)
'Pour me the tea.'

b. Nalivajte mne čaju.
tea(GEN)
'Pour me some tea.'

(14) a. Ljudi sobralis'.
people(NOM) gathered
'The people gathered.'

b. Ljudej sobralos'.
people(GEN)
'Many people gathered.'

The example in (13b) is traditionally known as a 'partitive', since it occurs with mass nouns and means 'some'. The genitive in (14b), however, expresses the opposite meaning of an inordinately large number. This is often accompanied by an expressive intonation, and is certainly not as typical of literary Russian as the partitive genitive.

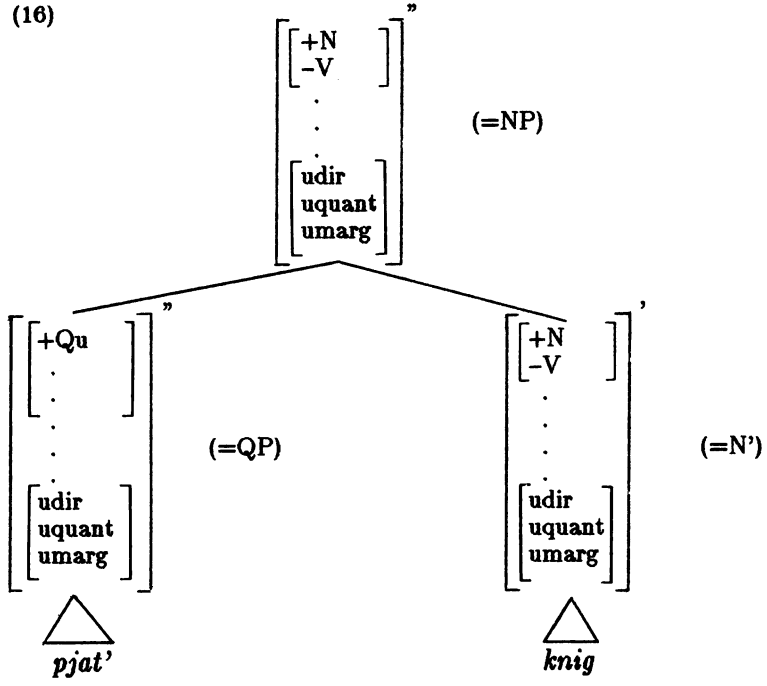
'Bare genitive' NP's are puzzling because, although they seem to be subcategorized by the verb, they are unlike other arguments in that they have some independent source for case. They are thus exceptions to the principle that theta-role assignment depends on case, and constitute an example of what Babby refers to in this volume as 'semantic' case. In other words, it would appear reasonable to claim that bare genitives get their theta-roles from V in the usual manner. In the (b) examples of (13) and (14) they occupy the same positions as do the nominative and accusative NP's of the (a) examples, and consequently bear the same theta-roles. They do not, however, exhibit the appropriate case. The bare genitive is thus unusual in that it seems to get its theta-role and its case from two distinct sources. The question, then, of the origin of the genitive in (13b) and (14b) is fundamental to understanding the structure of this construction.

3.2. *Quantified NP's.* In order properly to address this issue we must first examine the curious behavior of quantified NP's in Russian. The basic relevant fact needed to be accounted for is that quantifiers are typically followed by (adjectives and) nouns in the genitive.[12] Consider the following standard example:

(15) pjat' knig
five books(GEN/PL)
'five books'

The phrase *pjat' knig* can appear in any context which requires an NP in the nominative or accusative. Nevertheless, *knig* is in the genitive. Clearly, it is not *pjat' knig* itself that is genitive, otherwise we would erroneously expect it to follow verbs and prepositions that take genitive complements. Since we are not actually faced with an alternation between nominative/accusative and genitive, the locus of the problem of case can be placed inside *pjat' knig* itself, rather than in any external governer. An appropriate structure, consistent with our requirement of sisterhood for case-assignment, is given in (16).

(16)



Notice that in (16) I have not elaborated on the feature composition of the category to which the quantifier *pjat'* belongs. I would like to concur with Babby (this volume) and call this category a Q heading the QP *pjat'* (as opposed to Pesetsky (1982), who treats *pjat'* as the Q head of a QP *pjat' knig*). The values of N and V within the part-of-speech submatrix for quantifier are able to range freely over plus and minus. Morphosyntactic arguments, for example, can be made for the nominal ([+N, -V]) status of *pjat'* and for the adjectival ([+N, +V]) status of *dva* 'two', *tri* 'three', and *četyre* 'four', and in section 3.5 we will need to relate this position to even more diverse categories.

The distributive preposition *po* can also head our QP in the NP-specifier position. As such, *po* has the features [+Qu, -N, -V] and takes dative NP complements (within the QP!).

(17) a. $[_{PP}[_{P}$po$]$ $[_{NP}$jabloku$]]$
each apple(DAT)
'one apple each'

b. $[_{NP}[_{QP}[_{P}$po$]$ $[_{NP}$pjati$]]$ $[_{N'}$jablok$]]$
each five(DAT) apples(GEN/PL)
'five apples each'

Example (17a) shows that the preposition *po* governs the dative case on an NP complement.[13] In (17b), however, *jablok* 'apples' is genitive because it is governed by the (prepositional) QP, which internally consists of a head *po* and its complement NP *pjati*. Whereas *pjat'* is neither nominative nor accusative, but a frozen caseless form which has become a quantifier, *pjati* is a dative noun. Note that the adjectival numerals *dva, tri*, and *četyre* cannot be assigned dative directly by *po*, so that **po dvum jablok* 'each two(DAT) apples (GEN/PL)' is impossible.[14] This indicates that in (17) *po* is indeed behaving like a preposition and that *dva, tri* and *četyre* differ from the other numerals in that they are adjectival.[15] The quantifier system of Russian is not syntactically uniform in that there are caseless quantifiers (i.e., with the feature [+Qu]) with various values of [N] and [V] as well as oblique nouns and adjectives with numerical meaning (which have not yet become [+Qu]).

The loss of case in quantifiers is not as complete in Russian as it is in, say, colloquial Serbo-Croatian, where all quantifiers, regardless of whether the NP they are in is oblique or not, govern the genitive. Oblique quantifiers in Russian, rather than governing

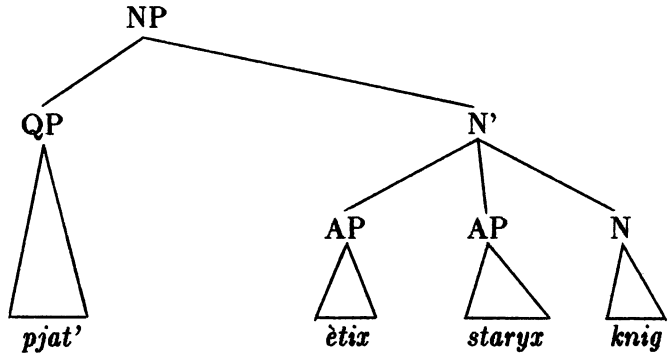
the genitive, agree in case with the oblique N's they modify (cf. Babby 1980a and Franks 1981). It thus seems advisable to treat these not as quanitifiers in the NP-specifier position, but as adjectival sisters of N, in a distinct category from their non-agreeing counterparts. This reflects the general state of transition of the Russian quantifier system from cased to caseless forms. I have suggested that quantifiers belong to a category distinguished from all others at least by the feature [+Qu]. They constitute a new category created from diverse sources, which accounts for their affinity with the major parts-of-speech discussed at the beginning of this section. Historically, for example, *pjat'* 'five' was a noun taking, as do other nouns, an NP complement in the genitive; verbs and modifiers agreed with it, not with the NP it modified. Now, however, it is a fixed caseless form and, frozen as such, it can go into the caseless NP-specifier position.

The N' in (16) receives its case not from the phrasal node to which it belongs, but from the governing QP *pjat'*. The QP enters into the canonical government configuration, so it is not surprising that its case submatrix should be able to assign case to its sister N'. Notice, however, that the configuration in (7) is extended here to allow case-assignment from a non-terminal (i.e. non-lexical) element. Since the case submatrix of NP will be independently governed by a V or P, the case of NP will be independently determined. When NP receives the default case of accusative, i.e., if governed by a [-N] lexical head, this cannot percolate down to N' by (10), because the case features of N' are already fixed by the governing QP.[16] Recall that the u notation is employed whenever the assigned case is predictable in terms of the governing category. Just as the default case for complements of V is accusative, with QP's it will be genitive.[17]

Crucial to the treatment in (16) is the assumption that the QP *pjat'* is in the *specifier* position of the NP *pjat' knig*. Note that adjectives and demonstratives following *pjat'* will also be in the genitive; since they are under N' they agree with the head noun *knig*.

(18) a. pjat' ètix staryx knig
five these(GEN/PL) old(GEN/PL) books(GEN/PL)
'these five old books'

b.



Moreover, unlike in English, determiner-like elements in Russian, although morphologically distinct from other adjectivals, can proliferate as far as semantic constraints will allow.

(19) ètot moj odin staryj
this(NOM) my(NOM) one(NOM) old(NOM)
prijatel'
friend(NOM)

It is therefore reasonable to propose that all these modifiers are under N' and are consequently subject to case-marking from the NP-specifier position. The QP in (18b) has the property of assigning genitive to N', which percolates down to N and then is able to govern the case-feature submatrices of its sister AP's.

I have consistently referred to the quantifier as a 'phrase', without offering to justify this claim. Despite the fact that a single word typically fills the NP-specifier position, we do want to maintain *pjat'* is the head of a maximal projection QP in the NP-specifier slot. Firstly, of course, theory-internal motivation can be found in the framework of X-bar syntax, which requires that every terminal element have a maximal projection (compare Jackendoff's (1977) similar treatment of DET in English). We also have seen the need for prepositional QP's with clear internal structure, as in (17). Moreover, caseless adverbial elements that semantically delimit the quantifier, such as *priblizitel'no* 'about', *tol'ko* 'only', *počti* 'almost', *bol'še čem* 'more than', can be included in the QP as specifiers.[18]

All four phrases in (19) are sisters to the head noun *prijatel'*, and so can receive case from the head, which in Russian has case features. Let us oppose this position to that of the specifier, which crucially does not receive case from N. In particular, because

sisterhood is a prerequisite for case-assignment, a specifier (daughter of X") cannot receive case from its head, there being an intervening X' node.[19] N, but not N', assigns case in Russian. This means that everything else being equal, the NP-specifier will not be a case-marked position. Precisely because it has no source for case, only non-cased elements will be able to go into the NP-specifier position in Russian. It is for this reason that we find it filled by non-agreeing quantifiers, which in modern Russian lack case.

3.3 *Empty Quantifiers.* This lengthy digression into the morphology of overt quantifiers leads to an analysis equally applicable to the bare genitives of section 3.1., with the implication that these involve some kind of 'hidden' or 'covert' quantifier. Recall that bare genitives occur in non-oblique argument positions and impart a quantificational meaning of either 'some' or 'many/much'. Because of the parallelism they display with overtly quantified NP's, I posit an *empty quantifier* in the NP-specifier position. Let us refer to this empty quantifier as PRO, endowing it with at least the feature [+Qu], since we have attributed the genitive on N' to the presence of [+Qu] in the specifier.

I have labelled our empty category PRO in deference to the fact that it necessarily lacks case. Government-Binding theory admits various kinds of empty categories, parallel to different kinds of overt items. For theory-internal reasons, PRO is ungoverned and, as such, has no source for case. Since case is the property that allows an NP to be overtly realized, PRO appears where no case is assigned and thus lacks an overt correlate.[20] The typical caseless position is subject of non-tensed clauses, such as infinitive and gerund, but in Russian we extend this to the NP-specifier. This is true whether or not an overt element occupies that position. In fact, it is the lack of case that allows PRO to appear. Compare (20) with (15), the structure of which is given in (16).

(20) $[_{NP}$PRO $[_{N'}$čaju]]
[+Qu]

This empty quantifier phrase governs N' and assigns case, just as an overt quantifier would. Of course, it differs from overt quantifiers in lacking a specific value. As with any PRO element, this must be determined in order for the construction to be interpretable.[21] As arguments, the appropriate 'partitive' and 'large

quantity' readings are imposed on the PRO quantifier by the verb's semantic-selection properties. That is, 'tea' in (13) is 'poured' and 'people' in (14) 'gather' in quantities. Note that the specific interpretations in (13b) and (14b) reflect the overall tendency for the PRO quantifier to mean 'some' with mass nouns and 'many' with count nouns, even though this need not necessarily be so. Example (21) may mean 'he drank a lot of tea' with the appropriate intonation or in the appropriate context. Similarly, (22) might mean 'he bought a few books', although its first reading will be 'a lot of books'.

(21) On čaju vypil.
he tea(GEN) drank
'He drank some/a lot of tea.'

(22) On knig kupil.
he books(GEN/PL) bought
'He bought a lot of/some books.'

We thus analyze bare genitives as quantified NP's, accounting for their distribution and internal morphology (cf. Neidle 1982a and Pesetsky 1982 for supporting argumentation). We claim that, as with other quantified NP's, it is only N' that is genitive. NP itself is assigned the accusative case and the Patient theta-role in accordance with the verb's subcategorization requirements.

The 'second genitive' *-u* ending, available for some masculine substantives when used as partitives, is no more than a special realization of genitive on N' assigned by a quantifier. We therefore see no justification for differentiating it from the regular genitive, as does Jakobson (1958/1971), with the feature [-ascriptive]. Naturally, this upsets the curious symmetry of his famous cube, and brings into question the fate of the 'second locative', which Jakobson also distinguishes as [-ascriptive]. Moreover, it is certainly noteworthy that the *-u* ending is gradually disappearing from the language, so that most younger speakers will prefer, for example, the regular genitive *čaja* to *čaju* even in partitive usages.

3.4. *Comparison with English.* In the previous section I argued that PRO quantifiers are possible as NP-specifiers in Russian precisely because this happens to be a caseless position. The reader may have observed that this situation contrasts dramatically with that of English. In English, case within NP is assigned structurally. In other words, a special rule of English states that

subjects of NP are assigned genitive case, as in *John's new car*. The NP *John* is governed by the N' containing *new car*, and N' in English has the idiosyncratic property of assigning genitive. Due to this property, we are able to oppose English and Russian in terms of the NP-specifier position being cased in English, but caseless in Russian. That an NP governed by N' should be genitive is somewhat peculiar, although languages with degenerate morphological case systems do tend to tolerate greater deviation from case-assignment strictly by governing lexical heads. One might speculate that what has happened in English is that the property that N structurally assigns genitive to its NP complement, which held of an earlier stage of English (e.g. Old English *sēo gēmen his bearn* 'the care (of) his children(GEN)') was somehow transferred up to N' (Modern English *his children's care*). It is curious to note that whereas in English N' can exceptionally *assign* genitive, in Russian it can exceptionally *be assigned* genitive. Be that as it may, this innovation creates the possibility of having lexical NP's in the specifier.[22] Since case determines the distribution of overt NP's, we expect them to occur in this position in English, but not in Russian.

This caseless status of the NP-specifier position is independent of the question of whether NP-specifiers are properly governed or not (cf. fn. 19 and Chomsky 1981 for discussion of proper government). It is likely that only government by a lexical category may constitute 'proper government', although government by any node may license case-assignment. For this reason, the tense/inflection node INFL is able to assign nominative to the subject, even though it does not properly govern. Likewise, N' assigns genitive to the subject of NP in English, but does not properly govern it. This explains the impossibility of movement from NP-specifier position, as in the ungrammatical **whose*$_i$ *did you read* [t_i [*book*]]. The *Empty Category Principle* (cf. Chomsky 1981) prohibits movement from non-properly governed positions by stipulating that the trace left behind must have a recoverable antecedent in that it be properly governed.

I have claimed that the fact that the NP-specifier position in English is idiosyncratically cased allows it to be filled. Likewise, the lack of case in Russian means that no phonologically realizable nominal can be in this position. There is, however, one apparent counterexample to the proposal that the NP-specifier position in Russian has no source for direct case assignment. Genitive third

person pronominal forms in prehead position seem a likely candidate for overt (i.e. cased) subjects of NP in Russian, as in (23).

(23) ix kniga
they(GEN) book(NOM)
'their book'

Such genitive possessive pronouns certainly look like their English counterparts, which are assigned genitive by dint of being specifiers. I would like to relate them, however, to the canonical position for genitive, object of N, as in (24).

(24) kniga starogo pisatelja
book(NOM) old(GEN) writer(GEN)
'(the) old writer's book'

An NP complement of N appears in the genitive case. Perhaps, then, there is a local movement from complement to specifier position to create the possessive pronoun construction in (23).[23] Note that there is a strong tendency to replace these with agreeing adjectival forms in the colloquial language, so that (23) would be *ixnjaja kniga* 'their(NOM) book(NOM)'. This makes the third person possessive pronouns parallel to the first and second person, which are adjectives morphologically. The other Slavic languages also reflect the inconsistency of (23). For example, in Serbo-Croatian genitive possessive pronouns have been totally replaced by adjectival forms, even in the literary language, and in Polish it is not uncommon to find full NP genitive complements to N, as in Russian (24), preceding the head noun. In this way, their structural parallelism to the possessive pronouns is directly expressed.

3.5. *Non-argument Bare Genitives.* I have delayed discussion of the final instantiation of 'bare genitive' to this section, since it differs enough from the other two to demand special attention. Bare genitives may also appear in *non-argument position*, usually at the beginning of the sentence, where they function as themes. Sentence (25) means something like 'talking about books, the number of them I read was three'.

(25) Knig ja pročital tri.
books(GEN/PL) I read three
'Of books I read three.'

Let me review this construction's most salient properties, which are

described in more detail in Franks and House (1982) and House (1982).

Of primary importance is the fact that *knig* in (25) differs from the bare genitives of (13) and (14) in that it does not occupy an argument position. One plausible proposal is that it has moved from inside a quantified argument NP, but it can be shown that this is not viable for several reasons. Primarily, it does not always illustrate the form that corresponds to what we might expect in the putative 'source' position; for example, *tri* in (25) assigns genitive singular, not plural as does *pjat'*. In fact, the bare genitive can be related to any (non-oblique) argument in the sentence that addresses the quantity of the item expressed by the bare genitive. In other words, well-formedness obtains so long as the domain specified by the bare genitive is delimited by some phrase occupying an argument position in the sentence.

(26) a. Publiki na ploščadi bylo gusto.
public(GEN) on square was thick
'Of people in the square was packed full.'

b. Mjasa on s"el dve banki.
meat(GEN) he ate two tins
'Of meat he ate two tins.'

c. Knig ja pročital v obrez/dva romana.
books(GEN/PL) I read in edge/ two novels
'Of books I read just enough/two novels.'

In examples (a) and (c) there is not even a possible source position from which the initial genitives might have been moved. They thus clearly demonstrate that we are once again dealing with bare genitives.

These non-argument bare genitives have the exact same internal structure as the others, namely, that of (20). An empty quantifier in the NP-specifier position governs and assigns case to N'. This identical analysis accounts for the identical morphology, and nothing more need be said about their internal structure.

There remains, however, the awkward problem of associating these bare genitives to a related argument position.[24] Likewise, because they are non-arguments and the PRO quantifier can find no value from the verb, some independent strategy must be adopted for interpreting the empty quantifier. I suggest that an appropriate phrase in argument position must be able to control the PRO quantifier to give it some value. In order to be able to

do this it undergoes Quantifier Raising to a position *c-commanding* the bare genitive, so that coindexing of the moved phrase and the PRO quantifier will be possible at the level of Logical Form (cf. May 1977 for discussion of this operation, although in a very different context). The structure of (25) at S-structure and Logical Form is given in (27).

(27) a. [[PRO knig] [ja pročital tri]] : S-structure
b. $[[\text{tri}]_i$ [[PRO_i knig]$_j$ [ja pročital t_j]]] : LF

The idea captured by the representation in (27) is that once the phrase in argument position (here *tri*) adjoins to S to control PRO, it leaves a *trace* that must be bound. Its antecedent, however, is not the phrase that vacated that position, but rather the NP containing the bare genitive. The indices in (27) indicate that the trace of the moved phrase is bound not by what moved (*tri*), but by the quantified NP (*knig*). The PRO quantifier itself is, in turn, controlled by what moved, which, as shown by (26), can be of any category.

The analysis just outlined accounts for the peculiar properties of this construction, essentially by having the consequence that it is the bare genitive that meets all the lexical requirements imposed by the verb on its argument. For this reason, (26b) only admits a reading in which the quantity of meat consumed amounts to two tins; it is unambiguous in that it cannot possibly mean that the tins themselves were eaten. The logical object of *s"el* 'ate' is the meat, not the tins.

In general, these initial bare genitives can only be associated with positions that tolerate bare genitives at all, so that they never correspond to oblique objects or subjects of agreeing verbs. In other words, the phrase occupying the syntactic argument position at S-structure is not the logical argument at LF. If, as Pesetsky (1982) argues, part-of-speech subcategorization requirements need be met only at LF, then various phrases, such as the AP (*gusto*) or the PP (*v obrez*) of (26), can serve as an S-structure object. Pesetsky suggests that the part-of-speech of the trace is determined by subcategorization requirements at LF. What moves can be of any part-of-speech, but its trace will always be an NP, if that is what the verb subcategorizes for. Likewise, our analysis crucially assumes that subscript indexing is done freely by general rule, and not automatically in tandem with movement. In conclusion we might observe that if this turns out to be true, then

the only special relationship holding between a trace and its antecedent is Subjacency, which in any event is limited to syntactic (not LF) movement and may perhaps be subsumable under other principles.

In this section we accommodated an otherwise baffling construction to the independently motivated analysis of partitive and large quantity bare genitives as involving a PRO quantifier. Because the bare genitives treated here were not verbal arguments, we were required to develop a unique analysis to provide the PRO quantifier with semantic content. Our approach was forced by the need to control the PRO quantifier, on the one hand, and the desire to associate the bare genitive to an appropriate argument position, on the other.[25] Finally, our treatment of these unusual bare genitives as 'non-argument partitives' made powerful predictions about the nature of movement rules.

NOTES

[1]For further discussion see Franks (1981). One of the primary factors motivating the schema in (2) is the ability of both P and V in Russian to assign accusative in the unmarked ('default') situation.

[2]Other notations occurring in the literature for x, x', x" are x^0, x^1, x^2 and x, $\bar{x}$, $\bar{\bar{x}}$.

[3]X-bar theory has been adopted by many generative grammarians. Recent work by Stowell (1981) and others (e.g. Fabb (1982), Muysken (1983a) and Pranka (1983)) has shown that the properties of the categorial component may be largely or totally reduced to other principles of grammar.

[4]This is by no means to be construed as an exhaustive list. Rather, it is meant to be representative of the approach adopted in this article. One might, for Russian alone, augment this set of categories with, e.g., declensional class and animacy.

[5]See Pranka (1983) for somewhat similar proposals. She argues, on the basis of syntactic 'merger' and 'fusion', that word-form insertion must follow the operation of syntactic rules.

[6]The case submatrix for a given lexical form may be defective in features, causing syncretism of endings. Thus the Russian adjective *novyx* 'new' is associated with [+pl] and [+quant], so that this single form serves as the genitive and the locative plural. The lack of any specification for the features [dir] and [marg] allows *novyx* to be non-distinct from locative and genitive when 'word-form' insertion takes place.

[7]See Anderson (1982) for discussion and development of this idea.

[8]I argue in Franks 1985 that the schema in (7) actually pertains to the assignment of theta-roles, to which case is usually tied. The behavior of predicate adjectives (cf. Franks 1983), which lack theta-roles but nonetheless bear case features, illustrates the true extent of the domain of case

assignment. These may agree in case with their antecedents, with which they are coindexed. For this reason, the system advocated in Franks 1985 differs considerably from the one presented here. Basically, case assignment is treated as a consequence of two nodes bearing the same index. The problem is therefore shifted to determining appropriate principles of coindexation, including those applicable to theta-role assignment and predication. This also applies to percolation (cf. Principle (10)), under the assumption that all projections of a node bear identical indices.

[9]In Franks (1981, 1985) I argue that the default case assigned by P is accusative.

[10]For example, *ask* and *wonder* appear to differ precisely in terms of whether they assign case to an object. Compare the grammaticality of both *John asked (Bill) the time* and *John asked (Bill) what time it was*, on the one hand, and **John wondered the time* versus *John wondered what time it was*, on the other. Semantically, both verbs take questions (hidden or overt; cf. Grimshaw 1979 for an insightful discussion), but syntactically only *ask* takes an NP object, presumably because only it assigns case (as observed in Pesetsky 1982).

[11]There may be undesirable consequences of this move, suggesting that the conflation of agreement and government is not the best way to handle normal adjective agreement. In Franks 1985 I endow NP-internal AP's with the 'referential' indices of the NP containing them, thus enabling them to agree by Principle (10), as reformulated in footnote 8. In this way, AP's are not restricted to daughter of N' position, permitting them the freedom of occurrence described in Babby (this volume).

[12]I am ignoring the many strange and problematic morphological quirks of quantified NP's, any analysis of which would unnecessarily complicate this paper. See, for example, Babby 1981b.

[13]This analysis differs from that of Babby (1984b, this volume), which argues that (17a) and (17b) are syntactically parallel, except that *po* in (17a) lacks a complement, enabling it to assign dative directly to N'. This would be impossible in our approach because *po*, as a preposition, must have an NP complement.

[14]This analysis makes no claims about the mysterious alternative to (17b) in which *po* acts like a preposition assigning accusative case, as in *po pjat' jablok*. It is the possibility of this construction that salvages 'two apples each', as *po dva jabloka*. For further discussion of the properties of *po* see Crockett 1976, which argues that it should not be treated as a true preposition.

[15]This may account for the tendency to reanalyze feminine complements of *dva, tri* and *četyre* as nominative plural, rather than genitive singular. This reanalysis is facilitated by the syncretism of endings, as well as the frequent coincidence of stress. Thus, *dve starye ženščiny* 'two(FEM) old(NOM/PL) women(NOM/PL)' is replacing *dve staryx ženščiny* 'two(FEM) old(GEN/PL) women(GEN/SG)'. It may well be that in the nominative variant *dve* is an adjective under N' rather than a Q.

[16]An alternative to our derivational approach to the resolution of conflicting case-assignment rules is simply to adopt a set of conditions for deciding which case has precedence. This is the strategy developed by Babby in this volume, as embodied in his Case Assignment Hierarchy. It is unclear to what extent the derivational and the hierarchical analyses will turn out to be notational variants, given that in both instances independent principles of grammatical organization mediate in the choice of precedence. Thus, derivational and hierarchical priority can be conceived of as manifestations of the need to satisfy principles motivated by considerations of interpretability.

[17]If a V or P requires an oblique case on its complement (in order to assign a theta-role depending on that oblique case), then the oblique case will have already percolated throughout the NP before the QP's default genitive is realized on N'. This is a consequence of the Projection Principle mentioned in part 1. See Babby (1980a), Franks (1981), Neidle (1982a), Pesetsky (1982), and Freidin and Babby (1984) for discussion and proposals.

[18]For further discussion of the agreement possibilities of adjectives in quantified NP's see Babby (this volume).

[19]See Chomsky 1981 for various formulations of configurations of government, which may or may not be formally independent from those permitting case-assignment. Perhaps it is possible to claim that the relevant notion here is that of 'proper government', which we may define as sisterhood (to a lexical category). Proper government serves in Government-Binding theory as a special requirement that traces must meet in order for their antecedents to be recoverable.

[20]My approach here is along lines of Bouchard 1982, which claims that the crucial property of PRO is not lack of government, but lack of case (at S-structure).

[21]This is not strictly true, given the existence of NP-PRO with arbitrary reference, as in [[PRO *to leave now*] *would be silly*]. However, in contrast with [+Qu]-PRO, NP-PRO bears a theta-role, which is sufficient for semantic interpretation.

[22]Possessives such as *mašina* 'Masha's' in the construction *mašina bluzka* 'Masha's blouse', which agree in case with the rest of the NP, are analyzed as sisters of N (rather than as specifiers), on a par with the modifiers in (19).

[23]Admittedly, the near obligatory status of this movement will need to be motivated on grounds stronger than analogy.

[24]I have consistently termed the bare genitives of this section 'non-argument', without attempting to specify their exact location. In Franks and House 1982 it is argued that they are not in some presentential TOPIC position, and in fact they can actually follow complementizers in embedded clauses. Let us tentatively assume they are adjoined to S, with the understanding that they have non-argument status.

[25]It is interesting, in fact, that if we are to satisfy the *Bijection Principle*'s (cf. Chomsky 1982) stipulation that every operator bind exactly one variable, then the quantified NP is the only candidate to bind the argument trace.

On The Grammar Of Simile: Case And Configuration

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0. *Introduction*

Recent work in syntactic theory has focussed attention on the role of configurational context (phrase structure, Immediate Constituent analysis) in assigning grammatical case to Noun Phrases (NPs).[1] In particular, it has been argued that the configurational relation between two categories is essential in the assignment of 'abstract case', a concept which plays a major role in defining acceptable syntactic structures.[2] While most of this work has been based on languages which only marginally express morphological case (e.g., English, French), the basic principles, defined in a formally rigorous fashion, dovetail quite closely with the treatment of more highly inflected languages in traditional grammar. It becomes tempting, then, to explore the possibility that the basic concepts and definitions of abstract case theory can be fruitfully applied to the study of how morphological case is assigned.

The descriptive focus of the present paper is the use of the word(s) ***kak*** 'like, as' in Contemporary Standard Russian to express simile at various grammatical levels.[3] The central question of interest is this: when ***kak*** takes an NP complement, how is the case of this NP determined? In some instances, an NP complement must agree in case with an NP in the main clause; in other instances, an NP complement of ***kak*** must appear in the nominative case. The two possibilities are illustrated by (1a) and (1b), respectively:

(1) a. Černyševskij xarakterizoval *Gogolja* kak *'otca* russkoj prozaičeskoj literatury'.
'Černyševskij characterized *Gogol'*[ACC] as "the father[ACC] of Russian prose literature".'

b. Ja by xotel imet' takogo *učenika*, kak *on*.
'I would like to have such a student[ACC] as he[NOM].'

The facts are rather intricate, ranging over a variety of syntactic constructions; they are systematically studied here for the first

time. The central goal of this paper is to develop an interpretive approach to *kak* constructions. That is, *kak* freely takes NP complements in any case form; syntactic structure then plays an essential role in determining the acceptability and interpretation of the resulting construction. The contrast between (1a) and (1b), for example, is explicable in terms of a difference in configurational structure. It is furthermore argued that syntactic case is properly distinguished from morphological case. In the typical situation, syntactic case is the assignment of case to an NP, the domain over which nominal reference is defined. The morphological case-marking of the individual constituents of this NP is a more superficial affair, invisible to the rules of grammar affecting semantic interpretation.

Definitions and assumptions essential to the ensuing discussion are introduced in section 1. In sections 2–5, we survey the basic uses of *kak* in simile expressions, developing the analysis as we proceed. *Kak* phrases are discussed in their function as adverbials, complements, attributives, and degree modifiers. The results are summarized in section 6.

1. *Preliminaries*

1.1. *Phrase structure and government*

We assume that the syntactic structure of the sentence is appropriately described in terms of its phrase structure.[4] Each phrase has a *head* category; the lexical categories which can serve as the head of a phrase include Noun, Adjective, Verb, and Preposition. The head of a phrase combines with various other constituents in a particular hierarchical structure to form *projections* of the head. Furthermore, there is a considerable parallelism among categories of the various lexical types. The rules discussed here are assumed to apply at least in English and Russian; they may well be either universal or at least represent that significant portion of the world's languages termed 'configurational'.

We illustrate these concepts first by considering the lexical category Verb (V), ignoring word order. The configurational structure of the projections of V can be represented in the form of the phrase structure rules given in (2).[5]

(2) a. V' -> V - (*complements*)
b. V' -> V' - *predicate adverbial*
c. VP -> V'

Rule (2a) states that a verb combines with its complements to form a phrase of category V'. We use the term 'complement' as a cover term for phrases of any of a range of categories: e.g., Noun Phrase, Prepositional Phrase, Sentence. Rule (2b) provides a recursive expansion of the phrasal category V': any number of times, a category V' can combine with a predicate adverbial (one expressing, e.g., manner, time, location, cause) to form a new phrase V'. The top-most V' in turn is dominated by a VP node.[6] The VP node is termed the *maximal projection* of V. The assumed phrase structures are illustrated by the following English and Russian examples (mutual translations), in which the head of the phrase is in italics:

(3) a. [$_{VP}$[$_{V'}$[$_{V'}$[$_{V'}$[$_{V}$to *talk*] [$_{PP}$to Bill][$_{PP}$about life]]
for a long time] last year]]
b. [$_{VP}$[$_{V'}$[$_{V'}$[$_{V'}$[$_{V}$*govorit'*] [$_{PP}$s Billom][$_{PP}$o žizni]]
dolgo] v prošlom godu]]

A similar pattern is observed for the category Noun (N). We assume the following rules:

(4) a. N' -> N - (*complements*)
b. N' -> N' - *restrictive attribute*
c. NP -> Specifier - N'

Rules (4a) and (4b) are analogous to rules (2a) and (2b) for projections of V. The Specifier node is the position for determiners of various types (articles: *a, the*; demonstrative pronominal adjectives: *this, that*) and possessive forms (pronouns: *my*, etc.; nouns, e.g., *Bill's*). The following examples should make the application of these rules clear:

(5) a. [$_{NP}$our[$_{N'}$brutal [$_{N'}$[$_{N'}$[$_{N}$*destruction*] [$_{PP}$of the enemy]]
during the war]]]
b. [$_{NP}$naše [$_{N'}$varvarskoe [$_{N'}$[$_{N'}$[$_{N}$uničtoženie] [$_{NP}$vraga]]
vo vremja vojny]]]

Now, given such assumptions, it is possible to define the

configurational relation of *government* which obtains between a lexical category and its complement as follows:

(6) Category A *governs* a category B if and only if:
   a. A is a head of phrase; and
   b. A c-commands B; and
   c. there is no maximal projection 'between' A and B; that is, any maximal projection dominating B also dominates A.

where

(7) Category A *c-commands* category B if and only if:
   a. A is distinct from B; and
   b. neither A nor B dominates the other; and
   c. B is either a sister node to A (i.e., is dominated by the first node dominating A) or is dominated by a sister node to A.[7]

As a result, for example, a verb will govern its complements, but not its adverbials: a predicate adverbial modifying a verb is not c-commanded by that verb, because it does not satisfy condition (7c).

One final remark. The lexical representation of a word identifies (in addition to the phonological matrix, the meaning, and any distinctive morphological properties) the categorial form of the word's arguments (including optional ones) and the semantic role of each of them. A *complement* is defined as an argument of a word which is governed by that word. A lexical item has at most one argument which is not a complement; we term such an argument an *external argument*. External arguments include the subject of a verb, the 'subject' (lexical Specifier) of an NP (e.g., *'Bill's* interpretation of the poem'), and the head of a modifier, regardless of the latter's category (e.g., Adjective: 'the tall *man*; PP: 'the *house* on the corner'; Adverb: 'to *read* quickly').

1.2. *Abstract case*

The fundamental principle of the theory of abstract case can be stated as follows:

(8) *NP, if NP has phonetic content and has no case.
(Chomsky 1981:49)

Principle (8) is understood as a filter which rejects a sentence containing an overt NP which has not been assigned case.

There are two ways of assigning abstract case to a NP. Both

are defined in terms of configurational structure. First, in the procedure of *structural case assignment*, an NP is assigned case if this NP bears a particular structural relation to a category. The relation can be that of government; in this event, the governor must be one of the case-assigning categories, which we will refer to as *case donors*: (transitive) verbs and prepositions. Examples of structural case assignment include case-marking of the direct object of a verb (e.g., *to read a book*) and the complement of a preposition (e.g., *about the movie*). But the relation need not be that of government; in English, an NP is marked in the 'genitive case' (*'s*) when c-commanded by a N', which is not the head of the phrase; e.g., [$_{NP}$[$_{NP}$John's] [$_{N'}$book about case]]. Second, in the procedure of *inherent case assignment*, the lexical entry of a case donor can specify that this word assigns case to an argument not assigned structural case. An example of inherent case assignment in English is the assignment of case to the second complement in a 'double object' construction; e.g., *to give John a book* (Chomsky 1981:170).

A noun, adjective, adverb, or intransitive verb (including a passive verb form derived from a transitive verb) cannot assign case. One of the consequences of abstract case theory is that various constructions are excluded, such as the following:

(9) a. *destruction *the city* (cf. destruction of the city)
b. *tired *me* (cf. tired of me)
c. *It was noticed *John* leaving. (cf. John was noticed leaving, It was noticed that John was leaving)

In each such case, an NP (in italics) is governed by a category which is not a case donor: a Noun in (9a), an Adjective in (9b), and a passive verb form in (9c). The NP cannot receive case; as a consequence of (8) the resulting construction is ungrammatical.

1.3. *Morphological case*

Let us now turn to morphological case in an inflected language such as Russian, where the case-related facts to be accounted for become considerably more complex. The basic principles of abstract case theory, presented above, can serve as the core of a theory of morphological case (see Freidin and Babby 1984 and Babby 1984b). The notion of abstract case can be replaced by that of *syntactic case*; that is, structural and inherent case assignment are specified in terms of actual morphological case. For

example, in Russian, the configurational position of the direct object is assigned the Accusative case. These principles can be supplemented by the following:

(10) a. A *case receptor* is a lexical category which expresses morphological case: a noun, an adjective, or a participle.

b. Lexical case assignment: The lexical representation of a word assigns a particular morphological case to any arguments which i) are expressed by a case receptor, and ii) are not assigned structural case.

c. Case percolation: When an NP is assigned case, the head of this NP, and all modifiers of this head which are case receptors, are marked with this case.

The resulting theory can account for routine agreement phenomena, as illustrated in (11a), given the lexical representations in (11b).

(11) a. Ja preobrazoval laboratoriju v naučnyj institut.
'I transformed the laboratory into a research institute.'

b. *preobrazovat'* <V> : NP _____ NP (v)
agent theme goal

v <P> : _____ NP[ACC]
theme

The transitive verb *preobrazovat'* 'to transform' is subcategorized for an NP subject identifying the agent performing the action, and an NP direct object identifying the theme, or entity undergoing the action.[8] Each of these arguments is assigned case by structural case assignment. The verb is also (optionally) subcategorized for a prepositional phrase argument headed by *v*. This preposition in turn assigns accusative case to its complement NP, by means of inherent case assignment. Case percolation assigns case marking to the heads of the NPs and to any adjectival modifiers.

There remain instances of case assignment which are problematic for a configurationally-based theory of case assignment. These instances, which have been subsumed under the rubric of *semantic case assignment* (Freidin and Babby 1984), can be divided into two groups.

First, an NP in a particular case can have an adverbial function, such as the accusative of duration and various uses of the instrumental:

(12) a. Dožd' stučal v okna *vsju noč'*. (Čexov)
'Rain beat on the window *all night*[ACC].'

b. [On] *malčiškoj* pošel na zavod. (cited by Vinogradov et al. 1960)
'He went to the factory (as) *a boy*[INST].'
c. . . . čitat' *celymi nočami.*
' . . . to read *whole nights* [INST] through'
d. On opredelil ego značenie *sledujuščimi slovami.*
'He defined his meaning *with the following words*[INST].'

There is no configurational environment which makes it possible to predict the case form of the NPs in (12). Clearly an analysis of such NPs as being accompanied by a phonologically null preposition which assigns it case should be looked at with suspicion in the absence of compelling empirical evidence. The second instance of semantic case assignment is of interest because two different cases are permitted in the apparently identical syntactic environment. Examples include the genitive of negation and the predicate instrumental when these cases alternate with the accusative and nominative cases, respectively:

(13) a. On ne jest *jabloki/jablok.*
'He does not eat *apples*[ACC/GEN]'
b. On byl *pisatel'/pisatelem.*
'He was *a writer*[NOM/INST].'

To analyze such variation simply as optional case assignment would not be enlightening: it would not account for the elusive but palpable semantic differentiation between the two choices of case.

We now turn to a grammatical analysis of simile constructions expressed by *kak* expressions.

2. *Kak expressions functioning as adverbials*

2.1. *Kak expressions as manner adverbials*

Kak can introduce a clause functioning as a manner adverbial; e.g.,

(14) a. [Ona] ostalas' sidet', kak ona sidela. (cited by Vinogradov et al. 1960)
'She remained sitting as she had been sitting.'
b. Vygnali [ego], kak sobaku mužik vygonjaet iz xaty. (Gogol')
'(They) chased him out as a peasant chases a dog out of a hut.'

The set of constructions considered here as manner adverbials have

a distinctive cluster of three properties. First, the clause can be preceded by the demonstrative manner adverb *tak* 'thus' (e.g., *ostalas' sidet' tak, kak . . .*). Second, the entire phrase introduced by *kak* is non-detached. That is, the phrase does not represent a complete intonational unit: there is no pause before *kak*, and the clause after *kak* does not bear its own sentence stress or melody contour distinct from that of the matrix clause.[9] As a non-detached adverbial, the most natural position for a manner adverb *kak* phrase is at the end of the sentence.[10] Third, like manner adverbials generally, the *kak* comparative clause answers the question 'how' (homophonically *kak* in Russian), which in turn can combine only with verbs describing a suitably non-stative event. Consider, for example, the following Question/Answer pair:

(15) a. *Kak ty sčitaeš' ego xuliganom?
('How do you consider him a hooligan?')
b. *Ja sčitaju ego xuliganom kak Boris sčitaet ego xuliganom.
('I consider him a hooligan as Boris considers him a hooligan.')

(15b) is unacceptable if the *kak* phrase is read as non-detached. This sentence can be made acceptable if the *kak* phrase is detached, but in this event its interpretation is that of a factive adverbial (see below), not a manner adverbial. The point is made even clearer by considering the corresponding interrogative, (15a). In order for a *kak* expression to be a manner adverbial, it must constitute a natural answer to an interrogative based on *kak*. Since the predicate is stative, the interrogative, and the corresponding *kak* construction in reply, are unacceptable. In contrast, (14a), for example, is a natural answer to the question *Kak ona ostalas' sidet'?* 'How did she remain sitting?'.

The logical structure of a manner adverbial introduced by *kak* has a quantificational (i.e., bound variable) structure. A manner adverbial is a property of a predicate. The comparative clause does not function as a proposition, but rather as an open sentence describing a property of a predicate in the form of a manner adverbial of the embedded predicate. This *kak* phrase, describing a property, then functions as a manner adverbial of the matrix clause.[11] The meaning of simile results from the fact that the same property of a predicate (i.e., manner adverbial) is said to be shared by the two events described in the matrix and embedded

clauses.

In (14), the complement of *kak* is an (open) sentence. A *kak* phrase functioning as a manner adverbial can also have an NP complement. Consider the following examples:

(16) a. *Glaza* goreli, kak zvezdy.
'*Eyes*[NOM] glowed like stars [NOM].'
b. Ja ljubil *tebja*, kak brata.
'I loved *you*[ACC] like a brother[ACC].'
c. Verju *tebe*, kak otcu rodnomu.
'I believe *you*[DAT] like my own father[DAT].'
d. Ona boitsja *menja*, kak ognja.
'She fears *me*[GEN] like fire[GEN].'
e. Ja by žil i dyšal *toboj*, kak prekrasnejšeju mečtoju. (Gogol')
'I would live and breathe *you*[INST] like a most wonderful dream[INST].'

The complement of *kak* corresponds to another phrase in the sentence (italicized in (16)) in a way which is essential to the interpretation of the comparative construction. This correspondence constitutes the axis of simile. We call the correspondence *linkage*, and the phrase referred to—the *linkage target*. Formally, it is easy to identify the linkage target in (16), because an NP complement of *kak* agrees with it in case. In assigning a meaning to constructions such as (16), we are inevitably led back to their paraphrases with full clauses, which are always reconstructible, given the identity of the linkage target:

(17) a. Glaza goreli, kak zvezdy goreli/ gorjat.
'Eyes glowed as the stars glowed/ as stars glow.'
b. Ja ljubil tebja, kak ja ljubil/ ja ljublju/ ljubjat brata.
'I loved you, as I loved/ I love/ as one loves a brother.'
c. Verju tebe, kak ja verju/ verjat otcu rodnomu.
'I believe you as I believe/ one believes one's own father.'
d. Ona boitsja menja, kak ona boitsja/ bojatsja ognja.
'She fears me, as she fears/ one fears fire.'
e. Ja by žil i dyšal toboj, kak ja by žil i dyšal/ živut i dyšat prekrasnejšeju mečtoju.
'I would live and breathe you as I would live/ one would live and breathe a most wonderful dream.

These clauses can be reconstructed mechanically as follows:

(18) a. The matrix clause (e.g., in 16b, *I loved you*) is taken as a base;
b. the complement of ***kak*** is substituted for the linkage target, adopting its syntactic function (*I loved my brother*); and
c. (optionally) the subject and tense of the resulting clause are replaced with generic equivalents: the indefinite (plural) third person and the 'gnomic present', respectively; e.g., *One loved one's brother, I love my brother, One loves one's brother*).

Given the fact that such clausal paraphrases can readily be reconstructed, it might be hypothesized that constructions with NP complements are actually 'reduced' or 'elliptical' forms of the constructions with clausal complements, thereby accounting for the case marking of the NP by the usual mechanisms that operate within a clause. This, however, is not a viable approach. First, there is no ellipsis rule which generally operates over a natural class of clauses which includes manner adverbials expressing simile. The non-detached adverbial clauses in (19a) cannot undergo such an ellipsis rule; the non-detached adverbial clauses in (19b,c) even share the logical structure of quantification, which characterizes manner adverbial simile constructions, and yet not even they can undergo ellipsis:[12]

(19) a. On prišel potomu, čto ona prišla.
'He came because she had come.'
*On prišel potomu, čto ona.
('He came because she.')
b. Prodajut produkty, gde prodajut lekarstvo.
'They sell produce where they sell drugs.'
*Prodajut produkty gde lekarstvo.
('They sell produce where drugs.')
c. On prišel, kogda ja prišel.
'He arrived when I arrived.'
*On prišel kogda ja.
('He arrived when I.')

Second, as we will see in the ensuing discussion, there are a variety of ***kak*** constructions in which an NP complement of ***kak*** agrees with a linkage target, and yet there is no clausal paraphrase of the ***kak*** expression. Third, manner adverb ***kak*** constructions recall comparative constructions, which exhibit similar ellipsis

phenomena:

(20) On govorit po-russki lučse, čem ja (govorju po-russki).
'He speaks Russian better than I/than I speak Russian.'

We will return to this parallel in section 6. For the time being, we note that parallel constructions in English are best analyzed not by deriving them from full clause paraphrases, but by treating the word 'than' as a preposition (Hankamer 1973, Chomsky 1977).

It is clear that the case form of an NP complement of *kak* performs an important diacritic function: that of identifying the linkage target. Furthermore, the case form of the complement is clearly not determined by configurational context. How is case assigned to an NP complement of *kak*, and how are such constructions interpreted, given the apparent freedom in case selection? We now turn to these questions, beginning with the question of what is a possible linkage target.

Not every NP in the matrix clause is an eligible linkage target of a *kak* phrase with an NP complement. For example, in (21), say that we want to designate *drug* 'friend' as the linkage target, so that the resulting interpretation would be 'I love a friend's son like I love a sister's son'. This interpretation is impossible:

(21) *Ja ljublju syna *druga*, kak sestry.
('I love the son of *a friend*[GEN] as of a sister[GEN].')

What distinguishes the unacceptable (21) from the acceptable constructions in (16) is that in the former, the intended linkage target is contained in another NP.

The linkage target can also be a Prepositional Phrase (PP):

(22) a. Ja obraščalsja *s nim*, kak s rebenkom.
'I dealt *with him* as with a child.'
b. Ja stradala *za milogo* . . . *Ivana* . . . kak za syna. (Čexov)
'I suffered for *dear Ivan* as for a son.

Agreement is not required in such cases: the prepositions of the *kak* complement and its linkage target need not even be the same:

(23) On brosilsja *na palubu*, kak v boj. (Gor'kij)
'He ran *onto the deck* as into battle.'

But not just any PP is an admissible linkage target:

(24) *On podslušival moj razgovor *s ženoj*, kak s kollegoj. ('He was listening to my conversation *with my wife* as with a

colleague.')

Again, a phrase within a NP, even one parallel to the complement of *kak*, is not an eligible linkage target. A phrase within a PP is also ineligible to be a linkage target:

(25) *On obraščalsja s *nim*, kak rebenkom.
('He dealt with *him*[INST] like a child[INST].')
*Ja stradala za milogo *Ivana* kak syna.
('I suffered for dear *Ivan*[ACC] like a son[ACC].')

The italicized NPs are contained in a PP; despite the fact that these NPs agree in case with the complement of *kak*, they cannot be interpreted as linkage targets.

The examples discussed so far involve a linkage target which either is an argument of the verb (acceptable) or is internal to an argument of the verb (unacceptable). An eligible linkage target need not be an argument: it can be one of a range of adverbials, most typically temporal and locative. The adverbial can be expressed by a lexical adverb, a PP, or an NP assigned 'semantic case'.

(26) a. On vedet sebja *zdes'* kak doma.
'He behaves himself here as at home.'
b. On rabotaet *v subbotu* kak v budničnyj den'.
'He works on Saturday as on a weekday.'
c. On rabotal *noč'ju*, kak dnem.
'He worked at night as during the day.'

As might be expected, a phrase within an adverbial phrase is not an eligible linkage target:

(27) *On rabotal v voskresen'e kak subbotu.
('He worked on Sunday like Saturday.')

When the complement of *kak* and its linkage target are adverbials, linkage is not impeded by differences among lexical adverbs, NPs assigned semantic case, and Prepositional Phrases (28a,b). It is even possible to mix semantic classes of PPs, such as temporal and locational (28c):

(28) a. On rabotaet *doma* kak na zavode.
'He works *at home* as at the factory.'
b. *Každuju subbotu* on rabotaet kak v budničnyj den'.
'*Every Saturday* he works as on a week day.'
c. *Do vojny* on žil kak v raju.
'*Before the war* he lived as in paradise.'

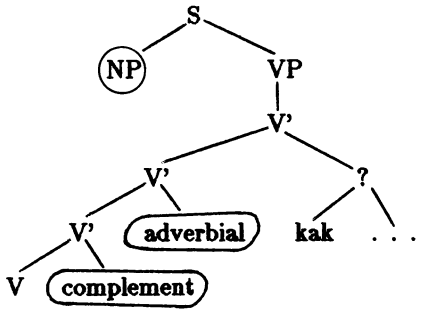
Agreement, then, is only imposed upon the linkage of arguments, not the linkage of adverbials. Furthermore, adverbials are not obligatory components of the sentence; therefore, the linkage target need not be expressed:

(29) a. Zdes' vse ostanetsja, kak ran'še.
'Here all will remain, as earlier.'
b. On vedet sebja kak doma.
'He is behaving as at home.'
c. On bežal, kak v detstve.
'He was running as in his childhood.'
d. On èto delaet kak iz-za čuvstva dolga.
'He does this as from a feeling of obligation.'
e. On uže rabotaet kak dnem.
'He is already working as during the day.'

This is a further indication that agreement is not imposed upon adverbials, since in examples such as these, it is not even clear what the complement of ***kak*** should agree with.

To sum up, then, when ***kak*** taking a non-clausal complement functions as a manner adverbial expressing simile, the linkage target can be an argument of the matrix verb or an adverbial modifier of that verb, but not a category internal to either of these. When the linkage target is an NP argument, the complement of ***kak*** must agree with it. The range of possible linkage targets can be summarized by the following tree diagram, in which possible linkage targets are encircled:

(30)



We now define the set of eligible linkage targets of a ***kak*** phrase in terms of ***linkage domain***, as follows:

(31) A category C is in the linkage domain of a ***kak*** phrase K if and only if:
a) K and C are in the same clause (S); and

b) any maximal projection dominating C also dominates K.

Condition (b) excludes the linkage of a *kak* phrase with any category contained in an NP or PP, as required.

It would appear quite difficult, if not impossible, to assume that configurational context plays a role in determining the form of the complement of a manner *kak* phrase. The complement can be an S, NP, PP, or Adverbial Phrase (AdvP); if the complement is an NP, it can appear in any morphological case. This variation is not accompanied by any difference in the lexical meaning of *kak*. It would seem, then, that the indicated analysis would be to put no constraints on the complement of *kak*, other than a categorial one (excluding Adjective Phrase and VP complements). The rule interpreting the simile construction must seek out the correct linkage target, looking within the linkage domain for an appropriate phrase, and checking for agreement if the phrase is an NP argument. We might assume that there is a further categorial check as well. For example, the linkage target of an NP complement of *kak* could not be a PP. This, however, is an automatic consequence of the interpretive process described in (18): substituting an NP for a PP complement will simply result in an uninterpretable structure.

It may be that there is no eligible linkage target within the linkage domain. In this event, an open sentence describing the property of a predicate is reconstructed by adding the complement of *kak* at either of two places. If the lexical representation permits the complement of *kak* to be interpreted as an argument, it is inserted under the minimal V' in the reconstructed clause. If the complement of *kak* can be interpreted as a predicate adverbial, it is embedded at a maximal V' position in the paraphrase. In order to understand what happens in such instances, consider (32).

(32) a. On vedet sebja kak s drugom.
'He is behaving like with a friend.'

b. On govorit kak s drugom.
'He is speaking as with a friend.'

The predicate *vesti sebja* 'to behave' is not subcatagorized for a prepositional phrase headed by *s* 'with'; therefore, the complement of *kak* in (32a) is interpreted as an adverbial: he is behaving as he behaves when with a friend. The predicate *govorit'* 'to speak' is subcategorized for such a prepositional phrase. Therefore, the

complement of *kak* in (32b) can be interpreted as an argument: he is speaking as he speaks with a friend. It is conceivable that the complement of *kak* could be interpreted as either an argument or an adverbial. This is the case in (32b), which in fact also has the following interpretation: he is speaking (to whomever) as he speaks (to anyone) when he is with a friend.

The following question remains: what is the category of the phrase marked with a question mark in (30)? As we proceed, we will see that the distribution of *kak* phrases is precisely that of Prepositional Phrases (PPs). Also, there is considerable evidence that prepositions take not only the traditional NP complement, but PP, Adverb Phrase (AdvP), and clausal complements as well (Jackendoff 1973, Emonds 1976). Cf. the following English examples:

(33) a. The cowboy rode *out* [$_{NP}$the door]/[$_{PP}$of the barn].
b. I was here *before* [$_{NP}$class]/[$_{AdvP}$yesterday]/[$_{S}$you arrived].

The ability of *kak* to take a range of complements, then, is not unique among prepositions. Also, like other prepositions, *kak* does not take Adjective Phrase or Verb Phrase complements. As noted by Vinogradov et al. (1960:369), apparent cases of Adjective Phrase complements of *kak* are functionally substantives. *Kak*, then, can be viewed as a preposition in Russian.

Unlike English prepositions, Russian prepositions rarely take complements of categories other than NP. PP complements are exceedingly rare. Babby (this volume) cites the case of time expressions, such as *v bez pjati vosem'* 'at five of eight'. I know of none which take an S complement.[13] In English, the possibility of a PP complement of a Preposition can be accounted for by calling the rule assigning structural case to the object of a preposition optional (within Abstract Case theory, optional rules are considered optimal). In Russian, as evidenced by the existence of morphological case, case assignment after prepositions is typically obligatory, so that prepositions cannot normally have PP complements. The obligatory nature of case assignment could be explained by assuming that prepositional case assignment in Russian is inherent, not structural. But when a preposition does not assign case, such as *kak*, it automatically becomes possible for the preposition to have a PP, AdvP, or S complement.

An instructive contrast to the *kak* phrases discussed thus far is provided by the preposition *podobno*, which also can be

translated as 'like, as' and appears in the same configurational position. E.g.,

(34) Glaza ee goreli podobno zvezdam.
'Her eyes glowed like stars.'

Podobno differs from *kak*, however, in two respects. First, via inherent case marking, *podobno* assigns the dative case to its complement. It would follow from the considerations mentioned above that unlike *kak*, *podobno* would not take a PP complement, regardless of whether the linkage target was an argument or adverbial. This is correct:

(35) a. *Obraščalis' *s nim* podobno s rebenkom.
('They dealt *with him* like with a child.')
b. *On drožal podobno v lixoradke.
('He shook as in a fever.')

Second, *podobno* in its adverbial function must take the clause subject as its linkage target:

(36) *Ja ljublju *tebja* podobno bratu.
('I love *you*[ACC] like (I love) a brother[DAT].')

In this regard, *podobno* has parallels among other 'controlled' adverbial PPs; cf., e.g.,

(37) My budem slušat' vas s ulybkoj.
'We will listen to you with a smile.'

The PP *s ulybkoj* 'with a smile' predicates of someone the property of having a smile. In (37), it is clear that the subject, 'we', will have the smile, not the object 'you'. In functional terms, prepositions which inherently case-mark their complements will not be able to enjoy the freedom of interpretation exhibited by the preposition *kak*, which does not case-mark its complement: when the ability of the complement to agree with its linkage target is lost, some constraint must be imposed, or the resulting ambiguity may be unacceptable. It is not surprising that a constraint in the form of subject reference is imposed.

2.2. *Kak expressions as factive adverbials*

Kak expressions functioning as a factive adverbial (expressing simile) differ from those functioning as manner adverbials in both their semantic and syntactic characteristics. The complement of *kak* cannot be a clause:

(38) *Ves' den' idet dožd', kak včera šel sneg ves' den'.
('It is raining all day, like it snowed all day yesterday.')

But the complement can be non-clausal: an NP or a PP. Some examples:

(39) a. Kak vse vrači, *on* izbegal lečit' blizkix. (cited by Čeremisina 1976)
'Like all doctors, *he* avoided treating those close to him.'
b. *Segodnja*, kak i včera, ves' den' idet dožd'.
'*Today*, like yesterday, it is raining all day.'
c. On govoril *vjalo*, kak sprosonok.
'He spoke *listlessly*, as in his sleep.'
d. On vzdrognul, kak pod toporom.
'He shuddered, as from an axe.'

Semantically, factive adverbs differ from manner adverbials most strikingly in that the factive adverbials do not have the logical structure of quantification. The sense of factive adverbials is this. The matrix clause predicates a property of the subject. The factive adverbial indicates that this property is also true, or just as true, of another entity, or under different circumstances. The axis of similarity is the truth of a predicate, rather than a property of it. For example, it is the fact that someone does not treat those close to him which makes the subject of (39a) resemble all (other) doctors, not the way in which he treats, or does not treat, them. In (39b), the adverbial adds the information that raining was a fact yesterday, as well as today. Factive adverbials have wider scope than manner adverbials: the former can refer to the latter as linkage targets, as in (39c). Finally, a linkage target need not be expressed if the complement of *kak* can be interpreted as a predicate adverbial; this is the case in (39d).

Formally, factive *kak* expressions a) must be detached, and b) can often be accompanied by *tak že* in the same intonational unit as the *kak* phrase (e.g., 39b could read *segodnja, tak že kak včera, . . .* *Tak že* is not possible under certain circumstances, such as under the irreal interpretation of the phrase in (39c,d) ('as if') or in the quantificational context of (39a) ('all doctors'). The linkage

target can be the matrix subject, which it agrees with, or a predicate adverbial, for which no agreement is necessary. But the linkage target cannot be a complement of the matrix verb:

(40) *Kak blizkogo, vrač tebja ne budet lečit'.
('Like one near to him, the doctor will not treat you.')

That is, when read with detachment, (40) cannot have the sense of 'the doctor will not treat you, and it is also true that he will/does not treat those close to him'. (40) is grammatical when read without detachment, in which case it is understood that you are close to the doctor, and therefore he will not treat you. But this is a different construction, that of a circumstantial adverbial, discussed below.

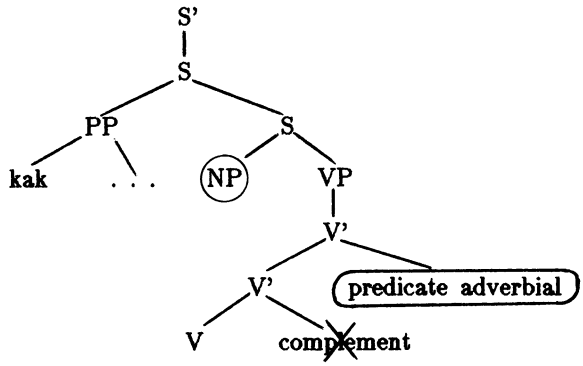
Why should a factive *kak* expression, unlike a manner adverbial, not be permitted to take the complement of the matrix verb as its linkage target? The principles discussed above provide an answer for this question, when we introduce one additional principle of phrase structure: a detached adverbial is not embedded at the V' level, but outside the VP entirely, at the sentence level (see Rappaport 1983, 1984). We assume that sentence level syntax is represented by phrase structures like those generated by the following rules:

(41) a. S' -> COMP - S
b. S -> S - *sentence adverbial*
c. S -> NP - VP

COMP represents a complementizer position, filled by certain subordinating conjunctions or an interrogative word. S nodes are then recursively generated so as to combine sentence adverbials and speech event adverbials with their external argument: an S category. The minimal S dominates the core predication of the sentence, expressed by the subject NP and the predicate VP.

Now the phrase structure of a construction containing a factive *kak* expression looks like the following, where the admissible linkage targets are encircled and an inadmissible linkage target is X-ed out:

(42)



The complement of the verb lies outside the linkage domain of the *kak* phrase as defined in (31c): there is a maximal projection dominating the complement which does not also dominate the *kak* phrase: the VP. On the other hand, the subject NP lies inside the linkage domain of the *kak* phrase: the first maximal projection above the subject is the S' dominating the entire clause, which also dominates the *kak* phrase.

But a problem remains. The detached factive *kak* expression can also take a predicate adverbial as a linkage target. Such an adverbial is embedded within the VP, so that, given the definition of linkage domain given in (31), it, like the verb complement, lies outside the linkage domain of the *kak* adverbial. This fact, along with the agreement constraint, points up a difference between argument linkage and modifier linkage. We now incorporate this difference in a revised definition of the linkage domain:

(43) A category C is in the linkage domain of *kak* phrase K if and only if:
   a. The first S' node dominating K must also dominate C; and
   b. If C is an argument of a lexical category, or is contained in such an argument, then any maximal projection dominating C must also dominate K.

Condition (a) is a restatement of (31a) requiring that P and K be in the same clause, defined in terms of the new distinction between S and S'. Condition (b) is also a restatement of the corresponding condition in the previous definition of linkage domain, but now restricted to arguments and to categories contained in arguments. A consequence of the new formulation is that the linkage domain dips farther down in the phrase structure to reach a non-argument

than an argument.

This stipulated differentiation between arguments and non-arguments has its motivation in the way semantic roles are assigned. To begin a theme developed further below, semantic roles are assigned at the level of the maximal projection. Case, a marker of semantic roles, does not percolate across maximal projections. And as we see here, linkage, which manipulates categories bearing the same semantic role, is also restricted in its ability to 'cross' maximal projections. Referring to (42), linkage from the *kak* phrase cannot penetrate the VP down to a complement of the verb, because this complement is assigned its semantic role in another maximal projection, the VP. Linkage can, however, penetrate the VP down to a predicate adverbial, because a modifier is the converse of an argument: rather than be assigned a semantic role, a modifier assigns a semantic role to what it modifies. Once a category is assigned a semantic role, everything this category dominates is opaque to linkage from above. The VP differs from NPs and PPs, of course, in that it is not assigned a thematic role.

2.3. *Kak expressions as circumstantial adverbials*

Kak expressions function also as *circumstantial* adverbials, providing information about the background circumstances accompanying an event in the form of simile. In the following examples, the circumstantial *kak* expression is non-detached:

(44) a. *Ja* edu kak revizor.
'*I*[NOM] am travelling as an inspector[NOM].'
b. Ja uvažaju *vas* kak kommunista.
'I respect *you*[ACC] as a communist[ACC].'
c. My sudim *o vas* kak o kommuniste.
'We are casting judgement *on you*[LOC] as a communist[LOC].'

(45) *On* nažil bol'šie den'gi kak advokat.
'*He*[NOM] amassed large sums of money as a lawyer[NOM].'

(46) a. *On* byl uvolen kak progul'ščik.
'*He*[NOM] was fired as a truant[NOM].'
b. *Ego* prognali kak bezdel'nika.
'(They) drove *him*[ACC] out as a do-nothing[ACC].'
c. Ja prišel *k vam* kak k ženščine.

'I came *to you*[DAT] as (to) a woman[DAT].'

Kak expressions as circumstantial adverbials can sometimes be paraphrased with the phrase *v kačestve* 'in the capacity'; e.g., 'I am travelling in the capacity of an inspector'. In (45) and (46), there is a clear sense of temporal and causal modification, respectively. The complement of circumstantial *kak* can be either an NP or PP. As is apparent from the examples, a circumstantial *kak* phrase agrees with its linkage target. However, a full clausal complement is not possible. An attempt to construct such a complement invariably results in a palpable shift in meaning, to the interpretation of a manner adverbial. Again, it is not possible to account for the oblique case of NP complement of *kak* by viewing it as the vestigial remains of a full clause.

In contrast to both manner and factive *kak* constructions, a predicational relationship is established between the linkage target and the complement of circumstantial *kak*. The complement of *kak* is interpreted as a nominal property which is then predicated of the linkage target. For example, (44a) is actually ambiguous between a circumstantial and manner adverbial reading. The difference is precisely whether or not it is understood that the subject ('I') is an inspector. Under the circumstantial reading, the NP complement of *kak, revizor* 'inspector', identifies a property ('being an inspector') which is then predicated of the subject ('I am an inspector'). In the manner reading, there is no such predicational relation: I do something like an inspector, but I am not one. This predicational relation has much in common with the coreference relation called *functional control* in recent work (cf., e.g., Bresnan 1982a for discussion and references). In particular, control is only possible when the controller (in our terminology, the linkage target), is an argument. This is the case for predicational circumstantial *kak* expressions as well. The motivation for this restriction is this: the function of an argument is referential, to identify an entity. The function of an adverbial, on the other hand, is not referential. It is the referential function of an argument which permits a predication to be made of it. Even when the argument is a PP, the function of the Preposition is merely to overtly specify the semantic role of its complement with respect to the matrix verb. Therefore, linkage across PP arguments assigns a predicational relation between their arguments, rather than the PPs themselves.

Since they are non-detached predicate adverbials, the

circumstantial *kak* phrases discussed so far occupy the same configurational position as manner *kak* phrases: inside the VP. Consequently, the same phrases which are in the linkage domain of manner *kak* are in the linkage domain of circumstantial *kak*: arguments of the matrix verb (whether the subject or complement(s)) and predicate adverbials. The fact that circumstantial *kak* expressions are predicational accounts for the additional restriction that no adverbial is an eligible linkage target. As in the previous cases, it does not seem possible to account for the case form of an NP complement by reference to configurational context. Rather, we continue with our assumption made above: *kak* is a preposition which does not assign case. Its complement can take the form of an NP in any case or any PP. The predicational rule then assigns coreference between the complement of *kak* and an argument in the linkage domain of *kak*. Since the control rule is restricted to arguments, the complement of *kak* must bear the same semantic role marker as the intended linkage target, be the marker a preposition or case marking. The interpretive rule then proceeds to assign the appropriate circumstantial reading.

Thus far, discussion of circumstantial *kak* phrases has been limited to instances in which the *kak* phrase is non-detached. A circumstantial *kak* expression can be detached as well, in which case it is best found in a position other than sentence-final. In this event, however, its properties are somewhat different: the linkage target must be the grammatical subject, and the target must be in the nominative case:

(47) *On*, kak čelovek s dobrym serdcem, serdilsja redko. (cited by Švedova et al. 1980)
'*He*[NOM], as a person[NOM] with a kind heart, rarely became angry.'
Kak jurist, *ja* ne mogu soglasit'sja s ètim rešeniem.
'As a lawyer[NOM], *I*[NOM] cannot agree with this decision.'

When we try to construct a circumstantial *kak* expression with a non-subject linkage target, the result is ungrammaticality:

(48) *Kak voru, ja ne mogu *vam* poverit'.
('As a thief[DAT], I cannot believe *you*[DAT].')
*Kak s neveždoj, ja ne mogu soglasit'sja *s vami*.
('As with an ignoramus[INST], I cannot agree with you[INST].')

This restriction follows directly from the principles discussed so far. Because the *kak* phrase is detached, it stands outside the matrix VP; consequently, complements of the verb do not lie in its linkage domain. Because the *kak* phrase is predicational, it cannot take an adverbial as a linkage target. The only admissible linkage target remaining is the subject; the nominative case form of the complement of *kak* follows from case agreement with its (only) linkage target.

2.4. *Summary of adverbial uses of kak*

To sum up, then, the following has been proposed:

(49) a. *Kak* is a preposition which does not assign case. Like all prepositions, it has the potential of taking an NP, PP, AdvP, or S' complement.

b. A *kak* expression can link only with a phrase in its linkage domain; if the linkage target is an argument, then the complement of *kak* must bear the marker of the intended semantic role, as required by the lexical representation of the matrix verb. This marker is either the appropriate preposition or case marking.

c. When a *kak* expression is predicational, its linkage target must be an argument, and not an adverbial.

Manner *kak* expressions are neither detached nor predicational; therefore, their linkage target is constrained by principle (b) to arguments and predicate adverbials. Factive *kak* expressions are detached, but not predicational; therefore, by principle (b) and the definition of linkage domain given in (31), the linkage target cannot be a complement of the verb; it can be a predicate adverbial or the subject. Circumstantial *kak* expressions are predicational, so that the choice of linkage target is constrained by principles (b) and (c). Circumstantial *kak* expressions can be either non-detached or detached. When non-detached, the linkage target can be any argument, but no adverbial. When detached, the linkage target of the circumstantial *kak* expression can no longer be a complement of the matrix verb, because condition (b) would not be satisfied: such an argument is not in the linkage domain of the kak phrase. The only phrase in the sentence eligible to be the linkage target is the subject, with which the complement of *kak* agrees.

3. *Kak expressions functioning as a complement*

A *kak* expression can function as the *complement* of its matrix predicate; e.g.:

(50) a. On rascenil *ego slova* kak podderžku.
'He interpreted *his words*[ACC] as support[ACC].'

b. Snova oščuščaem *žizn'* kak noviznu.
'(We) again experience *life*[ACC] as a novelty[ACC].'

c. Belinskij xarakterizoval *'Nevskij Prospekt'* kak proizvedenie, sočetavšee vysokoe i smešnoe.
'Belinskij characterized *'Nevsky Prospect'*[ACC] as a work[ACC] combining the noble and the humorous.'

d. *On* vygljadit kak mal'čik.
'*He*[NOM] looks like a boy[NOM].'

A *kak* expression can also function as the complement of a matrix noun:

(51) a. . . . logičeskoe opredelenie *propozicii* kak semantičeskoj kategorii . . .
'. . . the logical definition of a *proposition*[GEN] as a semantic category[GEN] . . .'

b. Ono opredelilo ponimanie *reči* kak komponenta čelovečeskoj dejatel'nosti.
'It defined the understanding of *speech*[GEN] as a component[GEN] of human activity.'

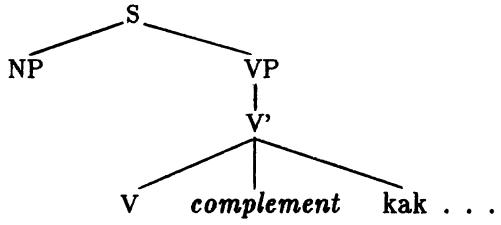
c. . . . vzgljad *na jazyk* kak na orudie . . .
'. . . the perspective *on language* as on a tool . . .'

The complement function of *kak* in such constructions is indicated by the fact that the *kak* phrase can combine only with certain lexical items, with a particular argument structure. The complement of *kak* is interpreted as a property (e.g., in 50a, 'being support') which is predicated of another argument (e.g., 'his words'). That is, complement *kak* phrases, like circumstantial adverbial ones, are predicational. In some cases (e.g., 50a), the matrix predicate requires an argument of the form satisfied by the *kak* expressions; the sentence would be incomplete without the latter. The predicand (that of which the property is being predicated) is the direct object, if it is present (50a–c) or, otherwise, the subject (50d). It is not possible to predicate a (full, closed) proposition of an entity. Correspondingly, there is no full clause paraphrase of the *kak* phrases functioning as complements.

Turning now to the formal relation between the complement

kak phrase and its linkage target, we note that the complement of *kak* agrees in case with an argument of the matrix verb, and that this complement lies in the linkage domain of the *kak* phrase.[14] This follows from the principles presented above, as can be seen by considering the following phrase structure of complement *kak* phrases:

(52)



The predicational rule imposes linkage of the *kak* phrase with another argument of the verb. This other complement lies in the linkage domain of the *kak* phrase and, as an argument, it triggers agreement in the complement of *kak*.

4. *Kak expressions functioning as attributes*

A *kak* expression functioning as an attribute can appear inside an NP as a restrictive post-head modifier. The linkage target can be a phrase outside the NP, in which case we observe agreement:

(53) *U nee* glaza, kak u menja.
'She has eyes as I have [literally, "by her are eyes like by me"].'

Or the linkage target can be the head of the modified NP, in which case the complement of *kak* invariably stands in the nominative case, regardless of the case form of the NP:

(54) Ego supruga . . . veselaja govorun'ja s *glazami*, kak višni.
(cited by Švedova et al. 1980)
'His spouse is a cheerful chatterbox with *eyes*[INST] like cherries[NOM].'

The attributive *kak* phrase is often found in combination with the demonstrative pronominal adjective *takoj*. The properties just mentioned apply here as well. For example, the following sentence is ambiguous:

(55) *Ja* by xotel imet' *takogo učenika*, kak on.
'I[NOM] would want to have *such a pupil*[ACC] as him[NOM].'
(cited in Švedova et al. 1980)

If the linkage target is the subject, the complement of *kak* takes the nominative in order to agree with it. If the linkage target is the head of the modified NP, the complement of *kak* takes the nominative. Contrast this example with:

(56) U menja net *takogo učenika*, kak on.
'I[GEN] don't have *such a student* [literally, "by me there is no such student"] as he[NOM].'

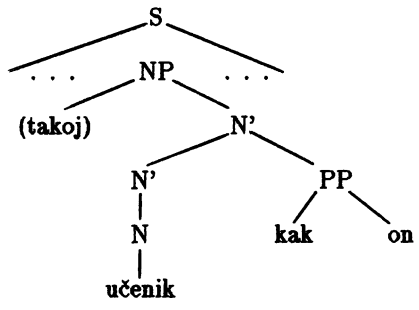
By changing the syntactic construction, the possessor, corresponding to the subject of (55), is not in the nominative, but in the genitive. As a result, the nominative complement of *kak* can only be understood as referring to the head of the modified NP. Of course, there are sometimes pragmatic reasons why an ambiguity which is grammatically permitted does not appear to be present:

(57) *Jamščik* byl v takom že izumlenii ot ego ščedrosti, kak i sam francuz.
'*The coach driver*[NOM] was in the same bewilderment from his generosity as the Frenchman himself.'

The grammatically admissible interpretation predicating being a Frenchman of the bewilderment is obviously nonsense.

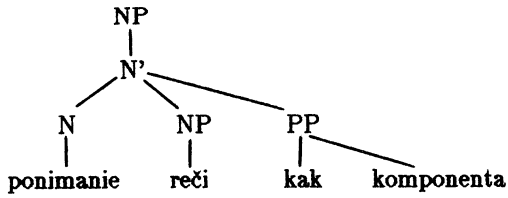
The interpretations with a linkage target outside the NP containing the *kak* phrase are unproblematic, following directly from the theory developed thus far. Why should attributive *kak* expressions assign the nominative case when the linkage target is the head of the modified NP? The first guess one might make is that a *kak* expression contained in a NP rather than a VP or S necessarily assigns the nominative case. This hypothesis is immediately falsified by the case of complement *kak* expressions embedded in NPs (cf. 51). The answer lies in the configurational definition of linkage domain. The attributive *kak* constructions discussed thus far share the following outline of a phrase structure (the NP is taken from (55) and (56)):

(58)



As linkage domain has been defined in (43), the lower N' is a possible linkage target. Now contrast (58) with the structure of a complement *kak* phrase within an NP, such as (51b):

(59)



The difference, of course, is that in (59), the NP internal linkage target is an NP, while in (58), it is an N'.

The importance of the distinction between linkage with an NP versus an N' is indicated by another construction. The attributes exemplified above have been non-detached, and therefore restrictive. *Kak* phrases can also function as detached, and therefore non-restrictive, attributes:

(60) a. *Ona*, kak kinozvezda, privlekaet vnimanie.
'*She*[NOM], as a movie star[NOM], attracts attention.'

b. *Ej*, kak kinozvezdoj, vse interestujutsja.
'*In her*[INST], as in a move star[INST], everyone is interested.'

c. *O nej*, kak o kinozvezde, vse xotjat znat' vse.
'*About her*, as about a movie star, everyone wants to know everything.'

d. *Vam*, kak gostju, ne imeet smysla taskat'sja po gorodu s lišnim vesom. (from a letter)
'*For you*[DAT], as a guest[DAT], it doesn't make sense to carry extra weight around town.'

These *kak* phrases are clearly part of the Noun Phrase: they cannot be separated and, for example, moved to the front of the sentence. The fact that they bear a certain circumstantial adverbial sense does not indicate that they are syntactically adverbials; even a relative clause, whose attributive credentials are impeccable, can carry an overtone of causality:

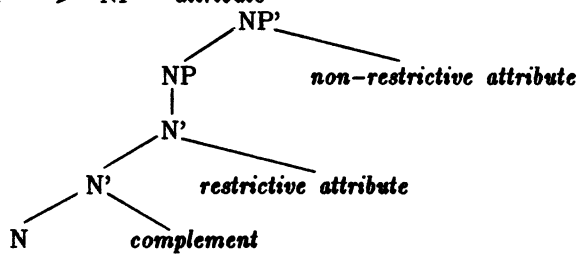
(61) Vse vyšli potixon'ku krome služanki, kotoraja xotela zasnut'.
'Everyone left quietly except for the servant, who wanted to go to sleep.'

We assume that detached, non-restrictive attributes are embedded

as sisters to the NP, under a higher category called NP' (see Rappaport 1984). This NP' node is now assumed to be the maximal projection of N. The corresponding phrase structure rule is given in (62a); the resulting structure of a Noun Phrase is displayed in (62b):

(62) a. NP' -> NP - *attribute*

b.



Non-restrictive attributes are predicated of their sister NP by a rule of attribute interpretation. This sister NP, then, is necessarily the linkage target, and we observe agreement. On the other hand, a *kak* phrase functioning as a restrictive attribute is predicated of a N'; in this case, there is no case agreement. Recall that agreement has been considered required when the linkage target is an NP argument. Strictly, only an NP (or PP) category can be an argument, not a smaller projection of N or P. Therefore, the nominative case results from a categorially permissible linkage between NP and N' which is not accompanied by agreement. The use of the nominative case for the complement of *kak* is naturally interpreted as the use of the unmarked case. The fact that agreement is only required for linkage with an NP, and not some other projection of N, strongly suggests that NP is the carrier of syntactic case.

To a certain extent, we have only displaced the problem: we have posited a new maximal projection NP', but left NP as the domain of morphological case marking. This is not an arbitrary move, as there is a fundamental difference in principle between the two categories. As discussed in Rappaport 1983, NP dominates all information which defines the reference of the nominal expression; NP' is the domain of supplementary information: non-restrictive attributes and 'specifier adverbials'. In structural and inherent case assignment (although not in semantic case assignment), case functions essentially as a diacritic marker, identifying NPs performing certain functions: that of an argument bearing a

particular semantic role, or of a modifier performing a particular semantic type. It is only that material contained under the NP node which in fact bears the identified relation to another part of the sentence; information embedded along with the NP under the NP' node functions at a different predicational plane, adding predications which supplement, rather than complement, the core predication of the sentence. Thus, there is a clear functional motivation for viewing syntactic case as a property of the NP, rather than of the maximal projection NP'.

5. *Kak expressions functioning as degree expressions*

A *kak* phrase can function as a degree expression, modifying a verb (63), adverb (64), or adjective (65):

(63) a. On ljubit *Ameriku* kak svoju rodinu.
'He loves *America*[ACC] as (much as) his native land[ACC].'

b. Ja ustal, kak nikogda.
'I am as tired as ever.'

(64) a. Možno podnjat' *damu* na vozdux tak že legko, kak bokal šampanskogo.
'It is possible to raise a *woman*[ACC] into the air as easily as a goblet[ACC] of champagne.'

b. *Nigde* ne rasklanivajutsja tak blagorodno i neprinuždenno, kak na Nevskom prospekte. (Gogol')
'*Nowhere* do (they) bow so nobly and naturally as on Nevsky prospect.'

(65) a. *Laevskij* . . . tak že opasen dlja obščestva, kak xolernaja mikroba. (Čexov)
'*Laevskij*[NOM] is just as dangerous to society as the microbe[NOM] for the black plague.'

b. Tak že neprinuždenna, kak v Stal'xejme byla ee poxodka.
'Just as natural as in Stalheim was her walk.'

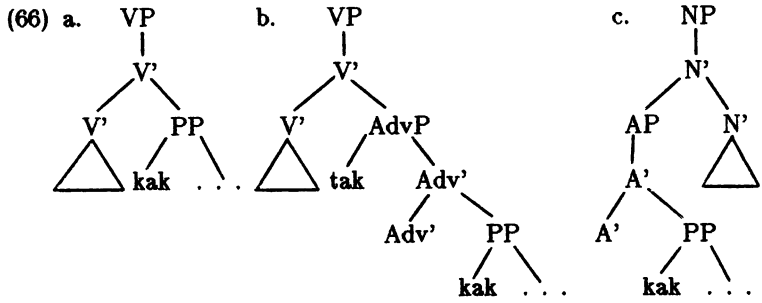
c. Časy viseli na tonkoj, kak nitka, *cepočke*. (cited by Švedova et al. 1980)
'The watch hung on a slim, like a thread[NOM], *chain*[LOC].'

d. Katjuša, sijaja . . . černymi kak mokraja smorodina *glazami*, letela emu navstreču . . . (cited by Švedova et al. 1980)

'Katie, glowing with her *eyes*[INST] black like wet currants[NOM], flew to meet him.'

In all three cases, the complement of ***kak*** can be an NP, PP, or AdvP. Only when the degree expression modifies the predicate of a clause (be it a verb, as in (63), or a predicate adjective, as in (65a,b) is a full clause paraphrase possible (e.g., ***Ja ustal, kak ja nikogda ne ustaval***).

The theory developed so far predicts possible linkage targets and case-marking behavior. To see how this theory fares, consider the phrase structures of the three degree expressions:



The configurational context of the degree ***kak*** expression modifying a verb, shown in (a), is the same as that of manner ***kak*** expressions: the ***kak*** phrase includes in its linkage domain any verbal argument, whether its category is NP or PP, and any adverbial; these are possible linkage targets, and the complement of ***kak*** must agree with an NP argument. The examples in (63) illustrate the correctness of these predictions. Degree ***kak*** expressions modifying an adverb, as shown by diagram (b), are more deeply embedded, but this does not matter. As linkage domain is defined, what is important is that there be no maximal projections containing the linkage target not also containing the ***kak*** phrase; how deeply embedded the ***kak*** phrase is does not matter, as long as it is in the same clause as its linkage target. Thus, a degree ***kak*** phrase modifying an adverbial shares the same potential linkage targets as a manner adverbial, and will express agreement. The examples cited in (64) indicate that this indeed is the case. Finally, as indicated in diagram (c), a degree ***kak*** expression modifying an attributive adjective includes the N' head of that adjective in its linkage domain. In fact, such a ***kak*** phrase necessarily takes this N' head as its linkage target, becoming itself part of the attributive predication interpreting its Adjective Phrase

head. However, an N' is not marked with syntactic case. As a result, the NP complement of a ***kak*** phrase taking this phrase as its linkage target must stand in the nominative case.

6. *Summary and Conclusions*

The essence of simile constructions is linkage: the relation between the complement of ***kak*** and some element of the matrix clause. Linkage is a form of deixis, which, following Brecht (1974), we understand as the interpretation of a sign by means of an obligatory reference to an intermediary, an orientation point, standing outside the sign itself. The ***kak*** phrase expressing simile is the deictic element; its interpretation requires identifying its orientation point, which we have designated its 'linkage target'.

The deixis of simile linkage shares a pattern observed in various forms of referential and temporal deixis. A domain of admissible orientation points can be defined for a class of deictic elements. Some such elements are free to choose any orientation point within this domain, while others are subject to a constraint in some form which restricts the set of possible orientation points even further, to a very small, if not unary, set (see, e.g., Rappaport 1984). While a few ***kak*** constructions (those performing complement, non-restrictive attributive, and adjectival degree functions) are subject to an interpretive rule selecting a unique linkage target, most ***kak*** constructions are free to choose any phrase in the linkage domain as the linkage target. Syntactic case, functioning in parallel with prepositions as a diacritic marker for identifying the semantic function of an NP, plays an essential role in identifying the linkage target within the linkage domain. It has been the goal of this paper to develop a theory of precisely how this identification is made. This theory has been based on a) the optional and free assignment of syntactic case to the complement of the preposition ***kak***, b) configurational constraints on admissible linkage targets, and c) syntactic case as a property of the NP (in contrast to morphological case, which percolates to the case receptor categories which are internal constituents of an NP).

The specific proposals made in this paper can be summarized as follows:

1. In its function of expressing simile, ***kak*** is best treated as a maximally unconstrained preposition. It assigns no case, and can take complements of any of the following categories: NP, PP, AdvP, and S'.

2. A *kak* phrase expressing simile is a deictic element, requiring reference to a linkage target for interpretation.

3. The linkage target must be in the linkage domain of the *kak* phrase, where linkage domain is given a precise definition in configurational terms (43). In the case of predicational *kak* phrases, an additional constraint is imposed as well.

4. The complement of *kak* must include whatever marker of semantic function the linkage target carries.
   a. If the linkage target is a nominal argument, the case form serves as this marker.
   b. If the linkage target is a PP argument, the preposition itself serves as this marker.

5. If the linkage target is not an argument, then only a looser, categorial match between the complement of *kak* and the linkage target is imposed. An NP linked with a non-argument (N') takes the unmarked nominative case.

We conclude by placing the syntax of comparative *kak* constructions into perspective along two dimensions. First, there are other lexical means of expressing simile, such as by the preposition *podobno* 'like, as' discussed in section 2.1. This preposition is more restricted in its syntactic distribution (it can only be embedded as an S or V' constituent) and it assigns the dative case to its complement.[15] It cannot be predicational. It is left with only two syntactic functions: manner adverbial (illustrated by 34), and factive adverbial (67):

(67) Podobno meteoritu, *kosmičeskij korabl'* možet sgoret'.
(cited by Švedova et al. 1980)
'Like a meteorite[DAT], *a spacecraft*[NOM] can burn up.'

As noted earlier, the case-marking property of *podobno* results in the constraint that only the clause subject can be the linkage target. Second, comparative constructions with the 'preposition' *čem* do not express a meaning of simile, but of relative degree. The syntactic distribution of such constructions is precisely that of simile *kak* constructions of degree, discussed in section 5; within the

confines of these constructions, the syntax of linkage and case marking properties of *čem* are precisely that of comparative ***kak***. A selective illustration of this point is provided by the following examples.

The examples in (68) illustrate comparative degree modifiers of the verb:

(68) a. Anna pomogaet *žene Ivana* čašče, čem žene Borisa.
'Anna helps *Ivan's wife*[DAT] more often than Boris' wife[DAT].'

b. *Anna pomogaet žene *Ivana* čašče, čem Borisa.
('Anna helps *Ivan's*[GEN] wife more often than Boris'[GEN].')

c. Anna pomogaet žene Ivana čašče, čem ona pomogaet žene Borisa.
'Anna helps Ivan's wife more often than she helps Boris' wife.'

In (68a), the indirect object is the linkage target of the comparative expression; the complement of *čem* correspondingly is an NP in the (agreeing) dative case. In (68b), an attempt to designate an NP within the subject as the linkage target results in unacceptability, even if the complement of *čem* agrees. Example (68c) illustrates that *čem*, like the analogous degree ***kak***, can take a clausal complement as well as a non-clausal one.

Sentence (69) illustrates a comparative degree phrase modifying a predicate adjective:

(69) *V serdcax prostyx* čuvstvo krasoty i veličija prirody sil'nee, živee vo sto krat, čem v nas... (Lermontov)
'*In simple hearts* a feeling for the beauty and greatness of nature is a hundred times stronger and more alive than in us.'

Linkage in this construction is between PPs expressing an adverbial (metaphorically locational) function. The preposition in the complement of *čem* is obligatory, as expected from the definition of linkage domain.

Finally, in (70), the comparative degree phrase modifies an adverbial:

(70) a. On proigryvaet *mne* čašče, čem vam.
'He loses *to me*[DAT] more often than to you[DAT].'

b. On proigryvaet čašče, čem ran'še.
'He is losing more often than before.'

The linkage target is a complement of the verb in (70a), and a (temporal) adverbial in (70b). In the former case, the complement of *čem* agrees with the NP argument linkage target.

It is apparent, then, that the principles developed here to account for the interpretation and case marking of *kak* constructions expressing simile are not restricted to these constructions. Even though *podobno* constructions express the same sort of simile meaning as (a subset of) *kak* constructions, there is more of a syntactic similarity between the latter and comparative *čem* constructions expressing relative degree. The reason is that *čem* shares with *kak* the formal property of being a preposition with a) minimal categorial restrictions, and b) optional, free case assignment. *Podobno*, on the other hand, is a conventional preposition, which a) can take only an NP complement, and b) must assign that complement the dative case.

NOTES

[1]I would like to thank Alan Timberlake for bringing the problem addressed here to my attention. I am also grateful for the assistance of my informants, Vladimir Cherkassky and Jurij Slezkin. Work on this paper has been partially supported by a Research Grant from the Research Institute of the University of Texas at Austin.

[2]See, for example, Chomsky 1981; on case in Slavic in particular, see, e.g., Freidin and Babby 1984, Pesetsky 1982, and Franks 1983.

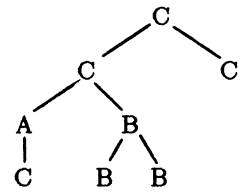
[3]We exclude from consideration, then, 1) uses of *kak* not bearing on simile (e.g., as an interrogative or complementizer, 'how'); and 2) the use of other lexical items in simile expressions (e.g., *slovno, točno, kak budto* 'as if, as though'. Other simile expressions differ from *kak* only in certain minor details; further discussion of this question would naturally supplement the analysis presented here, but it has been eliminated in the interests of brevity. On simile expressions in the form of a predicate nominal, see Nichols 1981, especially Chapter Six.

[4]For further discussion of the following assumptions and their application to Russian syntax (with references), see Rappaport 1984, Chapter Five.

[5]We beg the question here of whether or not the grammar actually contains a component with phrase structure rules; the same effect, that of constraining possible syntactic structures, can be realized in other ways, such as by an elaborated system of lexical rules.

[6]The contrast between VP and V' is not essential to the present discussion; it is introduced here in order to preserve the parallelism among various lexical categories; see the discussion of the projections of N to follow.

[7]For example, in the following configuration, the node labelled A c-commands those labelled B, but not those labelled C:



[8]We have (arbitrarily) chosen to describe the semantic roles of NPs in terms of the theory presented by Gruber 1965/1976.

[9]On the linguistic function of detachment, see Rappaport 1983, 1984. Comma placement is not an accurate indication of detachment in Russian.

[10]In a marked stylistic variant, a manner adverb *kak* phrase can be detached and stand in sentence-initial position; e.g.,

> Kak ix naučili i kak im prikazyvali, tak oni i obxodilis' s nami. (Aksakov, cited in Gvozdev 1973)
> 'As (they) had taught them and had ordered them, in that way they dealt with us.'

[11]A close parallel is observed in relative clause constructions. Consider, for example:

i. The one [who was in the lead role of that movie] has now been elected president.

The reference of the lexically empty subject, *the one*, is provided by the relative clause, which describes not a proposition, but a distinctive referential property: having been in the lead role of that movie.

[12]But cf.

i. Starik zvenel medaljami, kak kon' sbrujej.
'The old man jingled his medals, like a horse—its harness.'

We assume that this is a clausal complement of *kak* reduced by the rule of 'Gapping', which applies to a variety of complex sentence constructions, especially those involving coordination; e.g.,

ii. Starik zvenel medaljami, a kon'—sbrujej.
'The old man jingled his medals, and the horse—its harness.'

[13]But in Rappaport 1984, it is suggested that the notion of a preposition be interpreted far more widely than is traditional, including a range of adverbs and subordinating conjunctions.

[14]As linkage domain is defined in (31), the linkage target cannot be internal to a PP. The preposition *o* appears to be exceptional in this regard when a *kak* phrase functions as a complement, cf.:

i. Govorjat o *dekabristax* kak (o) pionerax russkoj svobody.
'(They) speak of the *Decembrists*[LOC] as (about) pioneers[LOC] of Russian freedom.'

With the preposition *o* 'about' after *kak*, the sentence is ambiguous between a manner and a complement interpretation: the difference is perhaps most clearly seen as a difference between whether the Decembrists *are* pioneers (complement reading) or not (manner reading). Without the preposition, only the complement reading is possible.

[15]There is an obviously related adjectival form, *podobnyj*, which also assigns the dative case to its complement.

Grammatical Functions of Noun Phrases in Balkan Slavic Languages and the So-called Category of Case

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The object of description in this paper is the Balkan Slavic languages (i.e. Macedonian and Bulgarian), precisely because these languages are marked in the Slavic linguistic world as languages with no category of case. In my opinion what happened in these languages makes explicit some characteristics of the category of case which are obscure, although obvious, in the so-called synthetic languages[1], i.e. languages with case inflection; among other things it makes clear the functional hierarchy of particular case forms; also, within the framework of a semantically oriented grammar—and that is the framework presupposed in this paper—the historical development of Bulgarian and Macedonian suggests a tentative redefinition of the category of case such that the latter is no longer obligatorily associated with the nominal case inflection (= with the presence of declension) and thus no longer excludes the Balkan Slavic languages (and many other analytic languages as well). I shall try to demonstrate that the results of this investigation in a way can be seen as a continuation and a confirmation of ideas contained in the well known work of R. Jakobson on case in Russian.

The theoretical framework that I accept here is an elaboration of the theory of grammatical description presented in a new Polish descriptive grammar (Gramatyka Współczesnego Języka Polskiego, I. Składnia, Ossolineum 1984) which in turn derives from the Polish tradition of the logical interpretation of a text in natural language. I accept two types and only two types of semantic units appearing in the pre-lexical, underlying structure of any message. These are: the large set of predicates and the relatively small set of indices binding those predicates and thus serving to identify objects referred to by the predicates. All the indices which are not built into individual (proper) names (indices such as 'here', 'there',

'now', 'we', 'you'...) derive from the primordial index 'I' referring the text to the speaker. I see a linguistic text as an interplay, a hierarchy of predicates free or bound with indices. Consequently the semantic compatibility of any two units means that they are able to appear as a hierarchical structure consisting of a predicate and its argument[2]. It follows that an argument is defined with the aid of its function alone, independently of its structure. Any unit, be it an index, a free or a bound predicate, can appear in the argumental position if dominated by a predicate.

In order to define the key notion of domination I should like to introduce some examples. However, before introducing any linguistic material, let me recall the well known handicap of all semantic inquiry. Namely, notwithstanding the theoretical assumption of independence of the semantic structure of the text from its formal segmentation, we have to operate with such semantic compounds as are registered in the lexicon, until we have a full semantic dictionary of a given language and thus know the semantic primitives needed to reconstruct that lexicon. In other words, we must operate with (selected) lexemes and only with lexemes as examples of semantic units. Now, let us return to the definition of semantic domination. I assume that the semantic structure of any predicate able to appear with arguments (= able to appear in the position of domination) embraces two parts; let us symbolize them respectively as S_1 and S_2. While S_1 is the relational content of itself, S_2 is what is implied about the arguments of the said relation; it could be defined as the sum total of selectional restrictions imposed on the arguments. E.g. for 'sleep' S_2 would be 'living creature', for 'read' - 'human being' + 'text', for 'hungry' - 'living creature' + 'food', for 'frequently' - 'event', and so on. Assuming that the semantic compatibility of any two linguistic units (i.e. the possibility of their composing a minimal semantic structure, that of a predicate and its argument) consists in their sharing some content in common (let it be S_c), we could say that for the dominating unit $S_c \subset S_2$ (read: S_c is contained in S_2) while for the dominated unit $S_c \subset S_1$ (S_c is contained in S_1).

In terms of the outlined theory we could say that in languages with nominal case inflection (i.e. with nouns marked for case as a paradigmatic, modifying category) case endings belong to the exponents of domination, more precisely to the devices of

formal accomodation of the semantically compatible lexemes in the text. Other such exponents are prepositions, the pattern of linearization and intonational contour of the syntactic unit in question. Note that our formula is so general that it works at the sentential level and at the level of a noun phrase as well, hence it accounts both for constructions of the type V(NP) (= a verb dominating a noun phrase) and for those of the type NP(NP) (= a noun phrase dominating another noun phrase). Note also for the moment that we do not preclude that the enumerated classes of exponents have or do not have any semantics of their own. The mutual hierarchy of exponents is not always easy to detect. Usually a preposition, if present, implies a definite case ending and thus is of preclusive importance. However, since the majority of case forms can be used without a preposition and since there are in Slavic languages instances where two case endings are governed by the same preposition (cf. Polish *pod stół* 'under the table' (motion/ACC) vs *pod stołem* 'under the table' (rest/INST.) and the like or *na stół* 'onto the table' (ACC) vs *na stole* 'on the table' (LOC)), the case ending should be given independent status. In instances of case homonymy linearization or—as the highest factor—intonation has to be taken into account. It should be mentioned that the distribution of case markers (case endings) in languages with nominal declension by definition points to the dominated unit while its dominating partner stays unmarked for case. In other words, not only the existence of domination but also its direction is expressed with the aid of case endings.

I shall proceed now to the description of the Balkan Slavic situation insofar as the exponents of domination in V(NP) and NP(NP) are concerned. This geographical area is highly differentiated in this respect. The tempo of abolition of the old system and the introduction of new patterns of grammatical accommodation depend, generally speaking, on three factors: (a) peripheral vs central position with respect to the foci of innovations; (b) degree of bilingualism or of polylingualism, i.e. intensity of interference of other, non-Slavic Balkan languages; (c) presence vs absence of a Standard learned norm favoring certain constructions and eliminating others. An additional complication arises from the fact that frequently the peripheral position which favors archaisms is at the same time the position of maximal exposure to external interferences. In any case all three factors collaborate in that the process of reconstruction of the grammatical

system is much more advanced in Macedonian than in Bulgarian territory. Hence I shall concentrate on Macedonian facts.

At this point I should like to emphasize once more that I am interested in what happened to Balkan Slavic languages from the point of view of its consequences for the present-day grammatical systems, and not in the reconstruction of the relative chronology and direct causes of the processes in question. I am interested in the chronology only insofar as it is reflected in the geography of the phenomena under description. I shall present certain new patterns especially symptomatic of the tendencies governing the whole process of reconstruction of the non-ommissible grammatical markers after the abolition of the case system. It goes without saying that my patterns will be somewhat idealized since—outside the standard norm—neither in Macedonian nor in Bulgarian dialects do we find absolutely balanced and static systems.

The basic fact that must be mentioned is the survival, albeit in a reduced form, of the case paradigm of genuine personal pronouns and of the so-called personal pronouns of the third person. In literary Macedonian the paradigm is as follows:

(1)

	1 pers. sg.	...	3 pers. sg.		
			masc.	neutr.	femin.
Nominative	*jas*		*toj*	*toa*	*taa*
Accusative	*mene me*		*nego go*		*nea ja*
Dative	*mene mi*		*nemu mu*		*nejze ì*

Some vital characteristics of this paradigm should be underlined:

- first of all, the absence of the genitive case; it is a well known fact that genuine personal pronouns do not have genitives; the paradigm of the third person is founded on that of the first and second persons;
- secondly, there are the double series of orthotonic and atonic (clitic) case forms in both the oblique cases;
- thirdly, of importance is the syncretism of Acc = Dat in the 1 and 2 person orthotonic forms; these cases differ in the atonic series alone; however, functionally this is of no consequence since the orthotonic forms are bound in the sense that they are not used without clitics, cf. *mene me vide* 'it's me he saw' under emphasis as opposed to *me vide* 'he/ she saw me', *tebe ti dadov* 'I gave (it) to you' under emphasis as opposed to *ti dadov* 'it's to you that I

gave it', etc.

• fourthly, not without interest is the syncretism of masc.=neutr. in both the oblique cases.

As we shall see, all four characteristics of pronominal forms are mapped onto the general pattern of the syntactic accomodation of the noun.

The accommodation pattern of noun phrases constituted by common names depends on their referential characteristics, i.e. on whether their referents are thought of as identified or not. However, in both "paradigms of accommodation" there are three different constructions equivalent to the three pronominal cases. Let us call them respectively: the construction of interdependence between the NP and the verb (equivalent to the nominative, abbreviated CI), the construction of direct dependence of the NP on the verb (equivalent to the accusative, CDD) and the construction of indirect dependence of the NP on the verb (equivalent to the dative, CID). The pattern is the following:

(2)

	REFERENT NOT IDENTIFIED (–R)	REFERENT IDENTIFIED (+R)
CI	*Došol eden* čovek. 'A man came.' *Došla edna* žena. 'A woman came.' *Došle edni* luǵe. 'Some people came.'	*Čovekot* došol. 'The man came.' *Ženata* došla. 'The woman came.' *Luǵeto* došle. 'The people came.'
CDD	*(Go) vidov eden* čovek. 'I saw a (certain) man.' *(Ja) vidov edna* žena. 'I saw a (certain) woman.' *(Gi) vidov edni* luǵe. 'I saw some (specific) people.'	*Go vidov* čovekot. 'I saw the man.' *Ja vidov* ženata. 'I saw the woman.' *Gi vidov* luǵeto. 'I saw the people.'
CID	*(Mu) dadov na eden* čovek. 'I gave to a (certain) man.' *(I) dadov na edna* žena. 'I gave to a (certain) woman.' *(Im) dadov na edni* luǵe. 'I gave to some (specific) people.	*Mu dadov na* čovekot. 'I gave to the man.' *I dadov na* ženata. 'I gave to the woman.' *Im dadov na* luǵeto. 'I gave to the people.'

As can be seen, the relation in the CI is two-directional: the verb requires that the NP be unmarked for grammatical dependence and accommodates to that NP both in number and in gender. A NP used in this way serves as name for the argument which is diathetically most important with respect to the chosen formalization of the predicate. Its referent is primarily human or, secondarily, anything that can be thought of as a cause and/or source of action. Let us call that argument a_1.

It is in CDD and CID that the -R and +R paradigms differ. This difference consists in the obligatory presence of pronominal clitics in the +R. The clitics agree both in number and gender with the NP they accompany. In the -R the clitics are optional and rather infrequent. It is obvious that the clitics as dependence markers are transferred here from the pronominal paradigm. It is worth mentioning that from the point of view of linearization the clitics are not free: they must directly precede the finite verbal form.

Both in CDD and CID the relation of dependence is one-directional.

In the CDD, if +R, the verb requires the accusative clitic. The NP in question serves as a name for the passive object of the action (a_2) whose cause and/or source is a_1. In other words, the CDD implies the CI. It is not without interest for the semantic interpretation of the construction that Macedonian still preserves (optional) morphological differences between dependent and independent forms insofar as masculine proper names and terms of kinship are concerned. Cf. *Dojde Stojan* 'Stojan came' vs *Go vidov Stojan(a)* 'I saw Stojan', *Mu dadov na Stojan(a)* 'I gave to Stojan', as well as *Dojde tatko mi* 'My father came' vs *Go vidov tatka mi* 'I saw my father', *Mu rekov na tatka mi* 'I told my father', and the like. It could be said that the old case ending emphasizes the secondary function of the person as object (and not source) of action.[3]

The pattern of dependence characteristic of CID can be seen and interpreted in at least two ways, depending on the treatment given to the preposition *na*. Namely, as a result of the dichotomous division of a CID *na* can be matched alternatively with the NP or with the verb. We are confronted here with the methodological but not irrelevant problem of the status of prepositions in the semantic and syntactic interpretation of the text

(Cf. Gladney, this volume). I am inclined to treat them, if not always, then at least in frequent instances, as bearers (modifiers) of predicative content; hence I should like to match them with the verb. However, I am perfectly aware that this is a problem of methodological convention. Let me abstain from the argument till the conclusion of this paper. For the moment I shall assume that *na* is a free morpheme required by some verbs as, *mutatis mutandis*, the Slavic **sę* is in its function of diathetic operator. Consequently I should say that it is *na* and not the verb that requires the dative clitic as dependence marker.

The NP in the CID (= a_3) serves primarily as a name of the human addressee (the beneficiary) of the action that a_1 is performing on a_2. Hence the CID implies both CI and CDD. Verbs that accommodate the CID and not the CDD are secondary semantic (and syntactic) derivatives[4].

As can be seen, the CI, CDD and CID correspond functionally to the nominative, accusative and dative cases of languages with case inflection. Differences in distribution and in frequency are not greater than those between particular languages with case inflection.

The instrumental case has no direct functional equivalent in Standard Macedonian nor in any other Balkan Slavic system. Its central functions are signaled through the preposition *co* (cf. *X krpi čorapa so crn konec* 'X is mending a sock with black thread', *X seče leb so nož* 'X is cutting bread with a knife'; *X živee so sestra mu* 'X lives with his sister', *X zboruva so Y* 'X is talking with Y', etc.)[5] or transferred to the NP unmarked for dependence, formally identical with the NP that enters the CI. However, in sentences with an unmarked NP, in addition to the CI, the former does not stand in agreement with the verb nor with the CI but is simply concatenated; it is obligatorily -R and implies a CI marked as +R. Let us symbolize such a concatenated NP as CC. Semantically sentences with CC belong to two different types. One of them marginal and optional, is constituted by the verbs *polni, napolnuva* 'fill', 'fill up', cf. *ke go napolnam bazenot voda / so voda* 'I'll fill up the basin with water', and the like. The second type, frequent and of basic structural importance, is the pattern with the copula, where the CC formalizes a predicate and not an argument, cf. *Toj čovek e moja sreka* 'This person is my happiness', *Avtomobilot e najgolemo zlo* 'The automobile is the greatest evil', *Pavle stana inžener* 'Pavel became an engineer', *Ana ja odbraa pretsedatel*

'They chose Ana as the president/ chair', etc. Since in the framework of the Balkan Slavic system the CC should be given autonomous status, we can just as well treat it as partial equivalent of the instrumental case.

In connection with the locative case no commentary is needed since in present-day Slavic languages it is an obligatory "prepositional" case.

Finally, let us say explicitly that all the prepositions other than *na* accommodate the NP formally identical with that entering the CDD and/or the CID but not accompanied by pronominal clitics. This emphasizes the specific status of *na* as the so-called grammatical preposition (i.e. preposition able to govern a "case-construction"). Let us symbolize all the prepositional constructions except the CID as PC.

From what has been said it follows that Standard Macedonian at the sentential level has ***morphological*** exponents for all the functions associated primarily (in "synthetic" languages) with N, A, D, I and L respectively. Let us now discuss one of the key problems of the restructuring of the Balkan Slavic grammatical system—the disappearance of the genitive case.

We can easily dispose of the two functions of the genitive at the sentential level. The so-called genitive of negation is formally a bound variant of the accusative; hence it is only natural that the function is transferred to the CDD. This tendency is encountered in all the Slavic languages. Insofar as the so-called partitive (i.e. the sentential exponent of the relation "part - whole",) is concerned, the Macedonian equivalents depend on whether the "whole" is thought of as +R or as -R. If +R, the *od*-construction appears; if -R, the CC, cf. *Daj mi od mlekoto* 'Give me some of the milk' vs *Daj mi mleko* 'Give me some milk' as opposed to *Daj mi go mlekoto* 'Give me the milk', and the like.

For the functional identity of what is known as the genitive case we have to consider the NP(NP) type of construction (= nominal dependence construction, NDC), so let us first characterize the type as such. In a sense we could say that the NDC are nominalizations since they represent the sentential content built into a nominal frame. The governing NP (= NP_1) is a name of the diathetically more important argument (the one chosen as the starting point of the propositional perspective) or of the constituting predicate itself (cf., e.g., *knigata na Petre* 'the book of Peter/Peter's book' but *čitanjeto na kniga* 'the reading of a book',

čitanje kniga 'reading a book', and the like), while the governed NP (= NP_2) formalizes the argument qualified for the second rank in the communicative hierarchy of the message. Depending on the constituting predicate and on the referential characteristics (+/-R), the NP_2 appears as PC or as CC. In other words, when not itself manifested in NP_1, the constituting predicate has for its exponent a preposition or is implied by the simple concatenation of the two arguments (cf. *Čovekot ima brada* 'The man has a beard' vs *čovek so brada* 'the man with a beard', *Vo čašata ima voda* 'There is water in the glass' vs *čaša voda* 'a glass of water', *Na livada ima cveke* 'There are flowers in the field' vs *cveke na livada* 'flowers in the field', etc.). There are some few basic relations such as localization, possession, quantitative evaluation, etc. that underlie the NDC constructions in Slavic (and not only in Slavic) languages.[6] However, although formally correct, semantically our description does not fit some NDC which have special standing and require special treatment. These are NDC expressing semantic structures which, being obvious and hence not fit to underlie an assertion, do not appear in sentential formalization, but only as NP's. Cf. e.g. NP's such as *majka mu na mojot kolega* 'the mother of my colleague' or *kosata na devojčeto* 'the hair of the girl', and the like. Consider also the nonexistence (except for some instances of double assertion - 'it is not so that ... is not true') of sentences such as **Mojot kolega ima majka* 'My colleague has a mother' or **Devojčeto ima kosa* 'The girl has hair', and the like. In my opinion we are faced here with the basic function that in languages with case inflection is associated with the genitive. It should be emphasized that syntactically this function stands in complementary distribution with case functions realized at the sentential level and the obvious semantic analogy ('passive human beneficiary') allows us to assign it the same formal devices as the sentential "dative" function.[7]

Semantic structures appearing only as the NDC formalization are not numerous (cf. the one-directional assertion of parenthood, the ascribing of an inalienable part to the corresponding "whole") but are of basic importance and great frequency. They present a pattern generalized throughout the so-called semantic field of possession (kinship relations, part-whole relation, actual possession) and are also recognized as equivalent to the subjective and objective genitive, i.e. in constructions where the NP_1 formalizes the predicate and is realized as a morphological nominalization[8].

Let us review the exponents of grammatical dependence appearing in Standard Macedonian in the aforementioned nominal constructions.

As was previously emphasized, there is no genitive in the pronominal case paradigm. This function is fulfilled primarily by the so-called possessive pronouns or possessive adjectives of the type *moj...*, *naš...* etc. In Balkan Slavic (as in many other Slavic linguistic systems) we find also possessive adjectives of the third person, cf. Standard Macedonian *negov* (masc. sg.), *nejzin* (fem. sg.), *nivni* (pl.). As a whole Slavic languages are known for having generalized the category of possessive adjectives; in older periods of Slavic linguistic history numerous derivatives from personal (proper and common) names were in use all over the area and in South Slavic possessive adjectives are still today a living category. Consequently in Balkan Slavic they are prime candidates for the genitive function[9]. Note that it is only man that we speak of as kin, that our best examples of the inalienable part-whole relation are those concerning parts of the human body, that true possessors can only be human, and finally that the subjective genitive (*genetivus subjectivus*) (joined to the nominative) is primarily a name for a human source of action; on the other hand note that possessive adjectives by definition are derived from personal names alone (and exceptionally from names of other-nonhuman-living creatures).

In present-day Standard Macedonian the possessive adjectives (PA) are in decline.

As far as kinship terms (the names of immediate family) are concerned, the dominating construction is the CID, cf. *tatko mi* 'my father'/*mojot tatko* 'my father' vs. (under emphasis) *tatko mi moj* '*my* father', cf. *na Petre majka mu* 'Peter's mother' (and *Petrovata majka*), *sestra i na mojata prijatelka* 'sister of my friend', etc.

In all the other NDCs the preposition *na* appears as the basic exponent of dependence; also the preposition *od* is found, marginally in some constructions, as an optional variant, cf. *glavata na Petre* 'Peter's head' (and *Petrovata glava*), *knigata na Ana* (and *Aninata kniga*) 'Ana's book', *kukata na tatko mi* (and *kukata od tatko mi*) 'my father's house', *bregot na ezeroto* 'the shore of the lake' (and *bregot od ezeroto*), *sovetot na brat mu* 'the advice of his brother', *doaǵanjeto na našite gosti* 'the arrival of our guests', etc.

Finally where constructions equivalent to the objective

genitive (*genetivus objectivus*) are characterized as -R, then CC also appears, cf. *pienje tutun* 'tobacco smoking' vs. *pienjeto na tutunot* 'the smoking of the tobacco', *čitanje kniga* 'book reading' vs. *čitanjeto na knigata* 'the reading of the book', etc.

To sum up: in the NDC besides PA there appears as basic exponent of grammatical dependence a preposition *na* which on semantic and syntactic grounds could be identified as the *na* from the CID; it constitutes an interesting link between the exponents of the dative and those of the genitive case. In present-day Standard Macedonian the NDC with *na* is the basic equivalent of the genitive.

Generally speaking the proposed rough equivalence between the "synthetic" cases of other Slavic languages and Standard Macedonian constructions runs as follows:

(3)

N ~ CI
A ~ CDD
D ~ CID
I ~ CC and PC (*so*)
L ~ PC (*na, vo...*)
G ~ NDC

As can be seen, neither the dependence paradigm of a NP nor the inventory of grammaticalized devices constituting that paradigm is poorer in a typical Balkan pattern.

Before formulating final conclusions I will compare the Standard Macedonian situation with Standard Bulgarian on the one hand and with some dialects in southern and southwestern Macedonia which combine peripheral Slavic archaisms with the most advanced stages of linguistic balkanization.

Important differences that Standard Bulgarian shows when compared with Standard Macedonian insofar as the paradigm of NP-dependence is concerned are the following:

- in the pronominal paradigm orthotonic dative forms are in decline; instead we have the construction with *na* implying the orthotonic accusative form (the unique generalized oblique form);
- pronominal clitics in the CDD and CID are not grammaticalized; they appear optionally, are not frequent, differ in frequency from speaker to speaker and from writer to writer, and

are interpreted by grammarians as signals of the functional perspective of the sentence and/or as devices of stylistic differentiation; this makes the exponents of dependence, particularly the links between dependence and referential characteristics, less explicit but does not reduce the paradigm; if present, the pronominal clitics obey different rules of linearization (not so strict as in Macedonian), which also diminishes their chances as grammatical operators;

- NPs of masculine gender, singular number, if characterized as +R, show two forms of the definite postpositive article, one of them reserved for CI and secondarily, for CC, the other one for all the other positions of dependence; this device is partially equivalent to the grammaticalization of clitics in Macedonian since it differentiates the +R and -R forms in one important type of paradigm (masc. sg.) and increases the explicitness of exponents on the +R side; however, it is an artificial rule, conceived by grammarians, with no parallel in any Bulgarian dialect, and so it is often absent from everyday performance;
- the pronominal dative clitics of all the three persons are more frequent than the adjectival possessive pronouns in NPs characterized as +R; this means that they combine with any head of a NP and are compatible with the article, which is not the case with the Macedonian type *tatko mi* 'my father', *majka mu* 'his mother'; in this way the merging of exponents of the old dative and genitive function is more advanced in Standard Bulgarian than in Standard Macedonian;
- finally, in the NDC (i.e. in the functional field of the genitive) besides *na* relatively often the preposition *ot* appears.

As can be seen, the differences enumerated do not alter the paradigm as presented above in (3), albeit the formal differentiation of particular constructions is lesser than in Macedonian.

South Macedonian dialects are highly differentiated. In order to shorten the survey, I shall operate not with complete patterns but only with the phenomena and tendencies which are most important for our problem. These include the processes manifested by the pronominal case paradigm and triggered by the syncretism of the orthotonic accusative=dative form of the 1st and 2nd persons sg. combined with the phonetic reduction of unstressed vowels: (a) the atonic accusative and dative forms of the 1st and 2nd persons sg. and of the reflexive also merge; (b) the same process leads to the merging of the atonic plural forms of the 1st

and 2nd persons; (c) the orthotonic oblique plural forms of the 1st and 2nd persons are reduced to one, that of the accusative or that of the dative case; (d) *mu* as phonetically most stabilized form is generalized as the unique dative clitic of the third person sg. and pl.; (e) the orthotonic dative forms of the 3rd person are dropped and (f) *na* is generalized as marker of both dative and accusative case, which means that no orthotonic dependent form without preposition is left in the pronominal paradigm.

All the changes undergone by the NP dependence system are corollaries of what happened to the pronominal paradigm. These are:

- generalization of *mu* as optional marker of high frequency in the CID (= a "mobile dative ending");
- expansion of *na* as optional marker of high frequency in the CDD;
- in consequence, where no clitics appear, optional merging of CID and CDD;
- generalization of *mu* as optional marker of high frequency in the NDC everywhere where NP_1 formalizes a personal argument, which means that only the direct transform of the CDD (equivalent to the objective genitive) is practically excluded.

Perhaps the weakening of the border-line between transitive and intransitive verbs should also be mentioned. Independently of the possible Greek influence, the process is engendered by the merging of the reflexive clitics; among other consequences it helps the functional merging of CDD and CID.

On the archaic side (archaic insofar as the formal inventory is concerned) we have:

- high frequency of the PA in the NDC, with the same extension as that of the generalization of *mu* (cf. above);

and - in the southwestern periphery alone -

- survival of the old dative forms in the CID and in the NDC as well where they are introduced secondarily under Balkan influence and subjected to Balkan linearization rules; this means that the "grammatical" *na* is absent from this particular system.

On the basis of what has been said, two main characteristics of the dialectal situation should be emphasized:

(1) the dropping of old categorial markers (of gender, of number, of case) where they are not directly active in the dependence pattern, and

(2) the optional character of the majority of processes.

The data presented so far suggest, in my opinion, the following conclusions:

- In Balkan Slavic as well as in other Slavic languages syntactic functions of the NP have morphological (and not only syntactic and prosodic) exponents; the characteristic Balkan Slavic innovations in this field are manifestations of a universal tendency to replace old (and undermined through both phonetic and semantic developments) categorial exponents with a new, functionally more adequate set. Distributional differences between the case endings of the non-Balkan Slavic languages on the one hand and the corresponding constructions of Balkan Slavic on the other are due to another universal pattern: every formal device, once it is grammaticalized, tends to widen its zone of use and so to lose its primary semantic motivation. The ways and the results of these processes are idiosyncratic characteristics of particular languages.
- The nominal category of case seems to be a pattern of realization of a wider category of (semantic and) grammatical dependence of the NP. Of the two axes of dependence: V(NP) and NP(NP), the first one is of basic importance. It is the verb that is selective for dependence (as the noun is selective for gender, and the like) and the NP accommodates to the verb. In other words, the semantics of the verb as sentential nucleus underlies its syntactic valency; the deep cases (our S_1, cf. above) are built into the verb. Seen from this perspective, dependence (valency) is primarily a category of the verb, and all that happened in Balkan Slavic could be thought of as a shift of categorial exponents of accommodation from modifiers to the head of the construction in question.[10] The secondary axis NP(NP) is activated when a predicate has a double formalization (as a verb and as a preposition) and/or when the $S_1 = \emptyset$ and the valency is characteristic of the S_2 component and thus is present in the semantics of NP_1.
- Constructions expressing dependence (whether founded on case endings or on other exponents) are very few in number as opposed to the open set of deep cases. Prepositions function as intermediary between the two sets; the majority of them are on the semantic side. However, the Balkan Slavic *na* is proof that they can be turned into mere grammatical operators. R. Jakobson (1936/1971:29) writes:

"Der sogenannte Übergang einer Sprache vom

> flektierenden Bau zum analytischen is in der Tat ein Übergang vom gleichzeitigen Bestand eines flektierenden und eines analytischen Systems zur Monopolstellung des letzteren. In einer Sprache, welche ein System der präpositionalen Fügungen mit einem unabhängigen Kasussystem vereinigt, unterscheiden sich die Bedeutungen der beiden Systeme in dem Sinne, dass in der präpositionalen Fügung die Beziehung an sich in den Blick genommen wird, während sie in präpositionslosen Gefüge etwa zu einer Eigenschaft des Gegenstandes wird."

• The Balkan Slavic situation confirms the adequacy of the Jakobsonian first, basic dichotomy, that of *Vollkasus* as opposed to *Randkasus* (cf. Kuryłowicz's (1949/1960) grammatical as opposed to semantic cases). Relations expressed with the aid of *Vollkasus*, i.e. N, A and G, are the first reconstructed in Balkan Slavic and are signalled with purely grammatical exponents. Symptomatic in this connection is the status of the two constructions with *na* as basic marker of dependence, the CID and the NDC. At the sentential level, where it is functionally equivalent to the dative case, the *na* construction (= CID) can be given a tentative semantic interpretation (cf. our remarks on the human beneficiary as primary referent of the corresponding NP). However, at the level of the NP where it is equivalent to the genitive (whose primary grammatical character is founded on that of both N and A) the *na* construction (= NDC) is a mere form of morphosyntactic accommodation. It is only in southern Macedonian dialects that a further step towards full grammaticalization of *na* has been taken: *na* has been introduced into the CDD and thus turned into a syncretic signal of grammatical dependence. Thus, in this most Balkan Slavic system what is thought of as dative case seems to be the fourth serious candidate for the status of "grammatical case".

ABBREVIATIONS:
CC - concatenated construction
CDD - construction of direct dependence
CI - construction of interdependence between the verb and the NP
CID - construction of indirect dependence
NDC - nominal dependence construction
PA - possessive adjective

PC - prepositional construction
S_1 - relational content of the predicate
S_2 - selectional restrictions built into the predicate
S_c - content shared by the predicate and its argument

NOTES

[1]The terms "synthetic" vs. "analytic", borrowed from the lexicon of the structuralist morphological typology, in other theoretical contexts easily lead to misunderstandings and should be abandoned in favor of more adequate labels, c.f. Topolińska 1982.

[2]I am not interested here in the compatibility characteristic of elements of simple concatenations which is—or so it seems to me—derived from the fact that the elements concatenated are all arguments of some higher (hidden) predicate.

[3]Cf. Kuryłowicz 1964 and Rokoszowa 1981 on the anthropocentric character of the Indo-European case system.

[4]Constructions like *Mi e žal* 'I'm sorry', *Mu e strav* 'He's afraid', and the like (i.e. construction with no CI and no CDD) also result from diathetical derivation.

[5]Note than in Lusatian the instrumental case, under German influence, obligatorily implies a preposition.

[6]I omit here the secondary construction with NP_1 or NP_2 as morphological nominalizations that themselves have sentential status, such as *odenje po leb* 'going after bread' (i.e. seeking a living), *otpadoci za frlanje* 'garbage/waste for throwing out', *devojka za maženje* 'a marriageable girl', etc.

[7]At this point I feel once more the need to insist than I am not interested here in the Arumanian nor in the Albanian interference, but only in the present-day inherent Macedonian system.

[8]On the difference between a morphological and a syntactic nominalization, see Topolińska 1981.

[9]On the substantival status of PA, see Loetzsch 1965. On the status of PA in Serbo-Croatian, see M. Ivić 1967.

[10]The Bulgarian Slavist Angelina Minčeva (1969), in writing on the Bulgarian dependence pattern, treats the pronominal clitics as adjuncts to the verb. I have treated such clitics in Macedonian as adjuncts to the noun, cf. Topolińska 1969. Both solutions are conventional and there are arguments in favor of each.

A Third Look at the Second Dative

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1.0 One of the striking properties of Jakobson's classic paper on case (Jakobson 1936/1971) is the insistence that differences in form intimate differences in meaning, and that each form in a system has a *Gesamtbedeutung* associated with all its occurrences. The association may be indirect, mediated by *Sonderbedeutungen* derivable from the appropriate *Gesamtbedeutung.* Much of Jakobson's paper deals with the *Sonderbedeutungen* for each of the Russian cases, of which more later. Another impressive property of Jakobson's proposals is the close-knit, symmetrical pattern he establishes for the Russian cases. This pattern is so pleasing that one proceeds to the dissection table reluctantly. Although the main concern here is not with the general pattern, it will be necessary to address the topic briefly, particularly as the pattern has been adopted unquestioningly in recent generative work—cf. Neidle 1982b.

This paper is a declaration of support for the principle of one form—one meaning and different form—different meaning. Bolinger (1977:19-20), alluding to the importance of the work of Jakobson and others, talks of phonetic adaptation and inertia causing us to stumble into allowing two meanings for a single form or two forms for a single meaning, but asserts that "we do not live happily with either accident and only tolerate the one while moving immediately to repair the other." My goal here is to apply the principle to analyses of the Second Dative in Russian, especially those of Comrie (1974a) and Neidle (1982b), in order to approach a third solution that does pay attention to semantics.

1.1 A résumé of background assumptions is required first. The most important is that semantic structures are more complex than are usually supposed—I believe that there is more to semantics than reference—and specifically that they are localist. This assumption is developed at length in Miller 1985 and has been employed in Miller 1974 and Brown and Miller 1982. Localism is the thesis that semantic structures should be constructed in terms of objects being located in a place or moving from one place to another. Natural languages contain much evidence in support of this view, with supplementary evidence coming from language

change and studies of cognitive and linguistic development in children. For details the reader is referred to the above references and to Jackendoff 1976, Lyons 1977 and the many papers by Starosta and others in the *University of Hawaii Working Papers in Linguistics* over the past ten years. Jakobson himself can be seen as having localist leanings, especially in his treatment of the accusative and dative, but nothing in this paper rests on the correctness of that view.

A second assumption is that a worthwhile description of syntax and morphology will be generative. To be more precise, it will be non-transformational, will display dependency relations as simply as possible, will give serious attention to distribution and will handle morphology and many other matters in the lexicon. I prefer dependency relations to be handled as in Hays 1964 or Robinson 1970, constituent structure as in Freidin 1975 and Schachter 1976 and morphology to be adapted from Lieber 1981. The "Revised Extended Standard Theory" (REST) of Chomsky and his colleagues is excluded by what I consider to be its cavalier attitude to constituent structure, dependency relations and morphology; generalised phrase-structure grammar is out for the first and last of these reasons. The product that comes closest to the requirements is Bresnan's lexical-functional grammar, but the status of grammatical functions as grammatical primitives is controversial—cf. Schachter 1977, Anderson 1979, Brown and Miller 1982.

A third assumption, interrelating with the second, is that linguistics is autonomous. Linguists describe linguistic structure, drawing on their intuitions and checking these against distributional and dependency criteria. Correlations on a large scale between linguistic studies and psycholinguistic studies are to be looked and hoped for, but linguists do not have direct access to psychological reality. They do have light from surface syntax and morphology—in accordance with the principle that differences and similarities of form are not accidental but semantically relevant. With respect to child acquisition of language, the pragmatic and data-oriented approach of the papers in Kuczaj 1982 is preferable to the approach represented in, for example, Hornstein and Lightfoot 1981.

1.2 A fourth assumption is that syntax and semantics, while enjoying interconnections, are separate and should be dealt with separately in linguistic description, to the extent of having different

structures and different, or partially different, sets of categories. One implication of such a model is that syntactic and morphological structures are generated by one set of rules, semantic structures by another, the two sets of structures being put in correspondence by a third set of rules. (This conception of linguistic description is explained and argued at length in Miller 1985.)

How does the category of case fit into the above framework? Obviously, the rules that generate morphological structures must assign correct affixes to stems and the rules that generate syntactic structure must guarantee correct combinations of constituents, including nouns with case affixes. The latter task is closely bound up with the description of dependency structure, since verbs assign case to nouns and nouns pass on case to dependent adjectives. Verbs also determine what types of prepositional phrases occur, and prepositions pass on case to dependent nouns. That is, in one part of the description there is a mechanical assignment of case affixes by means of rules like those in Chapter 11 of Brown and Miller 1982, and in accordance with the verb dependency view advocated by Hjelmslev (1928), Tesnière (1959) and many contemporary German linguists.

While case affixes as such do not figure in the semantic structures proposed in Miller 1985, they do correlate with certain elements in the structures. Using rough glosses, we can say that accusative correlates with 'movement into/onto', dative with 'movement to the vicinity of', prepositional with 'location', many occurrences of the genitive with 'movement from', others with 'location' (not a surprising degree of untidiness in view of the falling together of the Indo-European genitive and ablative affixes, though an argument can be made for analysing all instances of the genitive in terms of 'movement from'), instrumental in terms of 'movement through'.

Case affixes can be seen as a key to semantic structure, just as prepositions can in languages without case affixes. Of course, the theory adopted here is merely one half of a controversy that has been running since the mid nineteenth century, the other half being the more widely supported idea that case affixes are to be described in terms of grammatical functions. Whichever one of these theories gains the day, the important point is that they are serious theories, unlike the astonishing material in REST, which looks like the resurrection of the dragon slain by Jespersen fifty

years ago. At least they are theories about the place of case affixes in the functioning of language, as opposed to case labels slipped into a theory of co-reference and control.

Another serious theory of case that must be mentioned is the Case Grammar of Fillmore (1968). It contrasts with the present approach in not observing the principle of one form—one meaning, different form—different meaning and falling into the common but reprehensible habit of treating case affixes and prepositions as minor grammatical items, devoid of meaning and capable of being juggled about at will.

2 Since this paper offers an alternative both to Comrie's and to Neidle's accounts of the Second Dative, let me begin by probing part of the latter description that derives from Jakobson's work. The part is small but important, as it raises the question of the content expressed by a given formal notation and the question of how reliable Jakobson's system of oppositions is.

Neidle (1982b:396-97), although allowing that allegedly universal case features need investigation, adopts Jakobson's analysis, since it permits her to break down the individual cases into a bundle of features and to present the cases as a system. Let it be noted that the latter is the principal aim of the borrowing, since the rules providing complements with case marking are not rendered more simple or general by the feature notation.

Neidle observes that Jakobson works with the features [marginal], [quantifying], [ascriptive]. To each feature he assigns a positive or negative value, the negative value being unmarked, and Neidle, following the feature representation of parts of speech developed by Jackendoff (1977) gives the features a + or - value, the - being unmarked. But what does Neidle mean by 'unmarked'? In previous X bar descriptions of English, [-subject] or [-complement], for example, have been interpreted simply as 'not taking a subject/ complement', but this is not how unmarked is understood either in generative phonology or by Jakobson. On the former interpretation, 'unmarked' is equivalent to 'normal', 'marked' to 'abnormal', but the marking of a preposition as [-subject] in the X bar scheme does not indicate that prepositions take subjects, though very infrequently and unusually. It indicates unequivocally that prepositions never take subjects.

For Jakobson, 'marked for a property X' means 'definitely signalling the presence of property X', whereas 'unmarked for property X' means simply 'not signalling whether property X is

present or not'. The Russian accusative is marked for "directedness"—"*Gerichtetheit*" in the 1936 paper, "*napravlennost'*" in the 1971 Russian version—in that it always signals that 'irgend eine Handlung auf den bezeichneten Gegenstand gewissermassen gerichtet ist' (Jakobson (1936:57)). The nominative, in contrast, does not indicate whether an action is directed at an object or not.[1]

The content of this system is in any event open to improvement. For instance, the feature 'marginal'—better, 'peripheral' or 'non-nuclear', as there is some connection with nuclear and non-nuclear sentence constituents—is defined in the 1936 paper in terms of the meaning of a sentence: 'Der Randkasus gibt an, dass das bezügliche Nomen im gesamten Bedeutungsgehalte der Aussage eine periphere Stellung einnimmt...' (Jakobson 1936/1971:68). The locative, dative and instrumental are non-nuclear, but there are a number of common verbs with which the dative and instrumental are obligatory and semantically central, and with *byt'* 'be' nouns in the instrumental or locative are likewise obligatory, the sentence being incomplete without them.

The instrumental is, like the nominative, unmarked for directedness, but unlike the nominative it is non-nuclear. Even overlooking the problem of instrumental complements, the various specific meanings of the instrumental do not derive in any obvious way from the general meaning of the case as embodied in the features: it is just not clear how they are combinatorial variants of the general meaning. Similarly, it is not clear how the time meaning is a combinatorial variant of the general meaning of the accusative.

3 Comrie's (1974a) account of the Second Dative is based on the sort of data in (1), which are the key examples from Comrie's paper.

(1a) Ivan vernulsja ugrjumyj/ugrjumym/ugrjum.
'Ivan returned gloomy.'

(b) Volodja est jabloki nemytye/nemytymi.
'Volodja eats apples unwashed.'

(c) Ivan vernulsja odin/*odnomu.
'Ivan returned alone.'

(d) Ivanovy vypuskajut sobaku na ulicu odnu/*odnoj.
Ivanovs let out dog on street alone
'The Ivanovs let out the dog on the street alone.'

(e) My poprosili Ivana pojti odnomu/*odnogo.
'We asked Ivan to go alone.'

(f) Tanja prinesla knigu čtoby ee čitat'
Tanja brought book in order it to read
samoj/*sama.
herself
'Tanja brought the book in order to read it herself.'

Sentences (1a) and (1b) exemplify what Soviet grammars call a 'semipredicative adjective' (known in some descriptions of English as a subject complement adjective) and an object complement adjective, respectively. The adjectives denote properties of the entity denoted by the grammatical subject noun or the direct object noun depending on whether they (the adjectives) follow an intransitive verb or a direct object noun. The semipredicative adjective can be either in the instrumental case—*ugrjumym* in (1a), *nemytymi* in (1b),—or in the nominative case—*ugrjumyj* and *ugrjum* in (1a), *nemytye* in (1b). The instrumental case is preferred in Modern Russian.

The other examples in (1) illustrate the problems arising from the idiosyncratic behaviour of *odin* 'one' and *sam* 'self'. Examples (1c,d) show that, as semipredicative, *odin* (*sam* behaves in the same way) agrees in case and gender with the appropriate noun. *Odin* in (1c) is nominative, agreeing with *Ivan* and *odnu* in (1d) is accusative feminine, agreeing with *sobaku*. The starred forms *odnim* and *odnoj* are instrumental and not permitted in these examples.

Sentences (1e,f) illustrate the behaviour of *odin* and *sam* in infinitive phrases. If the infinitive is controlled by the direct object of the main verb, as in (1e), or is controlled by the subject of the main verb and preceded by a complementiser, as in (1f), *odin* and *sam* do not agree with any overt noun but occur in the dative case. The forms *odnomu* and *samoj* are dative.

Comrie disposes of the peculiar behaviour of *odin* (and *sam*) in examples such as (1e) by adopting the usual transformational view that infinitives derive from full underlying sentences and by proposing that the subjects of infinitives, or at least the subject nouns in the underlying sentence, are always assigned dative case. *Odnomu* in (1e) agrees in case and gender with an underlying subject that has been deleted after agreement takes place. The deleted underlying subject does not on its own explain the dative form *samoj* in (1f) in an infinitive phrase controlled by the subject

of the main verb. Comrie suggests that a main verb and a subject-controlled infinitive form a cohesive unit favourable to case agreement between the subject of the main verb and any semipredicative adjective. When the cohesion is reduced, e.g. by a complementizer, agreement does not occur and the semipredicative adjective, i.e. *odin* or *sam*, is assigned dative case, presumably by a default rule.

Comrie defends his decision to assign dative case to the subject of sentences underlying infinitives by appealing to examples from Old Church Slavonic in which infinitives have an overt subject noun in the dative case, and to examples from Modern Russian. We will return to these examples later.

Neidle, applying Bresnan's lexical functional grammar, whose details are here irrelevant, accepts the idea that the subjects of nontensed verbs in sentences underlying infinitives are in the dative case. She adds to Comrie's data by pointing out that overt dative subjects of infinitives are common in Standard Modern Russian, as in (2).

(2) Kak mne skazat'?
'How to me to say'
'How should I say?'

Neidle distinguishes (following Bresnan) between grammatical control and anaphoric control. The former relates to control passing from one grammatical function to another, the process being regulated by control equations in lexical entries for verbs. For instance, the entry for *xotet'* 'want' specifies that the subject of *xotet'* controls the subject of any infinitive dependent on it. In turn, any semipredicative adjective functioning as an adjunct to the infinitive will agree in case with the subject of the infinitive, which is nominative in agreement with the subject of *xotet'*. Hence (3). (Cf. Neidle:407.)

(3) On xotel pojti odin.
'He wanted to go alone.'

In (3), *odin* is in the nominative case and so is *on*.

Anaphoric control involves identity of reference, and the interpretation of anaphors is governed by certain semantic, thematic and pragmatic conditions. Where there is anaphoric control the dative subject of infinitives is unaffected by control equations and semipredicative adjectives turn up in the dative case, as in (1f), or (4), which lacks an overt noun that might be coreferential with the

understood subject of the infinitive. (Cf. Neidle:408–9, 414–5.)

(4) Sliškom xolodno, čtoby ostat'sja zdes'.
'Too cold in order to stay here.'

Neidle suggests (409–11) that examples like (1e) are to be explained with reference to a general principle of Russian: objects of main verbs do not control the subjects of verb-complement sentences. To exemplify this property, Neidle chooses the verb *prosit'* 'ask', which she deems 'fairly representative' of verbs taking objective infinitives: e.g. *ugovarivat'* 'persuade', *zastavljat'* 'force', *velet'* 'order', *sovetovat'* 'advise'. Her examples are reproduced in (5) and (6).

(5) Ja poprosila ego ne byt' žestokim.
'I asked him not to be cruel.'

(6) Ja poprosila ego ne byt' isključennoj iz školy.
'I asked him not to be expelled from school.'

Žestokim in (5) is a masculine instrumental form and relates to *ego*, the subject of *poprosila*, whereas *isključennoj* in (6) is a feminine instrumental form and relates to the subject of *poprosila*. The subject of the embedded infinitive is not grammatically controlled, its interpretation depending on context.

4 Can the proposals of Comrie and Neidle be improved on? They can, but the improvements I am about to suggest do not involve constructing an alternative single grammar but rather allowing for different subsystems and taking the form-meaning relationship seriously. We can most usefully begin with the notion that the underlying subject of infinitives is in the dative case.

Comrie and Neidle are correct in their observation that infinitives occur with overt dative subjects—perhaps the last word had better be read as if in inverted commas,—but they do not mention that all such examples are highly modalised. Švedova, et al. (1980:151) provide the examples in (7), with the comment that they relate to someone being able or obliged to do something.

(7a) Mne exat' v gorod.
To me to go into town
'I have to go to town.'

(b) Nam zdes' ne projti.
To us here not to pass
'We can't get through here.'

(c) Tebe by otdoxnut.'
To you particle to rest
'You should have a rest.'

Borras and Christian (1971) list the examples in (8).

(8a) Ne prostudit'sja by vam.
Not to catch cold particle to you
'Watch you don't catch cold.'
(b) Vsem byt' na mestax.
To all to be in places
'Everyone is to be in his place.'
(c) Senja srazu načal soobražat', kak by podojti emu
Senja at once began to ponder how part. to go up to him
k nej.
to her
'Senja began to ponder how he should approach her.'
(d) Gde emu byt' akterom.
Where to him to be actor
'How is he ever going to be an actor!'

Example (8c) in particular should be noted, with its infinitive phrase dependent on the main verb and introduced by the complementiser *kak*. Where possibility is involved, the construction is negative, as in (7a), or has negative implications of a Gricean sort, as in (8d). I assume that the connection between impossibility and obligation should be invoked.

Interestingly, three out of Comrie's four Old Church Slavonic examples can be interpreted in terms of obligation. Cf. (9).

(9a) gljǫ vam ne klęti sę vam
I say to you not to swear self to you
'I say to you: do not swear.'
(b) mnozi moljaaxǫ i priti jemu v domy
Many were begging him to come to him to houses
ix
their
'Many were begging him to come to their houses.'
(c) isceli jǫ ěko narodu diviti sę
He cured them so that to crowd to marvel self
'He cured them so that the crowd marvelled.'

In (9a–c) the infinitive phrases can be seen as not mere appendages of the main verb but as relatively independent. Thus, (9a) can be analysed as 'I say to you' followed by an imperative

infinitive akin to the one in (8b); (9b) can be analysed as 'Many asked him' followed by 'He was to come to their houses'; (9c) can be seen as 'He cured them' followed by 'The crowd had to marvel'.

Timberlake (1974) quotes six examples with an infinitive and an overt dative subject, all expressing necessity. An example is given in (10).

(10) I mně poslat' svoego voevodu s tvoim
And to me to send my general with your
voevoduju
general
'It is necessary for me to send...'

The essential point about the above examples is that an overt dative noun subject accompanying an infinitive is always interpreted as expressing obligation or necessity or as conveying the idea that some action is fitting. Infinitives dependent on words such as *nado* 'necessary', *sleduet* 'ought', which combine with a noun in the dative case, have the same interpretation, but infinitives dependent on main verbs with a nominative subject noun never have these modalities. What we have is a major distinction in meaning signalled by an obvious distinction in form, and while it would be possible to introduce a dative noun in all underlying structures, delete it and obtain the appropriate interpretation from the surface structure, such a treatment would ride roughshod over the principle of two forms—two meanings, two meanings—two forms.

In any case, we are entitled to ask why the dative noun in, e.g. (7a), should be described as the subject of the infinitive. This question goes to the heart of any model that takes grammatical functions as primitive: how are subject, direct object, indirect object to be defined? Putting aside the existence of languages to which the traditional notion of subject does not easily apply, we can appeal to criteria that have been developed on the basis of Indo-European languages; e.g. the set of criteria established in Keenan 1976. These include control of coreference, i.e. control of reflexive pronouns, control of coreferential deletions and pronominalisation; control of number agreement; the ability to be questioned and relativised; exhibiting (typically) the same position, case marking and verb agreements as the causer NP in the most basic type of causative sentence; changing case in action

nominalisations—usually to a possessor or non-subject agent case.

Neidle (422) asserts that the dative nouns in sentences like *Mne nado uexat'* 'To me - necessary - to leave' have many subject properties. She mentions the property of being the antecedent of a reflexive and the property of controlling the coreference of participles. She could have added the property of controlling the coreference of understood subjects of infinitives (using the term 'subject' in its normal loose way for the moment) as in the above example with *nado*.

The subject properties possessed by the dative nouns in the examples under consideration are a subset of the properties; indeed, they fall within what Keenan calls behaviour and control properties. They possess only one of the coding properties, namely occurrence in first position in neutral word order: they do not take nominative case and they do not participate in verb agreement or action nominals. Nor do they participate in the passive construction. Finally, the dative nouns do not denote agents and do not typically correspond to the addressee phase in imperatives, as Keenan puts it. Keenan mentions selectional restrictions. I do not myself believe that they have any part to play in the analysis of syntactic structure, but anyone who does can find a long list of selectional restrictions that apply to the examples above with dative nouns but not to sentences with action-denoting verbs accompanied by at least one noun in the nominative case. Cf. Miller (1970).

The dative nouns can be called controllers, but to call them subjects is to stretch that term into something limp and shapeless. Jakobson's work, and the Prague School approach in general, leave the way open for another treatment, one that does not fit all constructions into one monolithic set of rules but allows the establishment of sub-systems. In this instance, there is a sub-system of rules generating the favourite sentence type—action clauses with agents and patients, and another set of rules generating stative clauses, such as the above examples, with, let us say, goals (the dative noun) and patients. If selectional restrictions are brought in, we can say that certain of them apply only within the sub-system of rules for stative clauses. Likewise, though I am not sure whether this is a blanket restriction, perfective aspect may be excluded from stative clauses.

Putting together the modal meaning of the dative noun + infinitive construction and the difficulties confronting the notion of

subject in stative clauses, I propose that stative clauses, including the infinitive construction, are *sui generis* and unavailable as the underlying source of action infinitive phrases.

Implicit in the preceding paragraph is the view that the dative noun in, e.g., (7), is identical with the dative noun in stative constructions like *mne grustno* 'to me - sad'. In Miller 1974 I argued that the dative case in Russian expressed movement towards or up to. In Brown and Miller 1982 it is further argued that the syntax and morphology of many languages justify the linguist in postulating semantic structures involving the movement of actions or events to people, which is precisely the meaning I assign to, e.g., the sentences in (7). If events move to people, people have little chance of escaping them, which fits well with the obligation and necessity modalities. That is to say, although my particular analysis differs from Jakobson's (but does it, since he too discusses the dative in terms of directedness?), the general principle is the same: one form—one meaning.

Two residual questions bear on Neidle's analysis. One is why infinitives should be treated as sentences. The stock TG answer appeals to the notion of understood subject, but this appeal is successful only if descriptions of syntax are to be fashioned primarily for semantic ends. Going back to the first and fourth assumptions at the beginning of the paper, I repeat my belief that semantic structures are more complex than syntactic ones and that syntactic structures should handle mainly constituent structure and dependency relations—both of which have implications for semantic structure. The fact that a sentence like *I want to leave* describes two properties, wanting and leaving, and ascribes them to the same person, the speaker, is a matter for semantic structure, not syntax. There is a great deal of evidence from many languages that infinitives are nominal categories, and I would handle them as VPs embedded in NPs—cf. Brown and Miller 1982:Ch. 12 and Schachter 1976.

The second question relates to Neidle's assertion that there is no control of verb complements by object nouns in the main clause. The examples with which she supports her assertion are given in (5) and (6). Without going into the question of whether (6) is less normal than *Ja poprosila ego, čtoby menja ne isključili iz školy*, let us note that *prosit'* 'ask' is not representative of the verbs that take object infinitives. If (6) is perfectly acceptable, all that one can conclude is that *prosit'* is just as peculiar as *ask*,

which led Perlmutter (1971) to propose deep and surface structure filters. Consider the examples in (11) with *zastavit'*, which requires an object noun.

(11a)	On	zastavil	ee	stat'	sekretaršej.
	'He	forced	her	to become	secretary.'
(b)	On	zastavil	ego	stat'	sekretarem.
	'He	forced	him	to become	secretary.'

In (11a) *sekretaršej* is the instrumental case form of a feminine noun that is applied only to women, whereas (11b) contains the instrumental form *sekretarem*, which can be applied to men. The choice of one or the other noun is controlled by the direct object of *zastavil*. The other verbs in Neidle's list (409 and see above) behave like *zastavit'*, and I suggest that *prosit'*, far from being representative, is an odd man out.

6 How can the Second Dative be handled satisfactorily? The answer about to be given will be regarded as 'common sense' by many traditional linguists and as sloppy by those who thirst for generalisations, but it respects the facts and avoids the criticisms made of previous accounts. On the assumption that agreement is dealt with in the lexicon, possibly by selectional or subcategorisation frames, I propose that there are indeed general patterns of case agreement but that *sam* and *odin*, in the one type of infinitive phrase, are simply exceptions whose lexical entries override the information entered into phrase markers from, e.g., the entries for main verbs.

Examples (1a–d) fall under general rules: one for semipredicative adjectives in intransitive clauses—(1a); one for transitive clauses with an accusative object—(1b,d). If the semipredicative adjective is *odin* or *sam* in such intransitive clauses as (1a,c), it is always in the nominative case, never the instrumental, an effect achieved by the overriding property of the lexical entries for these adjectives.

Another frame handles case and number agreement in transitive clauses where the main verb is followed by an object noun in the dative case. This frame applies to sentences like (12)—both from Comrie.

(12a)	Ja	velel	emu	prijti	odnomu.
	'I	ordered	to him	to come	alone.'
(b)	Ja	velel	odnomu	emu	prijti.
	'I	ordered	only	him	to come.'

emu is a dative form and *odnomu* is a dative adjective form. A fourth frame handles the stative constructions exemplified in (13).

(13a) Emu vypalo streljat' pervomu.
'To him fell to shoot first'
(b) Mne nužno bylo idti pervomu.
'To me necessary was to go first.'
(c) Ivanu xočetsja pojti odnomu.
To Ivan wants itself to go alone
'Ivan wants...'
(d) Mne skučno odnomu.
To me bored alone
'I am...'
(e) Vam nado samomu ubedit'sja.
To you necessary self to be convinced
'You yourself must be convinced.'
(f) Ne sidet' že nam zapertym.
Not to sit to us shut up
'We shouldn't sit shut up (indoors).'

In (13) *emu, mne, Ivanu, vam,* and *nam* are dative forms of nouns and pronouns, and *pervomu, odnomu, samomu* and *zapertym* are dative forms of adjectives. Notice that *sam* and *odin* are handled by the general frame. However, the dative adjectives in (13) can be replaced by instrumental forms, except for *samomu* and *odnomu,* the dative forms of *sam* and *odin.* If the frame assigns instrumental case to the adjective, the lexical entries of *sam* and *odin* override the instrumental, substituting the dative. *Sam* and *odin* do not occur in the instrumental case in the constructions under consideration.

Some sentences have a stative verb or adjective with no overt goal noun in the dative case but with a semipredicative adjective nonetheless in the dative. Examples are in (14), (14b) coming from Comrie.

(14a) Neprilično xodit' loxmatomu.
'Not polite to go about unkempt'
(b) Lučše s ljubimoj v žestkom, čem samomu
'Better with loved(one) in hard(class) than alone
v meždunarodnom.
in international(class).'

These sentences could be supplied with dative pronouns, and one way of treating them would be to have frames that specify an

optional dative NP with which the semipredicative adjective agrees. ((14b) cannot be just as simple as that, because the semipredicative adjective is in a different clause from the optional dative noun—or could be seen as in a different clause. Perhaps the *čem* phrase should be treated as a phrase and the sentence as consisting of just one clause. That would be good news for the syntax but leaves the semantic structure rather complex.)[2]

There remain (1e,f). The facts are as Comrie has stated and can be expressed by two frames: one for the sequence NP V NP Inf.—Inf. is a useful label for a more complex structure—and another for the sequence NP V NP $_{\text{InfP}}$.[Comp Inf]. The semipredicative adjective can be assigned dative case by the phrase-structure rules, and the lexical entries fixed so that only the appropriate forms of *sam* and *odin* are put in the adjective slot. An alternative rule generates an adjective marked for the instrumental case, and any adjective except *sam* and *odin* can go into this slot.

This treatment expresses the fact that the main verb does not control the case of the adjective in these constructions and brings out the exceptional nature of *sam* and *odin*. The *čtoby* + infinitive construction can be analysed semantically as involving the movement of an event to a person, as suggested for (8), but I leave it open whether, e.g., the infinitive phrase in (1e) can be so analysed. The difficulty is that, no matter where you slice a language, the slice will manifest the effects of diachronic change, with alterations just beginning or just ending and with some constructions relatively stable. (1e) could be seen as a loose end left by the development of paratactic structures to hypotactic ones; that is, by the development of two bits of syntax—*My poprosili Ivana* and *(emu) pojti odnomu*—merely juxtaposed into a single piece of syntax with a head part and modifier, the infinitive being the modifier.

If the above view of (1e) is correct, we have here a dative form that is not open to the movement interpretation given to other dative forms. As Bolinger remarks (1977:ix), it is not normal for languages to have lunacy wards for mindless morphs whose sole function is to fill a certain space. Perhaps a century from now (1e) will be a historical curiosity, no longer part of the living language. If so, the decision not to impose a monolithic analysis will be justified.

NOTES

[1]If Neidle is employing Jakobson's notion of 'marked', she must declare the usage, because she is changing the feature representation of syntactic categories as understood hitherto in the X bar model. I am in favor of such a move. It is an interesting question to what extent natural languages indicate certain properties positively, and whether it is the same properties across languages that are marked as definitely present or possibly present. If Neidle is not employing Jakobson's notion of 'marked', she is distorting the content of his system.

[2]Incidentally, Švedova, et al. (1980:148, §2017) appeal to the concept of 'semantic agreement'—*smyslovoe soglasovanie*—under which heading they lump not only examples like those in (14) with no overt dative noun but also examples like (13d,e) with overt dative nouns.

Equation vs. Ascription: The Nominative/Instrumental Opposition in West Slavic

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An old vaudeville joke, the quoting of which here implies no endorsement of the sentiments expressed therein, has one man ask another, "Who was that lady I saw you with last night?" The other answers, "That was no lady; that was my wife." The author of this gem was undoubtedly inspired by Bertrand Russell's philosophical writings, from which he could have learned that the first half of the answer ("that was no lady") ascribes certain features to the woman in question, whereas the second half ("that was my wife") represents the equation of two arguments, i.e. a statement of identity.

The distinction is perhaps clearer in the following sentences, based on examples from Higgins 1976:

(1a) What I am talking about is fascinating.
(b) What I am talking about is copular sentences.

The first sentence ascribes a property to the subject (describes it as fascinating), while the second sentence equates the subject and the predicate noun phrase. It is of course possible to get both readings from a single sentence, as in

(1c) What I am talking about is garbage.

Note that the inverted version of (1c) has only the equational reading:

(1d) Garbage is what I am talking about.

The equation/ascription ambiguity is also present but less obvious in a sentence like

(2a) That woman in the green dress is the Prime Minister.

It may be understood as the answer to the question: "Who is that woman?" On that equational reading the subject and predicate noun phrases may be reversed, preserving the logical structure (if not the communicative function). This reading parallels the kind of apposition that occurs in, say,

(2b) That woman, Margaret Thatcher, has had a long career in politics.

If, however, we read (2a) as the answer to the question: "What can you tell me about that woman in the green dress?", the definite article may be omitted ("That woman is Prime Minister") and inversion is impossible. This ascriptive reading parallels a non-restrictive relative clause as in

(2c) That woman, who is Prime Minister, has had a long career in politics.

It is perhaps not surprising that the native language of logicians like Ajdukiewicz, Łukasiewicz and Tarski should have a device for making the subtle distinction between equation and ascription. That device is the existence of two ways of forming sentences of the form "X is Y," with the demonstrative *to* and with *jest* (or some other form of *być* 'to be'), as in

(3a) Ta pani to premier [nominative] Anglii.
That woman is the Prime Minister of England.

(b) Ta pani jest premierem [instrumental] Anglii.
[the same]

with the former expressing equation and the latter, ascription.[1]

This distinction is usually ignored in textbooks, which often start with the *to* construction so as to avoid introducing the instrumental case. The instructor is stuck with explaining why one cannot say

(4a) *Ewa to bardzo miła.
'Ewa is very nice.'

or

(b) *Ona to studentka.
'She is a student.'

while being forced to use and encourage the use of such sentences as

(4c) ?Ewa to studentka.

instead of the more natural

(4d) Ewa jest studentką.
'Ewa is a student.'

Sentence (c) would be better if the predicate were definite, e.g.

(4e) Ewa to studentka, która mieszka w naszym domu.
'Ewa is the student who lives in our building.'

i.e. if the sentence served to identify Ewa rather than to describe her.

That sentence (a) is bad is not surprising, given the analysis suggested here. A predicate adjective is purely descriptive and therfore *to* is inappropriate. The sentence should read

(4a') Ewa jest bardzo miła.

The case of (4b) is somewhat more complicated. There are two possibilities. If we are describing the woman, we would have to say

(4b') Ona jest studentką.

(Cf. the question *Kim/Czym jest to pani?* 'What does that woman do?') If, however, we are identifying her, the appropriate version would be

(4b") To jest studentka Nowaka.
'That's Nowak's student.'

(e.g. in response to the question *Kto to jest [ta pani]?* 'Who is that [woman]?'). Cf.

(4f) To jest premier Anglii.
'That's the Prime Minister of England.'[2]

The difference in function between *to* and *jest* has been noted in the linguistic literature. Topolińska (1971-2), for example, provides the following semantic interpretation for the two constructions (in a free but non-distorting paraphrase). The sentence *X jest Y* states that the referent of X has the feature or features named by Y. The sentence *X to Y* on the other hand states that the referent of X has the feature or features that the referent of Y also has, and therefore the name Y can be applied in appropriate circumstances to the referent of X.

Wierzbicka (1969b), while not explicitly distinguishing the two constructions, gives a similar characterization of identity sentences, calling them "metasentences that assert the substitutability of linguistic expressions."[3] If that is correct, then it is not surprising that sentences with *to* do not have a full tense paradigm: alongside of the ascriptive sentences

(5a) Ta pani jest naszym profesorem.
'That woman is our professor.'
(b) Ta pani była naszym profesorem.
'That woman was our professor.'
(c) Ta pani będzie naszym profesorem.

'That woman will be our professor.'

we get only one equational version

(6) Ta pani to nasz profesor.

We would not in fact expect a metalinguistic assertion of substitutability to be tense-specific. The names would change, rather than the assertion of identity (*nasz były profesor* 'our former professor' etc.). Cf.

(7a) That woman was the Mayor of Cambridge.

which is unambiguously ascriptive, and note the impossibility of

(7b) *The Mayor of Cambridge was that woman.[4]

Similarly, as Higgins points out (1976:150), the complement of *become* is construed ascriptively, i.e. *become* serves as an inchoative to *be* in its ascriptive meaning:

(8a) Margaret Thatcher became (the) Prime Minister.

Perhaps this accounts for the persistence of the Slavic instrumental with verbs of becoming:

(8b) Margaret Thatcher to premier Anglii.

(c) Margaret Thatcher jest premierem Anglii.
'Margaret Thatcher is the Prime Minister of England.'

but only

(d) Margaret Thatcher została premierem.
'Margaret Thatcher became Prime Minister.'

In Slovak too the instrumental is used with verbs like *stat' sa, zostat', ostat'* 'become', while with *byt'* 'be' there is some evidence that the contrast of nominative vs. instrumental may be used to distinguish identification from ascription. Miko (1962:116) cites the following sentence from Dominik Tatarka:

(9a) Jeden z nich bol riaditel' banky zo Žiliny a druhý advokát z Bratislavy.
'One of them was the director of a bank from Žilina and the other, a lawyer from Bratislava.'

and contrasts it with a possible variant

(9b) Jeden z nich bol riaditel'om banky v Žiline a druhý advokátom v Bratislave.
'One of them was a bank director in Žilina and the other, a lawyer in Bratislava.'

He comments that in the original version (with the nominative) "we do not know the individuals and we identify them by means

of the predicate nominative," whereas in the second version (with the instrumental) "we take the individuals as known and simply characterize them in more detail by specifying their professions." To be sure, Miko later adds that the difference between the predicate nominative and instrumental "is not strictly delimitated in practice" (1962:117).

Miko also cites (without comment) examples of the use of both cases in tautological constructions. Some of these examples again suggest the possibility of a contrast of equation vs. ascription, e.g.

(10a) Bat' sa nebojím, ale robota je robota.
'I am not afraid, but work is work.'

(b) Muráň je Muráň, Ľupca je Ľupca a my sme slobodné král'ovské mesto Brezno...
M. is M., Ľ. is Ľ. and we are the free royal city of B.'

as opposed to

(10c) Preto sú hrdinovia hrdinami, lebo veria v nepravdepodobnost'.
'Heroes are heroes because they believe in improbability.'

(d) Bez stromov park nie je parkom.
'Without trees a park is not a park.'[5]

Polish tautological constructions may show interchangeability of *to* + nom. and *jest* + instr., since in such constructions the distinction between equation and ascription may be reduced to an imperceptible minimum:

(11a) Rodzina to rodzina (jest rodziną), musisz się z nią liczyć.
'Your family is your family; you have to take it into consideration.'

But if the ascriptive function is clear, then only *jest* is possible:

(11b) Dopóki rodzice się nie rozwiodą, rodzina jest rodziną.
'Until the parents get divorced, a family is a family.'

These examples, although not their interpretation, come from Klebanowska 1976, who presents a good deal of interesting material in trying to show that *to* and *jest* are merely contextual variants, and not, as Topolińska would have it, semantically distinct. (Klebanowska admits, however, that *to* "sometimes communicates relations that cannot be expressed with the verb *być*.")

Klebanowska argues in effect that *to* and *jest* are interchangeable except in certain circumstances, which she proceeds

to catalogue. She points out, for example, that if the subject is the first or second person singular pronoun *ja* or *ty*, *to* can only be used if the predicate designates a concrete person. Thus if the male addressee is unmarried, the female speaker can say only

(12a) Zapominasz, że ja nie jestem twoją żoną.
'You forget that I am not your wife.'

whereas if he is married, she can also say

(12b) Zapominasz, że ja to nie twoja żona.

This very specific contextual limitation follows, however, from the general distinction of equation and ascription: the real referent of one NP cannot be identified with the nonexistent referent of another NP; there is nothing wrong though with ascribing hypothetical characteristics.

Most—and perhaps all—of Klebanowska's constraints on *to* or *jest* seem to follow from facts about constraints on equation or ascription. The cases that she cites, for example, in which *to* has a meaning that cannot be expressed by *jest* are all instances of equation or identification, albeit metonymic equation. Thus we have

(13a) [cause and effect] Tytoń to rak.
'Tobacco is [means] cancer.'

(b) [effect and cause] Te dziury to mole.
'Those holes are [the work of] moths.'

(c) [visible part or appearance and whole or true identity]
Te drzwi to czytelnia.
'That door is the reading room.'
Ten mały błyszczący punkt to samolot.
'That small shiny dot is an airplane.'

(d) [sign or indication and what is indicated]
Ten zapach to czosnek.
'That smell is garlic.'
Czarny kot to nieszczęście.
'A black cat is [means] misfortune.'

(e) [components and whole] Tlen i wodór to woda.
'Oxygen and hydrogen are [make up] water.'

(f) [whole and most important part] Państwo to ja.
'L'état c'est moi.'
Ta szynka to sam tłuszcz.
'That ham is all fat.'

(g) [product and material from which it is made]

Ten sweter to czysta wełna.
'This sweater is pure wool.'

Some native speakers of Polish are reluctant to use sentences with *to* in a purely identificational context if the subject is a person, and some authors have commented on the relative rarity of the *to* construction in the spoken language (e.g. Musiołek 1978:104). On the other hand the same speakers accept the *to* construction in what seems to be an ascriptive use, e.g.

(14) Ewa to dobra sekretarka!
'Ewa is a good secretary!'

Apparently in such usage the descriptive phrase is viewed as so important that it can almost serve as an identification; it is not *a* description, but *the* description. Informants agree that (14) is stronger than

(15) Ewa jest dobrą sekretarką.

Cf. Oscar Swan's example (p.c.):

(16a) Ten pan jest aktorem.
'That man is an actor [by profession].'
(b) Ten pan to aktor.
'That man is an actor.' [He puts on a good act.]

Other languages use different grammatical devices to make similar distinctions. Thus in German the presence or absence of the indefinite article functions in this way (Admoni 1973:89):

(17a) Er ist Politiker.
'He is a politician [by profession].'
(b) Er ist ein Politiker.
'He is a politician.' [He plays politics.]

Mistrík (1970:256) suggests a distinction of essential vs. subordinate characteristics expressed by nominative vs. instrumental in Slovak:

(18a) Kukučín bol spisovatel'.
'Kukučín was a writer [his main characteristic].'
(b) Kukučín bol lekárom.
'Kukučín was [happened to be] a doctor.'

Note also in this connection Padučeva's Russian examples (1981:83) such as

(19a) Gekkern na vse sposoben: èto čelovek bez česti i sovesti.
'Gekkern is capable of anything: he is a man without honor or conscience.'

where the use of the neuter demonstrative pronoun (*èto*) produces

a stronger statement (characterization becoming identification) than would the same sentence with a personal pronoun:

(19b) ...on čelovek bez česti i sovesti.

Cf. also Nichols' comments on the use of the nominative to provide "descriptive force" (1981:44–47) and on sentences like

(20) On byl durak.
'He was an idiot.'

with nominative instead of instrumental (1981:183–84). Nichols also cites Potebnja (1888/1958:504), who explains the contrast of

(21a) On byl oficer.

and

(21b) On byl oficerom.
'He was an officer.'

by seeing in the latter (with the instrumental) a suggested potentiality of other predications ('he was an officer, but also other things'), while the former does not tempt us to seek other associations.

One fact about the relationship between *to* and *jest* has been missed both by Klebanowska, who treats them as contextual variants, and by Topolińska, who regards them as semantically distinct, namely: inverting a sentence with *jest* converts it into an equational sentence. Consider the following examples:

(22a) Ewa jest lekarzem.
'Ewa is a doctor.'
(b) Lekarzem jest Ewa.
'The one who is a doctor is Ewa.'
(c) Warszawa jest stolicą Polski (i leży nad Wisłą).
'Warsaw is the capital of Poland (and is on the Vistula).'
(d) Warszawa to stolica Polski (*i leży nad Wisłą).
'Warsaw is the capital of Poland.'
(e) Stolicą Polski jest Warszawa (*i leży nad Wisłą).
'The capital of Poland is Warsaw.'

Klebanowska (1976:60) cites the following example of obligatory *to* in metalinguistic use:

(23a) Głowacki to prawdziwe nazwisko B. Prusa.
'Głowacki is the real name of B. Prus.'

If, however, the order of elements is reversed, the *jest* construction is quite normal:

(23b) Prawdziwym nazwiskiem B. Prusa jest/był Głowacki.
'B. Prus' real name is/was Głowacki.'

Cf. the following example (Makuszyński 1976:137):

(24) Nazywała się Kazia i miała cudowne szare oczy... Ojcem jej był radca ze sądu...
'Her name was Kazia and she had marvelous grey eyes... Her father was a court councilor.' [= She was the daughter of a court councilor.]

This effect of inversion has been noticed for other kinds of sentences, e.g. in Russian. Arutjunova (1976:292) points out that while the sentence

(25a) Rodion Raskol'nikov ubil staruxu.
'Rodion Raskol'nikov killed the old woman.'

expresses a logical predication, its inverted version

(25b) Staruxu ubil Rodion Raskol'nikov.

expresses logical identification, corresponding, say, to the explicitly equational English sentence

(25c) The one who murdered the old woman was R.R.

The fact that inverting a Polish ascriptive sentence produces an equational one can be explained simply in the framework of functional sentence perspective. A descriptive phrase can occur freely as rheme, but if it serves as theme, it must constitute what logicians call a definite description, and therefore serves as the basis for a statement of equivalence.

Thus Polish (and to a lesser extent Slovak) has grammatical means at its disposal to distinguish the logical operations of equation and ascription (or predication), although the grammatical distinction may be neutralized, as we have seen, given a particular "communicative task," i.e. a particular distribution of theme and rheme. Neutralization may also result from stylistic factors.

Bertrand Russell once characterized the fact that many languages use the same copula in both equative and ascriptive sentences as "a disgrace to the human race" (1919:172). Polish, at least in part, saves the good name of humanity.

NOTES

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[1]A third possibility, common in spoken Polish, should be noted: a form of *być* with the nominative. This construction occurs in the metalinguistic function of identifying oneself by name:

(i) Janek jestem/Jestem Nowak.
'I'm Janek/I'm Nowak.'

and in emotive speech:

(ii) Jesteś osioł.
'You're an ass.'

(iii) Jestem profesor i nie pozwolę się likceważyć.
'I am a professor and I will not allow myself to be slighted.'

The last two examples are from Klemensiewicz 1927:153, who comments that the nominative is used when the predicate nominal bears "a strong psychological accent, when the speaker wishes to draw the listener's attention to that word." Constructions with the predicate nominative "have a great deal of strength and expressiveness; there is a large dose of the affective element in them. We therefore use them primarily in excitement, anger etc., i.e. as a function of the subjective emotional state of the speaker."

[2]The use of the neuter demonstrative in identification sentences vs. the personal pronoun in ascriptive ones is well known from other languages. Padučeva (1981:73–4) cites the following Russian example from Bulgakov:

(i) I pod rešetku Patriaršej allei vybrosilo na bulyžnyj otkos kruglyj temnyj predmet. Skativšis' s ètogo otkosa, on zaprygal po bulyžnikam Bronnoj. Èto byla otrezannaja golova Berlioza.
'And a dark round object was thrown up the cobblestone slope under the grating of the Patriarchs' Avenue. It rolled down the slope and started bouncing along the cobblestones of Bronnaja St. It was the severed head of Berlioz.'

The masculine personal pronoun *on* is used in the second sentence, which ascribes an action to the dark round object. The subject of the third sentence, however, which identifies the object as Berlioz's head, is the neuter demonstrative *èto*. Cf. the following quotation from Pascal (cited in Harrison 1886:121):

(ii) Qui sont ces nouveaux auteurs? Ce sont des gens bien habiles.
'Who are these new authors? They are [certain, some] very clever people.'

as opposed to

(iii) Comment sont ces nouveaux auteurs? Ils/Ce sont des gens biens habiles.
'What are these new authors like? They are very clever people.'

[3]A number of authors have treated what Padučeva and Uspenskij (1979) call "binominative sentences" as sentences having the logical structure R(a,b) rather than P(a), i.e. as expressing an identity relation between the two halves rather than one half being predicated of the other, which serves as subject. See, for example, in addition to the works just mentioned, Berka 1961, Steblin-Kamenskij 1956 and Kallas 1974.

[4]It is possible to say, e.g.

(i) I realized that the Mayor of Cambridge was the woman sitting across the table from me.

because of English sequence of tense rules. Cf. also the following example from the Warsaw weekly *Polityka* (9/16/78):

(ii) Dla władz austriackich Piłsudski to była szansa wywołania dywersji na tyłach przeciwnika.
'For the Austrian authorities Pilsudski was a chance to create a diversion behind the enemy's lines.'

This is an example of metonymic, rather than literal, identification: 'the presence of Pilsudski signified/meant a chance...' (Similar metonymic or metaphoric use is illustrated in examples 13 below.)

A related phenomenon is probably at the base of Šmelev's example (1976:35) of a predicate nominative that cannot be changed into the more common (in contemporary Russian) predicative instrumental:

(iii) Ob ètix izlišnix ljudjax nikto ne sčital sebja objazannym zabotit'sja; nanjatye byli *drugoe delo* (*drugim delom): o nix zabotilis'.
'No-one felt obliged to worry about those superfluous people; the hired people were *another matter*: they were taken care of.'

Cf. Padučeva's comments on "categorial incompatability" (1981:83–84).

[5]Some other examples do not fit as well, e.g.

(i) Ľudia sú nielen stránky, prosím, l'udia sú aj l'udia.
'People are not only parties; people are also people.'

In Czech the choice of nominative or instrumental for the predicate noun after a form of *býti* is sometimes said to be free (e.g. Mrázek 1962:351), sometimes said to express a distinction between permanent or essential features vs. temporary or less essential features, e.g.

(ii) Co byl její otec?—Čech.
'What was her father? A Czech.'

vs.

(iii) Čím byl její otec?—Ředitelem pojišť'ovny.
'What was her father? The director of an insurance company.'

The examples are from Šmilauer 1966, who comments that there is a good deal of variation in the choice of nominative or instrumental: "alongside of semantic differences stylistic and individual differences play a role" and "the instrumental is more common in the written language than in the spoken language."

According to Mrázek 1962:351, spoken Upper Lusatian lost the predicate instrumental, but it was retained in the written literary language. Even in predicate use it occurs only with a preposition, e.g.

(iv) Jeho bratr je w susodnej MTS z traktoristom.
'His brother is a tractor driver at the nearby tractor station.'

The Instrumental in Russian: On Establishing a Consensus

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1. *The nature of the problem*

In accounts of the Russian case system it is generally agreed that the instrumental is the most complex case in terms of the range of meanings it can express and the diversity of its uses. It is not surprising, therefore, that many linguists have wished to argue that the instrumental in Russian is 'really' many cases. Potebnja is often given as the major proponent of such a view, as the following often-cited passage illustrates:

> We have become used to talking about a single instrumental case in Russian, but in fact that case is not a single grammatical category, but several different, genetically related categories. . . . Strictly speaking, we have several cases called instrumental. (Potebnja 1888, cited in Vinogradov 1972:141; my translation DAK)

This approach is quite a natural one to take if one is aiming at pedagogical effect, for instance, in that a learner of a language is going to want to know what is happening in specific linguistic contexts at the very least. It may well be that a learner would derive benefit from having some general account of the use of the instrumental as well, but it can hardly be denied that it is not sufficient for there to be a general account (along the lines of Jakobson 1936/1971, for instance) of the use of the instrumental; a learner could not be expected to derive information about the specific uses of a case from such general information.

There are two reasons why this type of approach is inadequate for a theoretical approach to the instrumental case. First, it will always be possible to take a case form and specify a number of different uses of that case form, while a general account requires some fairly careful analysis of case uses, and not a little inspiration as well. It follows that the specification of a list of case uses cannot be taken as implying that there is no possible general account. But if there is a general account, it is clearly

preferable to a mere list of uses, as it provides some basis for the unity of the case form. Put more generally, a strong claim will always be preferred over a weak one, and a mere list of uses is about the weakest claim one can make about the nature of a case. The second reason is a purely factual one: it turns out that there are many languages which combine meanings such as those which are expressed in the Russian instrumental: e.g. instrumental of instrument (1), of agent (2), of location (3), to name only three of the relevant uses:

1. Ona udarila ego palkoj.
   she hit him stick (I)
   'She hit him with a stick.'
2. On byl prinjat ministrom.
   He was received minister (I)
   'He was received by the minister.'
3. On šel lesom.
   He went wood (I)
   'He went by the wood.'

Such commonality of expression is found in a very wide range of languages; we find the instrumental and agent receiving common expression in Carib, Hungarian, Kabardian, Sel'kup, Tamil, etc. The instrumental and the notion of motion through are commonly expressed in Azerbaijani, Diola, Mongolian, Tabasaran, Twi, Yakut, etc. All of these represent merely a few of the languages which express different case meanings in the same way as Russian, and only a sample of the meanings of the instrumental which are commonly expressed in a wide range of languages. This should, however, be sufficient to suggest rather strongly that the link between these uses of the instrumental cannot merely be that of occurrence in an arbitrary list—there has to be some principled account of their occurrence with identical formal expression.

Let us accept, then, for the purposes of this article, that there must be a general account of the uses of the instrumental in Russian. There is a variety of accounts of the Russian case system in general, or of the instrumental case in particular, which claim to find some overall characterisation of the uses of this case. Some of these approaches I find quite unattractive, and therefore I shall arbitrarily exclude them from consideration: in particular, Ebeling's account (1955) will not be considered in detail here, because it seems to be less than strongly supported by the facts that he

considers, and because he imposes a variety of methodological constraints on his analysis which prevent him from considering many of the uses of the instrumental. The accounts that I shall consider in some detail start with the classic article of Jakobson (1936/1971), of course, and include the interesting and original book by Wierzbicka (1980b—entirely on the instrumental), an article by Veyrenc on the instrumental (1971), my own book on the Russian case system (1977—a revision of my doctoral dissertation of 1972) and a more recent article on the instrumental in which I adopted a 'functional' approach (1982). These are selected not because they are good, but because they are the only works which set out to provide an overall and unified account of the instrumental case in Russian, and do so in a way which is comprehensible (to me). Of course there are other major works on the instrumental, notably those by Worth (1958) and Mrazek (1964); these, however, do not claim to provide a unified account of the instrumental case, but rather provide typologies of the individual uses of the instrumental.

2. *Some approaches to the instrumental*

Some priority in the matter of Russian cases naturally attaches to Jakobson's (1936/1971, 1958/1971—henceforth 'J') approach, which operates in terms of binary features characterising individual case forms. The approach is essentially morphological (rather than syntactic) in orientation—the data to be explained are similarities of form among different case markers, a natural corollary of such an approach being the fact that any one case implies total identity of the markers used for expressing different individual uses of that case. There is general agreement among those who have followed J in his approach to Russian cases that he is correct in analysing the instrumental case as a 'peripheral' or 'marginal' correlate of the nominative—i.e. it is unmarked in all but its peripheral status.[1]

J has a number of specific arguments to offer for the peripheral status of the instrumental. There is the argument from subcategorisation: absence of a nominative or accusative noun phrase from a sentence with a finite transitive verb marks that sentence as elliptical, but it is rare for the absence of an instrumental noun phrase to have that effect. One of the clearest *semantic* arguments that J brings forward is the contrast between

the differential case government of the verb *švyrjat'* 'throw':

(4) Čtoby probit' stenu, oni švyrjali v nee
so-as-to breach wall, they threw to it
kamnjami.
stones (I)
'To breach the wall, they threw stones at it.'

(5) On bescel'no švyrjal kamni v vodu.
'He aimlessly threw stones (A) into water.'(A)

In (4), we have a purposeful action, and the role of the stones is secondary—they are used to help perform an action which does not primarily relate to them. In (5), on the other hand, the stones are the point of action, they are not used as secondary participants in some purposeful activity. J has many other examples which demonstrate a similar point, and his discussion of many specific examples is exceptionally rich in insights, but the essence of his claims is, I think, adequately summarised in the above discussion.

Veyrenc 1971 (henceforth 'V') is an interesting approach based on syntactic deep structures which are variously reduced or modified to approximate surface structures. Like any approach of its kind, the argument is only as convincing as the deep structures which he posits to go with it, but the degree to which a wide variety of uses of the instrumental can be captured with a unitary account based on (deep) syntactic structures is quite impressive. The general argument goes something like this: many uses of the instrumental involve an instrumental noun phrase in a situation where it is plausible to view that noun phrase as being subject or object of a related sentence, e.g.;

(6) On letit streloj.
It flies arrow (I)
'It (he) flies like an arrow.'

In this case both the subject noun phrase and the instrumental noun phrase are *potential* subjects of the verb; so Veyrenc analyses this sentence as involving two underlying predications:

(7) On letit: strela letit

It may not be doing too much violence to V's proposal to state that it relates the use of the instrumental to the combining of underlying sentences in such a way that the valency of the verb is insufficient for the number of NPs in the sentence. There is more to it than this: In some instances the same noun phrase arguments are merely rearranged (e.g. the instrumental of agent in

the passive). Also, causative sentences, for instance, might naturally be analysed as involving a causative predication with a 'caused predication' embedded in it; but the most frequent case for the 'surplus' noun phrase is the dative (cf. Comrie 1974b), and the instrumental is only used when the caused predication has an indirect object. The general point that V is making is that the instrumental is the case of *inclusion*: it indicates that one construction has been included within another one. A large proportion of V's examples are reasonably satisfactorily dealt with from an intuitive point of view. But he allows himself one or two highly *ad hoc* devices. Thus, for instrumentals expressing path (as in (3) above), time, and means of transport, V postulates 'sectoral transformations' whereby each of these types of instrumental noun phrase modifies one semantic aspect of the sentence. This type of reasoning could be applied to the use of virtually any case, and cannot be considered distinctive of the instrumental. However, it is inevitable that any approach to cases will more naturally apply to some uses than to others, and on the whole V's sketch can be considered quite a successful attempt to capture generalisations about the instrumental, at least as a first approximation.

My own work (Kilby 1977 [K77]—although completed just after V's work, and to a large extent independently of it) starts from a similar set of observations and emerges with rather different conclusions from those of V. As I was taking a localist viewpoint, it seemed natural to try to relate the instrumental to locatives of some sort, and this received support from the sorts of alterations of instrumentals and locative elements such as:

(8) Oni gruzili baržu drovami.
they loaded barge (A) wood (I)
'They loaded the barge with wood.'

(9) Oni gruzili drova na baržu.
they loaded wood (A) on barge (A)
'They loaded wood onto the barge.'

(10) Zadača ne v ètom.
problem not in that (L)
'The problem isn't that.'

(11) Èto bylo zadačej bol'šoj složnosti.
that was problem (I) great (G) complexity (G)
'That was a problem of great complexity.'

The general argument involved the claim that, assuming processes

of subject/object formation (in the 'generative semantic' tradition), an abstract predicate of location could be left with a location-specifying element attached to it, resulting in overtly locative expressions as in (9) or (10). But subject/object formation could take away this location-specifying element; the locative predicate would then be left relating to the 'theme', which would appear in the instrumental. Much of the relevant chapter was spent extending this analysis to less obvious uses of the instrumental, cf.

(12) Ego nagradili medal'ju.
him awarded medal(I)
'They awarded him a medal.'

(13) Dali emu v nagradu medal.'
gave him (D) in award medal (A)
'They gave him a medal as reward.'

(14) On otvetil dlinnoj reč'ju
he answered long speech(I)
'He answered with a long speech'

(15) On skazal v otvet, čto...
he said in reply (A), that
'He said in reply that...'

As with the other accounts some extensions are less plausible, but the correlations are nevertheless suggestive. The proposal was extended to cover the 'left hand side' of other relations too: for example, given a causative sentence, the agent or the instrument would be on the 'left' (causing) side, and hence would be expressed by I if not made subject. K77 was less complete than V in dealing with different uses of the instrumental. It was also less explicit in some of its analyses, where it merely pointed out correlations of locative and instrumental noun phrases in related sentences, without following through a detailed analysis. However, K77 devoted more attention than V to the problem of when the instrumental *cannot* be realised.

Both of these approaches—those of V and K77—relied heavily on acceptance of a theoretical framework; a recent approach which relies even more heavily on factors of this sort is that of Wierzbicka (1980b—henceforth W), who bases her work on the semantic metalanguage she has been developing for a number of years (cf. Wierzbicka 1980a). I share much of the scepticism which her work has generated among some linguists, but it would

be a great pity if this were to discourage people from attempting to grasp the intuitions behind this work. In rather similar vein to K77 (though naturally with a much more highly developed semantic base), Wierzbicka refuses to claim that the instrumental actually corresponds to any element of the semantic metalanguage, but rather that there is a family of resemblances that cover the uses of the instrumental. W's account is less than clear in relation to the overall structure of the instrumental: She claims that the instrumental does not have a constant meaning of its own, yet insists that where there is a choice of case expression the choice of the instrumental rather than some other case is determined by semantic factors. So the instrumental appears to come out as being both semantically specific and non-specific at the same time. It is non-specific in that there is a whole range of semantic formulae which determine the use of the instrumental, and these semantic formulae have nothing in common which could be isolated as the 'meaning' of the instrumental case as a whole. It is specific in that, given a choice between two expressions, there is always some semantic reason why the instrumental expresses the meaning it does. Unfortunately W devotes very little space to this aspect of her argument, while specifying in much greater detail the semantic features of the individual uses of the instrumental. Insofar as it is possible to deduce the basic semantic motivation of the Russian instrumental as W sees it, it seems to be that the instrumental expresses something which is acted on not in order for something to happen to it, but in order for something else to happen. In this sense the characterisation of the instrumental as 'peripheral' is applicable here too, in a purely semantic sense. As an example, consider her account of the instrumental of instrument, (where X is subject, Y is object and IN is the instrumental NP):

> Something happened to Y
> that can be thought of as something that happened to IN
> because X did something
> that can be thought of as something that happened to IN
> not because he wanted something else to happen to IN
> (Wierzbicka (1980b:147))

The last line gives the 'peripheral' characterisation to IN.

The general idea of Kilby 1982 (henceforth K82) is that it seems natural for a language to be as economical as possible by having as few cases as it can get away with, and yet at the same

time it seems necessary for languages to have the possibility of clearly expressing particular meanings. One way of combining these requirements is for languages to pack into a single case form those meanings which are complementary to each other. Such complementarity, I suggested, is likely to emerge in two ways: either by there being different classes of nouns (or noun phrases) which occur in a given case form, or by there being unambiguous governing elements selecting semantically specific noun phrases. Thus, for example, the distinction of nominative and accusative is more likely to be maintained where nouns refer to likely subjects *and* objects, rather than where they refer to things which are more likely to be objects—cf. recent work on the role of animacy in the expression of grammatical relations (e.g. Comrie 1978). Similarly, a verb which restricts the type of objects it may have will not need highly distinctive case marking to achieve correct interpretations. The crucial point about the instrumental, I suggested, was that the classes of nouns, and the classes of governing elements, which occurred with the instrumental were highly specific, and therefore it is possible to fit a large number of different uses into the same case. In other words, whereas a case such as the accusative or the locative has meanings which make it applicable to a very wide range of noun phrases, and with a very wide range of governing elements, the instrumental can be looked on as a case which 'mops up' a lot of loose ends, picks up small and insignificant constructions and includes them in itself. Thus it is quite difficult to construct examples of sentences where there is a genuine possibility of ambiguity between different instrumental NPs, and the naturally occurring examples of this are very rare. For example, consider the instrumental of instrument, location, time, personal characteristics, etc., which could not be confused with each other because of the virtual complementarity of the noun phrases which occupy these positions. This complementarity becomes even more strongly marked when the nature of the governing element is taken into account as well. But if you take a use of the instrumental, say the instrumental of passive agent, and imagine it being expressed by the accusative or the dative or whatever, then it becomes clear that there would be a great deal of ambiguity. In that sense meanings can be said to be packed into case forms only insofar as they do not lead to misunderstandings on a large scale. It seems dubious to claim that the case system of any particular language is *maximally* efficient—the best of all possible worlds.

What seems essential is that case meanings should be combined in such a way that no major malfunctioning of the linguistic system results, mass and unavoidable ambiguity representing such an instance. It remains to be demonstrated in detail how this is achieved by particular languages, but the approach of K82 is, I believe, suggestive in this respect.

3. *Is a synthesis possible?*

The approaches to the Russian instrumental considered in the last section all, I believe, have something of interest to say; all of them are also open to a range of criticisms, most of which have been aired to at least some degree in the literature on Russian case. But an interesting problem arises in relation to these approaches viewed all together. Can they all be right, even to some degree? Are they in some way compatible with each other, do they in some sense involve saying the same thing in different ways, or are they perhaps incommensurable in terms of the theoretical preconceptions which give rise to them? A further possibility is that some of them are simply wrong, and that one of them, or some other approach entirely, can be shown to be *the* correct solution. I certainly do not claim that here. However I would not wish to reject any of these approaches entirely, as all of them seem to me to have something of interest to say which is not captured by the other accounts. What I should like to do instead is to explore the possibility that each of these approaches is directed towards more or less the same position with respect to the instrumental, but from different points of view. I find it quite natural to speculate that the thing these approaches have in common is the notion of the 'peripheral' nature of the instrumental: This is clear in the label in J's approach; W is arguing that the instrumental noun phrase typically has a peripheral role, either from the speaker's point of view, or from that of the agent of the action; V and K77 are based on the suggestion that the instrumental emerges as a by-product of syntactic operations which assign it a role outside the predicative core of the sentence, and finally K82 can be said to see the instrumental as peripheral in that it 'tidies up' the loose ends of the use of cases—it includes a whole range of uses which would in some sense 'interfere' with the major uses of other cases. The crucial questions which arise in this context are the following: Is

this use of the term 'peripheral' merely a metaphorical use which gives the impression of consensus without in fact representing anything substantive in the way of agreement, or is it a genuine unifying factor? And if there *is* genuine agreement of some sort, what implications are there from one formulation to another? How do specific analyses relate to each other, etc.?

J's and W's analyses of the Russian instrumental both can be regarded as semantic with qualifications. The qualifications relate in J's case to the fact that the semantic feature characteristic of the instrumental in my view, must be interpreted as syntactic in at least some instances. J makes it clear that semantics motivates *some* of his decisions—but does it motivate all of them? It seems not. In W's case, the qualification is that she does not claim that there is a single semantic characterisation of *all* uses of the instrumental, only that they cluster round certain semantic foci. In neither case, I would argue, is there a commitment to a single clearly semantic basis for the instrumental. W can possibly be interpreted as saying that there is a semantic *core* meaning for the instrumental in Russian which motivates cases where there are alternative possibilities. J's and W's approaches are clearly compatible; in fact it could be argued that W is taking J's original insight and recasting it in the framework of her own theoretical approach. I find it difficult to look on either of them as being predictive, although W certainly makes such a claim.

V and K77 both postulate abstract deep structures for sentences which include the instrumental, and are inevitably controversial merely by virtue of that—specific proposals for deep structures which differ radically from surface structure are almost necessarily controversial. But there is sufficient similarity between V and K77 to suggest that they represent some of the same intuitions. Both approaches put crucial emphasis on the role of transformations deriving simple sentences from complex structures, and many of the individual analyses are quite compatible.

We can assume for the moment that these represent a single, relatively unified approach, as there are many specific similarities in spite of a rather different set of initial assumptions. How, then, can this trend be reconciled with the approach taken by W and J? There is a familiar type of argument which discusses whether a type of construction should be dealt with in terms of deep structures, or whether it would be better dealt with purely in terms of semantic or indeed pragmatic factors. We might wish to

claim that V and K77 represent the 'hard' syntactic side of this debate, while J and W would be more on the side of semantics. But in fact this would be quite wrong: there *are* purely syntactic generalisations covering the use of cases, and nobody (J and W included) is denying this. The semantic analysis of the J/W tradition cuts across the syntactic analysis of the instrumental. Conversely, syntactic analysis in the V/K mould takes account of certain semantic aspects of the use of the instrumental, and could well be extended in the light of some semantic theory.

A natural hypothesis to suggest on this basis is that J/W are referring to factors which might be said to *determine* the applicability of syntactic rules such as those that V/K postulate. In other words, if we assume that one such purely syntactic approach can be adopted, then we are still left with the choice of whether we should maintain something very similar to the postulated underlying structure as a surface structure, or alternatively, if we should reduce it by whichever transformations are suggested as being able to perform this task. It would be natural to take into account factors of the sort specified by J/W to deal with problems of this sort.

Take, for instance, V's relatively simple examples given as (6) and (7) above, and repeated here:

(6) On letit streloj.
'It flies like an arrow.'

(7) On letit: strela letit.
'It flies; an arrow flies.'

How would this be compatible with W's account, for instance? It seems clear enough that, even if these two predications are validly taken as underlying (6), they are in no sense of equal status. As W (1980b:150) states, we want to say something about the *subject* of (6), not about the instrumental noun phrase. The second predication is used as a reference point, as something by which we can judge the action of the first predication, hence the unacceptability of a combination from (7) which makes the second predication primary:

(16) *Strela letit im

So V's analysis gives us an account of the underlying formal relations between noun phrases and the verb; W essentially provides an account of the functions of these noun phrases in constructing a message.

Exactly the same type of analysis would hold of the instrumental of instrument, as V and W see it. However, there are interesting specific differences between some of these approaches. For example, given the meaning of instrument proper, V, W and K77 are agreed that it involves a complex source. W and K77 suggest that part of this involves the agent acting on the instrument, while for V the agent and the instrument are not explicitly connected—they are both specified as possible subjects for the predicate. It is perhaps significant in this connection that V's example of the instrument meaning is abstract, and the idea of 'acting on' the instrument is less clear:

(17) Ubedili ego dovodami.
(they) persuaded him arguments (I)
'They persuaded him with arguments.'

4. *Conclusion—the nature of the instrumental*

The evidence of the last section suggests that there is a complex web of compatibilities and incompatibilities, of predictions and non-predictions, which hold between the various proposals relating to the instrumental in Russian. They are all loosely related in the sense that they can all be looked on as specifying some sort of peripheral role for the instrumental. Nevertheless, more specific links between them are rather less coherent if they are looked on as being alternative theories of the nature of the instrumental, even though there are clear instances of intertranslatability.

There is another way of looking at them, however. If we begin with the proposals of K82, it is clear that this is in no sense a generative mechanism for a language, or even for a grammar. Languages can have different numbers of cases, they can distribute the meanings expressed by those cases in different ways, and they can allow ambiguities of various sorts up to some (unspecified or unspecifiable) level of tolerance. But, if this proposal is correct, any system of cases and case meanings will obey certain constraints on internal distribution.

The essentially semantic proposals of J and W, on the other hand, *are* concerned with specifying the distribution of cases among meanings in Russian. They can therefore be said to be subject to the constraints imposed by the sorts of functional considerations mentioned in K82. But they do not give an account of the

instrumental which relies on detailed semantic consideration of all of the sentence-types in which the instrumental can appear. W's account is perhaps misleading in this respect, as she does attempt to give an account of the meaning of each sentence-type in which the instrumental appears. But insofar as the instrumental has general properties in her account, it is just one line of the semantic definition which is relevant, and the other lines give semantic properties which are (she claims) valid of particular sentence types but by no means crucial to the choice of the instrumental itself. J is rather clearer about this, in that the instrumental is specified only to the extent that it can be shown to be distinctive vis-a-vis the other cases. Furthermore, the definitions of J and W are not couched in terms of the truth-functional values of sentences, but in terms of the way that the speaker envisages the situation. I am not of the opinion that this disqualifies such definitions from consideration by a semantic theory, but it *does* mean that they cannot be invoked in an entirely straightforward way by specifying that any situation which involves a particular type of activity, say, will be expressed in a form which includes an instrumental.

V and K77 both provide accounts in which the use of the instrumental depends on specific underlying configurations. They aim to be generative, in the sense that they both postulate specific types of underlying structure, specific transformational operations, and conditions on the realisation of the instrumental case contingent on these transformational operations. As I have suggested, though, they leave no place for the problem of why specific transformations are applied at specific times. The J/W account can be brought into play here, providing a reason why an 'underlying structure' should be realised with an instrumental in one instance, but not in another.

Clearly, therefore, there is something of a hierarchy of motivation: The broad (but predictively weak) functional approach of K82 provides a rationale for some general division of case uses. The more specific (but still not determinate) semantic account of J and W suggests why the instrumental might be preferred in specific instances. Finally, the quasi-generative (i.e. failed generative?) accounts of V and K77 attempt to specify individual uses of the instrumental in a general way in terms of purely structural factors. We might argue that the traditional way specifying each individual use of the instrumental is a further chain in this hierarchy of motivation.

If these considerations are plausible, as I believe they are, the question of how these approaches to the instrumental compare with each other appears in a rather different light. Rather than asking who has provided the most adequate account of the instrumental case, we have to ask what the purpose of the account is, or what is meant by 'account'. I would certainly not wish to paper over any of the very real defects which appear to be characteristic of all of these accounts that I have mentioned. There are many points of detail where each of them falls down, in terms of plausibility, in terms of explicitness, in terms of completeness of coverage of the instrumental. But if a general account of the instrumental is possible, there are at least these three general levels in relation to which all require clarification. These levels may relate to different aims: general functional approaches to case systems (such as K82) presumably relate to diachronic or developmental dimensions and require further consideration in these terms. The communicative-semantic approach of J and W would be hard to reconcile with a generative approach as part to whole, yet it suggests a natural *raison d'être* for different expressions in terms of case. V and K77 fit broadly (if uneasily) within a generative framework. Although they omit many factors relating to the *function* of the instrumental, they suggest concrete ways to distinguish different cases in specific syntactic positions (although it must be said that they fall some way short here).

There is one further point relating to the interrelation of these various approaches. I have shown that they are broadly compatible: if a true synthesis is to be achieved, however, there ought to be specific implications among these accounts of the instrumental. For example, it ought to be possible to say that, if an account at one general level is accepted, this has implications for specific proposals at another level. If we can take seriously the notion that different approaches to the instrumental converge on the notion 'peripheral', this would suggest that such implications are possible. In particular, any account, at any level, which analysed the instrumental as 'central', or 'non-peripheral', ought to be excluded. Take a simple example: assume that one is justified in proposing that at some syntactic or semantic level the instrumental is a 'peripheral' case. It does not follow in a purely logical sense that it should also be peripheral in terms of a functional approach such as K82, for it is conceivable that it would be possible to combine a case which expresses the subject or object

in typical sentences with a whole range of other meanings which bear no relation to that notion. But in fact that is not a situation which occurs, on the whole. Semantically complex cases (like the instrumental) in different languages are generally not the same ones which express typical subject and object. In Russian in particular, the nominative and the accusative do not have a very wide range of uses (the accusative more so than the nominative, but certainly nothing to compare with the range of uses of the instrumental). This correlates naturally enough with the fact that there are no very strong restrictions on the sorts of noun phrases which can be subjects and objects. But there *are* strong restrictions on what can be interpreted as an instrument, and so it is natural enough that the instrumental case should be used to express numerous minor construction types. The syntactic centrality of the nominative and accusative is related to its semantic centrality; all sentences (or utterances) can be said to be 'about' something, and they are typically 'about' what is subject. If the instrumental were a central case semantically, then it would be expected to occur in the majority of sentences (except elliptical ones), and it would be expected to become syntactically integrated into the sentence. In sum, there *do* appear to be systematic correlations between these various levels of analysis of the instrumental, further evidence—if such were needed—of the fundamentally systematic nature of linguistic organisation.

NOTES

[1]One necessary point to make about the status of J's features is that they are not intended (by virtue of his use of markedness) as sufficient conditions for the use of a particular case, although they are necessary conditions.

Hierarchies in the Genitive of Negation

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American textbooks of Russian often suggest that "the genitive case is regularly required for the direct object of negated verbs."[1] In fact, the use of the genitive of negation in Contemporary Standard Russian is relatively restricted; its use is constrained by a number of lexical, semantic, syntactic, grammatical, morphological, and stylistic parameters. These parameters have been recognized and enumerated in various sources, but they have not been discussed systematically; there has been little attempt to relate these parameters to the function of the genitive of negation. In this paper I will discuss the genitive of negation in terms of these parameters, with the aim of establishing four points: (1) each parameter can be viewed as a hierarchy which ranks contexts for their greater/lesser likelihood of using the genitive of negation; (2) these hierarchies are relevant both synchronically and diachronically; (3) the genitive of negation is constrained by these hierarchies because it is in the process of being lost; and (4) each hierarchy is motivated in terms of the relative markedness values of its terms as contexts for the genitive of negation.

In the following I will refer to the genitive of negation as a rule, without being concerned with the formalization of this rule. I will discuss only the use of the genitive for the direct object of negated transitive verbs; I will not consider the use of the genitive for the subject of negated intransitive verbs with existential meaning. It may be noted, however, that most of the hierarchies which are relevant for the object genitive of negation are also relevant for the subject genitive of negation, suggesting that both types are part of the same rule. In this discussion I will use the distinction formulated by Roman Jakobson between the narrated event and the participants of the narrated event.[2]

Since it is difficult to make absolute claims about the acceptability or grammaticality of sentences with accusative vs. genitive, I will discuss the examples below in terms of relative acceptability for neutral style; rough approximations of acceptability are given in four gradations and indicated as follows: normal and

preferred, no mark; acceptable but not preferred, degree sign (°); marginally acceptable, question mark (?); unacceptable, asterisk (*). It must be emphasized that the degree of acceptability depends crucially on the stylistic register of language (see below); in fact the examples below, which were elicited from native speakers,[3] reflect a considerably less formal register than the literary examples which are typically cited in discussions of the genitive of negation.[4] The examples, although simplistic, have two advantages over literary examples: first, they give a more accurate picture of contemporary usage, and second, they clearly indicate differences of usage by limiting variation to a single parameter at a time.

The hierarchies which constrain the use of the genitive of negation concern all aspects of language. They may first be divided into substantive and stylistic hierarchies; substantive hierarchies may be further subdivided into those involving the participant and those involving the event. Let us first examine the semantic hierarchies of the participant. There are a number of such hierarchies, but they are similar in that they all refer to the INDIVIDUATION of the participant, that is, the degree to which the participant is characterized as a distinct entity or individual in the narrated event. In general, there is an inverse relationship between individuation and the genitive of negation: the more a participant is individuated, the less likely it is to be in the genitive under negation, and vice versa. Among the hierarchies of individuation are the following.

PROPER/COMMON. Proper nouns are virtually never in the genitive under negation, while common nouns may or may not be, depending on other factors.[5] Proper nouns, since they refer to a uniquely defined participant, are thoroughly individuated.

Ja ešče ne čitala roman Gladkova "Cement"
I still not read novel:ACC Gladkov's "Cement"
° Ja ešče ne čitala romana Gladkova "Cement"
I still not read novel:GEN Gladkov's "Cement"
'I still have not read Gladkov's novel "Cement".'

Ja ešče ne čitala "Cement"
I still not read "Cement":ACC

* Ja ešče ne čitala "Cementa"
I still not read "Cement":GEN
'I still haven't read "Cement".'

The neutral variants of these sentences have the accusative, but the one with a common noun in the genitive is more acceptable than the one with a proper noun in the genitive.

CONCRETE/ABSTRACT. Abstract nouns refer to concepts which inherently cannot be individuated, while concrete nouns may be more or less individuated. Abstract nouns tend to occur in the genitive more often than concrete nouns.[6]

° Ne slušaj ego - on ne dast tebe xorošij
don't listen-to him he not will-give to-you good:ACC
sovet
advice:ACC
Ne slušaj ego - on ne dast tebe xorošego
don't listen-to him he not will-give to-you good:GEN
soveta
advice:GEN
'Don't listen to him - he won't give you good advice.'

Ne pokupaj u nego, on ne čestnyj čelovek - on ne
don't buy from him he not honest person he not
prodast tebe xorošee plat'je
will-sell to-you good:ACC dress:ACC
° Ne pokupaj u nego, on ne čestnyj čelovek - on ne
don't buy from him he not honest person he not
prodast tebe xorošego plat'ja
will-sell to-you good:GEN dress:GEN
'Don't buy from him - he is not an honest person - he will not sell you a good dress.'

Thus the genitive is preferred for the abstract noun in the first pair, while the accusative is preferred for the concrete noun in the second.

COUNT/MASS. Count nouns by definition may be counted; that is, they may be treated as collections of individual entities. Substance or mass nouns cannot be counted; they can be quantified

only by referring to the parameter of part vs. whole. Mass nouns (with or without the partitive sense) tend to occur in the genitive more often than count nouns.[7] Thus the following, with a mass noun, is preferable with the genitive:

° Šokolad ne xočeš'?
chocolate:ACC don't you-want
'Don't you want (the) chocolate?'

Šokolada ne xočeš'?
chocolate:GEN don't you-want
'Don't you want (some) chocolate?'

But the following, with a count noun (for example, offered as tentative advice on what kind of present to buy), is likely to have an accusative:

Galstuk ne xočeš'?
tie:ACC don't you-want
? Galstuka ne xočeš'?
tie:GEN don't you-want
'Might you not want a tie?'

ANIMATE/INANIMATE. Animate nouns tend to be viewed more as individuals than inanimate nouns and therefore tend to occur in the genitive less often than inanimate nouns.[8] The neutral variants below have the genitive, but the accusative is at least barely possible for the animate noun.

? Nikakuju ženščinu ja ne vižu!
any:ACC woman:ACC I not see
Nikakoj ženščiny ja ne vižu!
any:GEN woman:GEN I not see
'I don't see any woman!'

* Nikakuju mašinu ja ne vižu!
any:ACC car:ACC I not see

Nikakoj mašiny ja ne vižu!
any:GEN car:GEN I not see
'I don't see any car!'

SINGULAR/PLURAL. A plural participant is less individuated than a singular participant and therefore tends to be used in the genitive more often.[9]

Ja ne našel cvety
I not did-find flowers:ACC
'I did not find the flowers.'

Ja ne našel cvetov
I not did-find flowers:GEN
'I did not find any flowers.'

With a plural noun both accusative and genitive are acceptable. But with a singular noun the genitive is marginal:

Ja ne našel cvetok
I not did-find flower:ACC

? Ja ne našel cvetka
I not did-find flower:GEN
'I did not find the/a flower.'

DEFINITE/INDEFINITE. A definite participant is understood as a uniquely defined individual within a set of individuals which might conceivably be participants in a given event. A definite participant is therefore more individuated than an indefinite participant, and is less likely to be expressed in the genitive.[10] Thus, the accusative in the plural example above would be used most naturally in a definite sense ('the flowers which you asked me to bring'), while the genitive would be used in an indefinite sense ('any flowers at all'). Similarly, in the singular sentence the genitive is acceptable only if the noun is understood to be indefinite.

The six hierarchies discussed above refer to individuation of a participant as a property of the participant itself. The three hierarchies discussed below refer to individuation of a participant in

its syntactic context.

NEUTRAL/EMPHATIC NEGATION. A noun modified by a marker of emphatic negation, such as *nikakoj*, *ni odin*, or *ni*, almost always appears in the genitive as the object under negation.[11]

Ja ne čitaju gazetu
I not read newspaper:ACC

? Ja ne čitaju gazety
I not read newspaper:GEN
'I'm not reading the newspaper.'

* Ja ne čitaju nikakuju gazetu
I not read any:ACC newspaper:ACC

Ja ne čitaju nikakoj gazety
I not read any:GEN newspaper:GEN
'I'm not reading any newspaper.'

Nikakoj and other markers of emphatic negation signal the indefinite and nonspecific sense of the noun and emphasize the impossibility of individuating the participant with respect to the event.

TOPICALIZED/NEUTRAL. An object which is topicalized and expressed in sentence-initial position is contextually and syntactically individuated. It is less likely to occur in the genitive than an object which is in normal object position.[12]

* Ja ne vižu nikakuju ženščinu
I not do-see any:ACC woman:ACC

Ja ne vižu nikakoj ženščiny
I not do-see any:GEN woman:GEN

? Nikakuju ženščinu ja ne vižu!
any:ACC woman:ACC I not see

Nikakoj ženščiny ja ne vižu!
any:GEN woman:GEN I not see
'I don't see any woman!'

It has been suggested that topicalized objects are not in the genitive under negation because the speaker fails to anticipate the

negation; he puts the object in the accusative before he realizes that the verb is negated.[13] It should be noted, however, that topicalized objects are not automatically in the accusative; even in this context, there is a choice between genitive and accusative which depends on all the other hierarchies. In order to use these hierarchies to make a choice between genitive and accusative, the speaker obviously must know that the sentence is negated; otherwise, he would express all topicalized objects in the accusative with the same regularity. It is clear that this suggestion is illogical.

MODIFIED/UNMODIFIED. A noun which is modified by an adjective, pronominal or possessive adjective, genitive, or prepositional phrase is characterized more explicitly, and is more individuated, than a noun which is not modified; nouns with modifiers are typically, although not necessarily, definite. A noun with modifier is less likely to be in the genitive.[14]

Ja gazet ne čitaju, a uznaju novosti po telivizoru
I newspapers:GEN not read but learn news on television
'I don't read newspapers, I learn about the news on television.'

Ja dlinnye stat'i ne čitaju
I long:ACC articles:ACC not read
'I don't read long articles.'

Here both nouns are indefinite and nonspecific; the noun without modifier is genitive, while the noun with modifier is accusative.

In the sections above I have discussed individuation as a property of the participant. More generally, these hierarchies of individuation refer to the relationship of the participant to the event, and not simply to the participant itself. Consider the sentences:

Ja ne videl lošad'
I not did-see horse:ACC
Ja ne videl lošadi
I not did-see horse:GEN
'I did not see a horse.'

Both of these variants may describe events in which no horse was

seen, but the accusative sentence may imply a particular occasion when a horse was not seen, while the genitive sentence may be a more general statement. The difference between them is a difference in the definiteness, or individuation, of the whole event. Individuation, then, is ultimately a property of the relationship between the object participant and the event.[15]

The reason why individuation plays a role in the rule of genitive of negation has to do with the function of the genitive. According to Jakobson, the genitive focuses on the extent to which a participant participates in the event, rather than on the participant itself; it therefore represents a QUANTIFICATION of participation.[16] In a negated sentence, the object is to a certain extent displaced or excluded from participation, so that the genitive of negation quantifies participation by signaling that the extent of participation is negative. Individuation is the inverse of quantification: the more a participant is individuated, the less it can be quantified, and vice versa. So for the hierarchies discussed above, the more a participant is individuated, the less it is appropriate to express the negative extent of participation by means of the genitive of negation.[17]

All the substantive hierarchies are motivated in the same general way as the individuation hierarchies, in the following sense. For any hierarchy the term which is more likely to use the genitive of negation is a more basic or unmarked context for the rule; the term which is less likely to use the genitive of negation is a less basic or more marked context for the rule. In general, then, the way the terms are ranked in these hierarchies is correlated with the markedness values of the terms as contexts for the genitive of negation.

At least some event categories are hierarchized with respect to the rule of genitive of negation. For event categories the organizing principle of the hierarchies is not individuation of the object participant, but the scope or force of negation. Certain event categories imply that the scope of negation is limited to the verb and that it does not extend to the object; these categories tend to take an accusative object under negation. Similarly, other event categories imply that the force of negation is attenuated; these categories also tend to take an accusative object. On the other hand, those categories which do not imply limited scope of negation or attenuated force of negation tend to take a genitive object under negation. In event categories, then, limited scope of

negation and attenuated force of negation are comparable to individuation in participant categories.

INFINITIVE/FINITE VERB. The object of a negated finite verb is more likely to be in the genitive than the object of an infinitive which is governed by a negated finite predicate.[18]

Ne dumaj, čto ty vse znaeš', ty ešče mnogogo ne znaeš'.
not think that you all know you still much:GEN not know
Vse znat' nevozmožno
all:ACC to-know impossible

° Ne dumaj, čto ty vse znaeš', ty ešče mnogogo ne znaeš'.
not think that you all know you still much:GEN not know
Vsego znat' nevozmožno
all:GEN to-know impossible

'Don't think that you know everything, there's much you still don't know. Its impossible to know everything.'

In neutral style the object of the negated finite verb in the middle clause is genitive, while the object of the infinitive governed by a negated predicate in the final clause is preferably accusative.

Infinitives, as reduced sentences, behave to some extent as extensions of the governing predicate and to some extent as independent predicates. For this reason the object of an infinitive is primarily a complement of the infinitive and only by extension a complement of the finite predicate. The scope of negation is therefore primarily the finite predicate and only secondarily the infinitive plus object. The object of an infinitive is then less likely to be affected by the rule of genitive of negation than is the object of a simple finite verb.

The degree to which an infinitive behaves as an independent predicate depends in part on the semantic properties of the governing predicate; infinitives are more closely linked to modals and auxiliaries than to other governing verbs. The use of the genitive of negation differs accordingly:

Ja ne umeju pisat' stixi
I not know-how to-write verse:ACC

° Ja ne umeju pisat' stixov
I not know-how to-write verse:GEN

'I do not know how to write verse.'

Ja ne obeščaju pisat' stixi
I not promise to-write verse:ACC
? Ja ne obeščaju pisat' stixov
I not promise to-write verse:GEN
'I do not promise to write verse.'

Further, the independence of the infinitive depends on the depth of embedding; a doubly or multiply embedded infinitive is even less likely than a singly embedded infinitive to take a genitive object:

Ja ne mogu Vam pozvolit' načat' pisat' stixi
I not able you to-permit to-begin to-write verse:ACC
* Ja ne mogu Vam pozvolit' načat' pisat' stixov[19]
I not able you to-permit to-begin to-write verse:GEN
'I am not able to permit you to begin to write verse.'

PERFECTIVE/IMPERFECTIVE. Other things being equal, imperfective verbs are more likely to occur with the genitive of negation than perfective verbs.[20]

° Ja ne stirala skatert', a prosto zakryla pjatno
I not did-wash tablecloth:ACC but simply covered stain
salfetkoj
with-napkin
Ja ne stirala skaterti, a prosto zakryla pjatno
I not did-wash tablecloth:GEN but simply covered stain
salfetkoj
with-napkin
'I didn't wash (impf) the tablecloth, I simply covered the stain with a napkin.'

Ja ne vystirala skatert', xotja ja xotela najti
I not did-wash tablecloth:ACC although I wanted to-find
vremja
time
° Ja ne vystirala skaterti, xotja ja xotela najti
I not did-wash tablecloth:GEN although I wanted to-find

vremja
time
'I didn't wash (prf) the tablecloth, although I wanted to find the time.'

With an imperfective verb the scope of negation is the whole event, including the object participant. The perfective, however, signals a view of the event as a whole, as bounded; in particular, it signals that the event has an end point. With a perfective verb the scope of negation is accordingly the end point of the action, not the whole event; ***ne vystirat' skatert'*** means that the cleaning was not finished, not necessarily that there was no cleaning at all. As a consequence, the object of a perfective verb is included in the scope of negation to a lesser extent than the object of an imperfective verb, and it appears in the genitive less often.

IMPERATIVE, CONDITIONAL/INDICATIVE. The two marked moods of Russian take the genitive of negation less than the indicative.[21]

Net, ja ne poterjal očki, segodnja u menja
no, I not did-lose glasses:ACC today by me
kontaktnye linzy
contact lenses

? Net, ja ne poterjal očkov, segodnja u menja
no, I not did-lose glasses:GEN today by me
kontaktnye linzy
contact lenses
'No, I didn't lose my glasses, today I'm wearing contact lenses.'

Smotri ne poterjaj očki!
see not lose glasses:ACC

* Smotri ne poterjaj očkov!
see not lose glasses:GEN
'See to it you don't lose your glasses!'

Esli by ja ne poterjal očki, ja by ne dolžen
if subj I not lose glasses:ACC I subj not need
byl kupit' novye
past to-buy new

* Esli by ja ne poterjal očkov, ja by ne dolžen
if subj I not lose glasses:GEN I subj not need
byl kupit' novye
past to-buy new
'If I hadn't lost my glasses, I wouldn't have had to buy new ones.'

In all sentences the accusative is now the preferred variant, but the genitive is more acceptable with the indicative than with the imperative or the conditional.

Both the imperative and the conditional describe potential, nonactual events. When negated, both seem to presuppose that the positive action is a possibility; this is especially clear in the conditional sentences, where in fact the positive action (losing the glasses) is presupposed to have occurred. Since a negated imperative or conditional may presuppose the positive event, the force of negation is less strong for them than it is for the indicative.

INTERROGATIVE/DECLARATIVE. It is well known that the interrogative uses the genitive of negation less than the declarative. The interrogative was apparently one of the first contexts in which the accusative appeared.[22]

? Ni odnu knigu ja ne pročital za vse leto
not one:ACC book:ACC I not did-read in all summer
Ni odnoj knigi ja ne pročital za vse leto
not one:GEN book:GEN I not did-read in all summer
'I did not read a single book during the whole summer.'

° Ni odnu knigu ne pročital za vse leto?
not one:ACC book:ACC not did-read in all summer
Ni odnoj knigi ne pročital za vse leto?
not one:GEN book:GEN not did-read in all summer
'You didn't read a single book during the whole summer?

For both sentences the preferred variant is genitive, but the accusative is more acceptable with the interrogative than with the declarative.

The event category of status (interrogative vs. declarative)

behaves similarly to mood in the genitive of negation. In an interrogative sentence the negation of the event is in doubt. A negated question often presupposes that the positive version of the event is in fact true; this is especially clear when a negated question is used rhetorically. In an interrogative sentence, then, the force of negation is attenuated.

SECONDARY COMPLEMENT/NO COMPLEMENT. Some transitive verbs (*sčitat'* 'consider', *nazyvat'* 'call', *naznačat'* 'designate') take an instrumental complement which expresses the capacity in which the verb affects the object. In such constructions the scope of negation extends over the object and the instrumental complement; hence the scope of negation is diffused, and the object virtually never appears in the genitive.[23]

Ja ne smotrju inostrannye fil'my
I not watch foreign:ACC films:ACC
° Ja ne smotrju inostrannyx fil'mov
I not watch foreign:GEN films:GEN
'I don't watch foreign films.'

Ja ne sčitaju inostrannye fil'my interesnymi
I not consider foreign:ACC films:ACC interesting:INST
* Ja ne sčitaju inostrannyx fil'mov interesnymi
I not consider foreign:GEN films:GEN interesting:INST
'I don't consider foreign films interesting.'

The same argument presumably also holds for other verbs which govern two complements, such as *lišat'* 'deprive', *obespečivat'* 'provide', which rarely take a genitive of negation.

SPECIFICATION/DIRECT OBJECT. The accusative is used in Russian to give adverbial specifications of spatial and temporal extent, as well as to specify the direct object. Adverbial specifications appear in the genitive under negation less often than direct objects.[24]

? On ne pročital daže odnu stranicu ...
he not did-read even one:ACC page:ACC
On ne pročital daže odnoj stranicy ...
he not did-read even one:GEN page:GEN
'He didn't read even one page...'

° Ja ne čitala daže odnu minutu ...
I not did-read even one:ACC minute:ACC
Ja ne čitala daže odnoj minuty ...
I not did-read even one:GEN minute:GEN
'I didn't read even for one minute...'

In these sentences with emphatic negation the genitive is still preferred, but the accusative is more acceptable with the adverbial specification *odnu minutu* than with the direct object *odnu stranicu*. It is generally recognized that adverbial specifications are not objects; they are less closely linked to the verb than true direct objects. For this reason, an accusative of specification can occur with a reflexive verb in Russian, although reflexive verbs never take accusative direct objects. Given the weaker government, the scope of negation does not extend to adverbial specifications as much as to direct objects.

LEXICAL CATEGORIES. Verbs of perception or emotion (*znat'* 'know', *videt'* 'see', *slyšat'* 'hear', *dumat'* 'think', *čuvstvovat'* 'feel', *xotet'* 'want', *ždat'* 'wait') and verbs of existence or possession (*imet'* 'have', *dostavat'* 'get', *polučat'* 'receive') tend to take the genitive of negation more than other semantic classes of verbs.[25] Verbs of perception or emotion governed a genitive object historically in Slavic, suggesting that they are a natural context for the expression of quantification. Transitive verbs of existence or possession imply a high degree of subordination of the object participant to the event; in a sense the object exists or does not exist only with respect to the narrated event. The subordination of the object to the verb means that the scope of negation includes the verb plus object as a whole, which makes this class of verbs an appropriate context for the genitive of negation.

SECOND-DECLENSION SINGULAR/OTHER DECLENSIONS. One of the remarkable facts about the use of the genitive of negation in Russian is that it depends in part on the morphological paradigm to which the noun belongs:[26]

Ja gazetu ne vypisyvaju
I newspaper:ACC not subscribe
'I don't subscribe to the newspaper.'

Ja žurnala ne vypisyvaju
I magazine:GEN not subscribe
'I don't subscribe to the magazine.'

The neutral variant for the second-declension noun *gazeta* 'newspaper' is accusative, while the neutral variant for the first-declension noun in the same syntactic and semantic context is genitive. Among the different types of paradigms, second-declension singular nouns are less likely than other singular declensional types (first declension masculine and neuter, third declension) to take the genitive of negation.[27] Since the second and third declensions comprise primarily feminine nouns, this hierarchy cannot depend on grammatical gender; it must depend on the paradigm of the noun.

It is often suggested that the special behavior of second-declension nouns is based on a desire to avoid ambiguity;[28] thus, if the above sentence had the form *gazety*, it could conceivably be interpreted either as genitive singular or as accusative plural. There are, however, several facts which show that this special behavior is not based on a desire to avoid ambiguity. First, the same ambiguity exists for many first-declension neuter nouns (gen. sg. and acc. pl. *čúvstva* 'feelings', *zdánija* 'buildings') and for most third-declension nouns (gen. sg. and acc. pl. *dvéri* 'doors'), yet these nouns tend to be used in the genitive under negation. Second, the ambiguity disappears when modifiers are present (gen. sg. *interesnoj gazety* vs. acc. pl. *interesnye gazety*), yet second-declension nouns with modifiers are still relatively less likely to use the genitive than other nouns with modifiers. Third, for most second-declension nouns with mobile stress, there is no ambiguity, since for such nouns the gen. sg. and acc. pl. forms typically differ in stress (gen. sg. *rukí* 'arm' vs. acc. pl. *rúki* 'arms'); yet second-declension nouns with mobile stress will show the tendency to use the accusative instead of the genitive under negation. The special behavior of second-declension nouns therefore cannot be based on a desire to avoid ambiguity; it must be based on the types of morphological distinctions made within the singular paradigms.

The difference between the paradigms is that second-declension nouns distinguish accusative from both nominative and genitive, whereas the other singular declensions (animate nouns aside) syncretize accusative with nominative. For

second-declension nouns, assignment of the genitive would obliterate the morphological distinction between nominative and accusative, whereas for other declensions, assignment of the genitive does not obliterate this distinction. For this reason, second-declension nouns are more explicitly characterized as a morphological system and are therefore less appropriate than the other declensions as a context for the genitive of negation.

The distinction between nominative and accusative forms is then a morphological analogue to the semantic parameter of individuation; the more explicitly a noun is characterized—either on the semantic or morphological level—the less appropriate it is as a context for the genitive of negation. It should be emphasized, however, that a second-declension noun is not semantically more or less individuated than a noun from another paradigm; it is simply a less appropriate morphological context in which to express quantification.

The existence of a morphological hierarchy on the syntactic rule of genitive of negation is significant. Generally speaking, morphological rules and syntactic rules are distinct, so that morphological rules in principle do not refer to syntactic or semantic conditions, and syntactic rules do not in principle refer to morphological conditions. Overlapping normally occurs only in a transitional stage of development. For example, the animate-accusative rule in Russian (the use of the genitive desinence for the accusative case of animates of certain declensions) does not refer to syntactic or semantic conditions, such as the difference between adverbal and prepositional accusatives or the difference between definite and indefinite nouns. During the development of the animate accusative in Russian, however, the animate accusative did refer to these conditions. But because the animate accusative is a morphological rule, these syntactic and semantic conditions were eliminated when the rule was fully developed.

In accord with this general principle of the separation of morphological and syntactic rules, the existence of a morphological hierarchy on the rule of genitive of negation in Russian suggests that it is in a state of transition, that it is not a stable rule in its present form. In fact, it is clear from a comparison of Contemporary Standard Russian with nineteenth-century Russian that the genitive of negation has been reduced considerably in domain.[29] The eventual fate of the genitive of negation in Russian

would seem to be its total elimination (with the possible exception of lexicalized collocations). The final stages of such a development can be observed in Czech, where the older generation of Czech speakers preserves the genitive of negation with emphatic negation and with existential or possessive verbs, but the younger generation uses the accusative even in these contexts.[30]

LESS FORMAL/MORE FORMAL STYLE. For any substantive hierarchy given above there is a stylistic hierarchy governing the use of genitive and accusative. The genitive, depending on the hierarchy, is stylistically relatively more formal (in the range from neutral to formal to old-fashioned to archaic) than the accusative (in the range from substandard to colloquial to neutral). For example, the accusative in *Ja ešče ne čitala roman Gladkova* "Cement" is normal for neutral style; the genitive is less acceptable for neutral style, but more acceptable for formal style. In *Ja ne našel cvetka* the genitive is by now old-fashioned, and then is possible only with the indefinite sense of the noun. In *Nikakoj ženščiny ja ne vižu!* the genitive is still neutral, while the accusative is substandard or colloquial. It is because of this stylistic hierarchy that the accusative is relatively more common in colloquial speech than in literary Russian. Further, it is because of this stylistic hierarchy that participles and gerunds, which are stylistically inherently literary forms, consistently take the genitive of negation.[31] This stylistic hierarchy is apparently old; Safarewiczowa has shown (1960:126) that as early as the seventeenth century texts written in a style close to the spoken language used the accusative more often than texts written in a higher style.

The exact stylistic value attached to the use of the genitive or accusative depends on all the substantive hierarchies and on the stage of development reached in each hierarchy. The stylistic hierarchy is then qualitatively different from the substantive hierarchies; it is superimposed on all the other hierarchies. The stylistic hierarchy provides a synchronic way of seeing that the genitive of negation is in transition, specifically towards elimination. In contexts where the genitive is being eliminated and the accusative is being innovated, the use of the genitive becomes stylistically progressively more formal, while the use of the accusative becomes progressively more acceptable.

The hierarchies governing the use of the genitive of negation which have been discussed in this paper are listed in table 1. In

this table the term on the left is more likely to use the accusative and the term on the right is more likely to use the genitive. The hierarchies are divided first into substantive and stylistic; the stylistic hierarchy may be thought of as superimposed on the substantive hierarchies. It is clear that the substantive hierarchies must also be related to each other in some way, probably as a complex, multidimensional matrix. Determining the relationship of the hierarchies to each other is difficult and lies beyond the scope of this paper.

Following Jakobson, I suggested above that the function of the genitive is to express quantification of participation; in particular, the genitive of negation expresses negative extent of participation. The terms of every substantive hierarchy listed in table 1 can be evaluated as more or less marked contexts in which to express quantification. Let us review how quantification interacts with these hierarchies.

The substantive hierarchies may be subdivided into three subtypes: participant hierarchies, event hierarchies, and a morphological hierarchy. The participant hierarchies deal with the degree of individuation of the object participant. For participant hierarchies it is clear that the more the object participant is individuated, the less it can be quantified; individuation is then a marked context for the expression of quantification and for the rule of genitive of negation. The event hierarchies deal with the scope or force of negation. The scope of negation may be confined to the verb or it may extend to the object, and the force of negation may be more or less attenuated. The more the scope of negation is limited, or the more the force of negation is attenuated, the less the negative participation of the object can be expressed. Event categories which imply limited scope of negation (e.g., perfective) or attenuated force of negation (e.g., interrogative) are then marked contexts for the expression of quantification and for the rule of genitive of negation. In the morphological hierarchy second-declension singular nouns are a marked context in which to express quantification, since for them the use of the genitive means that a potential morphological distinction between nominative and accusative is obliterated. For all three subtypes of substantive hierarchies, a general principle may be stated: the term of a hierarchy which is more likely to use the genitive is the one which is the more basic or unmarked context for the expression of quantification. Conversely, the term which is less likely to use the

genitive is the one which is the less basic or more marked context for the expression of quantification.

TABLE 1. Hierarchies governing the use of the genitive of negation.

Substantive
- PARTICIPANT HIERARCHIES (individuation)
  - properness: proper/ common
  - abstractness: concrete/abstract
  - partitivity: count/mass
  - animacy: animate/inanimate
  - number: singular/plural
  - definiteness: definite/indefinite
  - negation: neutral/emphatic negation
  - focus: topicalized/neutral
  - modification: modified/unmodified
- EVENT HIERARCHIES (scope or force of negation)
  - finiteness: infinitive/finite
  - aspect: perfective/imperfective
  - mood: imperative, conditional/indicative
  - status: interrogative/declarative
  - complements: secondary complement/no complement
  - government: specification/direct object
  - lexicon: general transitive/perception-emotion, existence-possession
- MORPHOLOGICAL HIERARCHY (distinction of nominative vs. accusative)
  - second-declension sing./other declensions

Stylistic
- informal/formal

At least some, and perhaps all, of the substantive hierarchies may be considered to be synchronically unmotivated for a rule like the genitive of negation. Certainly the morphological hierarchy is unmotivated. It may be noted that Finnish, which has a stable and fully developed rule of genitive (partitive) of negation, has none of these hierarchies. The existence of these hierarchies on the Russian rule of genitive of negation suggests that it is in a state of transition. The fact that for all contexts the genitive is relatively

more formal than the accusative shows that the rule is being lost, not innovated, according to the general principle that retentions tend to be evaluated as stylistically more formal than innovations. Finally, it is clear in any case from comparison of different diachronic stages of Russian that the genitive of negation is being lost (see note 29).

The loss of the genitive of negation may be thought of as involving two kinds of historical changes: first, a reanalysis whereby the accusative will be assigned generally for objects in negated sentences instead of the genitive; and second, a set of gradual changes which actualize this reanalysis.[32] The motivation for this reanalysis is not clear; it is presumably part of the general reduction of adverbal genitives.

In the actualization of this reanalysis, both the substantive and the stylistic hierarchies provide a way for the loss of the genitive of negation to proceed more or less gradually, without producing a large discrepancy in the surface data of successive generations of speakers. The hierarchies may be termed DYNAMIC HIERARCHIES, in that they govern the dynamics of the loss of the genitive of negation. It should be noted that the dynamic hierarchies cover all parts of grammar, including some components of grammar—for example, the morphology—which in principle ought not to be relevant to a syntactic rule of case. In this way the necessity for graduality in change is enforced over as much of the linguistic structure as possible, and the graduality is as complete as possible.

These dynamic hierarchies are presumably more or less universal, for a rule of this type. It may be expected that they would be invoked whenever a comparable rule is innovated or lost; when a rule is fully developed or fully lost, reference to these hierarchies stops. Straková lists some of the same hierarchies for the change in government from genitive to accusative for goal-directed verbs (*ždat'* 'wait', *želat'* 'wish'); these hierarchies include count/mass, concrete/abstract, and feminine animate/other nouns (a conflation of the animacy hierarchy with the morphological hierarchy).[33] Some of the same hierarchies are relevant for the ongoing loss of the second genitive in Contemporary Standard Russian, another change involving quantification.

Thus, these hierarchies make both synchronic and diachronic predictions. Synchronically, each hierarchy predicts the

environment in which the genitive of negation is less likely or more likely to be used at any given synchronic stage. Diachronically, each hierarchy predicts in which environment the genitive of negation will be lost first and in which preserved the longest. There is then a convergence of synchronic and diachronic properties of these hierarchies. This convergence is based on the markedness values of the terms of each hierarchy as contexts for the rule of genitive of negation. The term of the hierarchy listed on the right—where the genitive of negation is more likely to be used and where it will be preserved longer—is more basic or unmarked with respect to the function of the rule.

NOTES

[1]Lunt 1984:41. For similar treatments see Domar 1961:90; von Gronika and Bates-Yakobson 1964:52; Dawson, Bidwell and Humesky 1964:246–47; Stilman, Stilman and Harkins 1972:246; and Clark 1973:269. The most complete description of usage is given by Davis and Oprendek (1973:123).

[2]Jakobson 1957/1971:130–47.

[3]Data for this paper were collected from V. Zaydman, V. Koff, E. Semeka and A. Matlina, whom I wish to thank.

[4]Nevertheless, examples of the accusative in all contexts discussed in this paper are found in literary Russian, as documented by Safarewiczowa (1959:77–109) and (1960:69–137).

[5]Deribas 1956:23; Kout 1960:31; Restan 1960:97 and Ravič 1971:264.

[6]Magner 1955:538; Gvozdev 1955:154; Deribas (22); Kout (29); Fleckenstein 1961:215; Ravič (264); and Rozental' and Telenkova 1972:324.

[7]Kout (28); Restan (102); Fleckenstein (218); and Rozental' and Telenkova (323).

[8]Unbegaun 1957:295; Kout (31); Safarewiczowa 1960:124; Fleckenstein (217–18); Ravič (264); and Rozental' and Telenkova (325).

[9]Tomson 1903:222 and 1911–12:255; Magner (537); and Ravič (264).

[10]Tomson 1903 and 1911–12; Vinogradov 1954:563; Magner (538); Gvozdev (154); Uglitsky 1956:383; Unbegaun (295); Kout (31); Safarewiczowa 1960; Fleckenstein (216); Ravič (256); and Rozental' and Telenkova (325).

[11]Deribas (24); Kout (28); Restan (101); Safarewiczowa 1960:127; Fleckenstein (216); Ravič (263); Rozental' and Telenkova (323).

[12]Vinogradov (562); Magner (535); Gvozdev (154); Deribas (25); Kout (31); Restan (99); Fleckenstein (218); and Rozental' and Telenkova (325).

[13]Peškovskij 1956:296–97.

[14]Deribas (25); Fleckenstein (217–18); Ravič (264); and Rozental' and Telenkova (325).

[15]A fact which was recognized clearly by Tomson.

[16]Jakobson 1936/1971:38.

[17]A rather different hypothesis was proposed by Morison (1964:292–97) and elaborated by Ward (1965:211–20) and Davison (1967:34–64). According to this hypothesis, the genitive is used "if the logical stress of negation is directed to the object, i.e., to that specific thing (rather than some other thing)" (Davison (36)), while the accusative is used "if the logical stress of negation is directed to the verb, or the verb + object as a whole" (Davison (35–36)). This hypothesis is flatly contradicted by the hierarchies of individuation documented above and in numerous other sources.

[18]Šaxmatov 1941:429; Unbegaun (295); Restan (94); Safarewiczowa 1960:124; Fleckenstein (218); Ravič (261); and Rozental' and Telenkova (326).

[19]Example from Ravič (261).

[20]Tomson 1911–12:254; Magner (535); Restan (97); Ravič (264); and Rozental' and Telenkova (325).

[21]Tomson 1903:212–15; Magner (235); Deribas (24); Kout (31); Restan (98); Safarewiczowa 1960:124–25; Fleckenstein (218); Ravič (264); and Rozental' and Telenkova (325).

[22]Kout (30); Restan (98); Safarewiczowa 1960:125; Fleckenstein (218); Ravič (264); and Rozental' and Telenkova (325).

[23]Deribas (24); Restan (99); Safarewiczowa 1960:125; Ravič (261); and Rozental' and Telenkova (325).

[24]Ravič (263).

[25]Vinogradov (562); Magner (537); Deribas (24); Kout (29); Restan (100–01); Fleckenstein (216); Ravič (265); and Rozental' and Telenkova (323–24).

[26]Tomson 1903:193; Magner (535); Uglitsky (380); Deribas (23); Restan (95); Ravič (262); and Rozental' and Telenkova (325).

[27]Leaving out of consideration (1) plural nouns, for which the individuation hierarchy of number is relevant, and (2) first-declension animate nouns, which have an accusative identical to the genitive.

[28]Deribas (23); Ravič (262); and Rozental' and Telenkova (325).

[29]As suggested by Peškovskij (297); Gvozdev (154); and Uglitsky (377, 380). For historical data, see Restan and especially Safarewiczowa. The loss of the genitive of negation is also evident from the increasing tolerance of accusatives in grammars. In his *Rossijskaja grammatika* Lomonosov (1755:561) admits no exceptions to the use of the genitive of negation. Vostokov (1831:256) allows the accusative for infinitives and for questions. Finally, the Academy Grammar (Vinogradov 1954:562–63) allows the accusative under various conditions (see the citations in other notes).

[30]Limited conditions for the use of the genitive of negation are given by Trávníček (1949:586–88); in even these limited conditions younger speakers no longer use the genitive, according to my informants.

[31]Magner (540); Uglitsky (387); Kout (30); Restan (100); and Rozental' and Telenkova (324).

[32]Andersen 1973:765–93.

[33]Straková 1961:283.

The Use of the Genitive or Accusative for the Direct Object of Negated Verbs in Russian:

A Bibliography

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This bibliography is intended to be as complete as possible in respect of works devoted exclusively to case selection for the object of negated verbs in Russian. For this reason, some items have been included which I have not seen, and so a few references are not complete. Works which treat the problem in question but are not solely devoted to it are included either if they make a substantial contribution or if the title would not lead one to expect a section relevant to case selection in Russian (thus the standard grammars are omitted). In both instances, the page numbers of the relevant section are indicated in parentheses after the reference. I am very grateful to Professor Arto Mustajoki for bringing several items to my attention.

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Jakobson's Case System and Syntax

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It is interesting to observe that while Jakobson in his two studies of the Russian case system (1936/1971 and 1958/1971) ultimately arrives at a structure which is built along the axis of replacement (the paradigmatic axis), he does so by describing the cases syntagmatically. In other words, he presents each case in its various contexts and shows that these occurrences are contextually conditioned variants of one single semantic invariant for each individual case. These invariants are characterized mostly in terms of the narrated situation (which amounts to saying in terms of a [set of] syntagmatic relationship[s]), with sometimes a recourse to a relationship bearing directly upon the speech situation.

One can do the brilliance of Jakobson's approach justice only if one thinks of the linguistic community of the nineteen thirties to which it was addressed. It is necessary to bring to mind what this community was like: 1. historically oriented, with its most progressive members being dissatisfied with the concept of sound law, essentially an *ad hoc* rule without actual causal significance and therefore without any real power of prediction, and, generally, being dissatisfied with the explanatory power of any linguistic laws whatsoever; 2. atomistically oriented, to use one of Prague's favorite characterizations, that is, viewing each linguistic unity by itself, not realizing that its relation to other similar units might be important. In fact, the linguists of this period were atomistically oriented to such a degree that each usage of a given formal unit of the language, or a type of usage of a given form, was considered the ultimate object of morphological investigation. Little attention was given to the invariant semantic value of the sum total of occurrences of a given form, let alone to comparing such a semantic invariant to the semantic invariant of the sum total of occurrences of another form, procedures which the Prague School makes the cornerstone of its heuristic methodology. In other words, the atomism of the Neogrammarians—because that is the tradition which constituted the background of European linguistics in the thirties—tended not to distinguish between the contextually induced semantic value of one or more occurrences of a given form, on the one hand, and the invariant semantic value of the sum

total of occurrences of that form on the other. This tendency away from generalization toward an immediate specific approach to the material as it is directly tangible to the senses is typical of Neogrammarian investigation of language and constitutes an analog to the investigative techniques of the physical sciences, the Neogrammarians' great example. From the point of view of Prague linguistics, the Neogrammarians ended up investigating variants instead of invariants. Thus, for instance, Delbrück (1893, 1897).

This tendency was fostered by the model object of Neogrammarian investigative endeavor: the study of older periods of a language and of ancient languages in general. Most linguists of the thirties were still steeped in Latin and Greek and thought of the category of case in terms of the descriptions of Latin and Greek cases with which they were familiar. If one wants to know what an average linguist of the time thought about cases and their use, including their semantic values, it suffices to look at a beginning secondary school or college text book for Latin or Greek. As they are still used today, they subclassify the uses of each case according to the context in which each use occurs. For instance, Goodwin (1894/1978:229 ff.), one of the textbooks for Greek distinguishes, among others, the possessive genitive, the subjective genitive, the objective genitive, the genitive of material, the genitive of measure, the genitive of cause and origin, the partitive genitive, the genitive as ablative, the genitive of course and source, the genitive of price and value, the genitive of time and place, the genitive absolute, and the genitive of comparison. For Latin the usages are more different still than for Greek and partly overlap with the usages of other cases in Greek. The impact of such listings was that the majority of linguists considered the extraction, in a given language, of a semantic invariant of each case beyond reach. And suddenly, in the same decade, appears this native speaker of Latin (because as far as case is concerned, Latin and Greek are similar to Russian) who states that to him, there is in his native language an invariant meaning for each case. Not only do these semantic characteristics of each individual case have elements in common but they constitute also a paradigmatic structure.

In order to demonstrate the existence of each invariable case meaning, Jakobson catalogues the variants occurring within each case meaning by a method which is similar to the one used in the Latin and Greek school grammars. He makes subclassifications of

the uses of each case based on the different contexts in which these usages occur. Thus, his subclassification is essentially syntactic, or in any case in terms of the linguistic environment in which the given variant occurs. If we wish to reserve the term syntactic for precisely formulated rules, it might be better to use De Saussure's term "syntagmatic." Jakobson's subclassifications are, like the ones we observe in Greek and Latin grammars, couched in syntagmatic terms. But Jakobson takes the next step. He declares that the variants corresponding to those subclassifications are due precisely to the syntagmatic contexts and that, in order to find the invariant inherent in all occurrences of the given case, we must discount the syntagmatic context. Thus, the methodology Jakobson applied investigating case makes use of both members of the Saussurian dyad: syntagmatic vs. paradigmatic. Starting out from syntagmatic considerations, he arrives at conclusions as to what change in meaning will result from replacement of one case by another. In this manner, he constructs relationships, or, in Prague terminology, oppositions between cases along the axis of replacement, i.e. the paradigmatic axis. However, his descriptions of the semantic invariants of the cases are largely formulated in syntagmatic terms. Accordingly, the accusative is characterized primarily as indicating the goal of a process . . . "dass der A ankündigt, auf den Gegenstand sei eine Handlung gerichtet" (Jakobson 1936/1971:32). The instrumental is characterized as indicating a phenomenon in the background. By "process" Jakobson means, at least in the "Beitrag", primarily the process signified by the verb occurring in the given sentence, and by "background" he means the background of the narrated situation described by a sentence (Jakobson 1936/1971:46). Thus we might say that he operates largely with a semantic syntagmatic context corresponding to the formal elements of which the sentence is composed. He operates primarily in terms of the narrated situation evoked by the given sentence.

In several instances, however, he goes again a step further, namely in the direction of a purely paradigmatic characterization of the semantic invariant of a case, moving away from reasoning in syntagmatic terms. An example of this is his treatment of accusative variants of the type *èk ego zalivaetsja*, 'how he pours forth' [song] where, according to Jakobson, the accusative *ego* 'him' still indicates the goal of a process, but the process is not the one indicated by the verb constituting part of the linguistic context,

that is, *zalivaetsja*. The referent of the accusative, *ego*, in Jakobson's thinking, is the goal of the attention- drawing process performed by the speaker (". . . Objekt einer tätigen Stellungnahme des Sprechenden") (Jakobson 1936/1971:31. See also Sangster 1982:147 and van Schooneveld 1978:205.). To be sure, this switch in perspective, from syntagmatic context to the vantage point of the speaker and receiver, raises an important problem. How are we to reconcile the conceptualization of the accusative as indicating the goal of the verbal process signified in the given sentence with the conceptualization of the accusative as indicating the goal of the speaker's attention? It is difficult, in our quest for semantic invariance in the accusative, to fit the latter variant in with the syntagmatic formulation of the former variant. However, if we carry the concept of the accusative as representing an attention-drawing act by the speaker to its furthest consequences, we can say that any accusative always indicates that the speaker sees its referent in a unique light; the accusative indicates that the speaker views its *denotatum* as a once-occurring phenomenon. The variant that is most revealing as to the general semantic value of the accusative, then, is the ostensive *èk ego zalivaetsja* type. The accusative indicating the goal of a syntagmatically signalized process actually beclouds the issue by suggesting that the uniqueness of this accusative referent is due to the process indicated in the narrated situation. In fact, this dependence on the narrated situation is a secondary, derived connotation; what is actually happening is the reverse. It is the referent of the accusative ostensively singled out by the speaker that is the authentic accusative type, and the syntactic environment merely provides information about an influence in external reality that may have caused the speaker to look upon the accusative referent in a unique way.

If this reasoning is correct, the conclusion is that the accusative is a deictic category. We cannot describe the semantic contents of the accusative without including in our formulation a reference to the speech situation, that is, to the transmission of the utterance. As a matter of fact, the category of case in general is a deictic category in the traditional sense of that term (the term I use myself is "transmissionally deictic").

A reorientation of case toward the transmission of the utterance, that is, toward Saussure's *parole*, helps to reinterpret, and, in my opinion, to clarify some usages of other cases as well.

The instrumental, for instance, signalizes in many of its occurrences a referent which is at the periphery of the narrated situation. However, it is difficult to bring the instrumental indicating the goal of verbs implying domination under this heading; it is hard to see that the referent of *mašinoj* in *upravljat' mašinoj* 'drive a car' is not just as much in the center of the narrated situation (Jakobson's *Aussagekern*) as is an accusative referent. What is rather the case here is that we are dealing with a semantic variant of the instrumental which is akin to the instrumental indicating a transitory property (Jakobson's *vorübergehende Eigenschaft*). In the opposition between nominative and instrumental, (*on byl xrabryj soldat* vs. *on byl xrabrym soldatom* 'he was a brave soldier'), the latter marks the temporariness of the predicated property. In this instance, one cannot say that the property is at the periphery of the narrated situation. What the instrumental case actually does is restrict the duration of the property to the narrated situation. Not only does this restrictedness to the narrated situation explain Jakobson's examples *budet sud'ëj* 'will be a judge' and *stal sud'ëj*, 'became a judge' where the validity of the property is relegated to the given narrated situation with the exclusion of the preceding situation, but it also suggests the explanation for the use of the instrumental with verbs implying domination such as *upravljat' mašinoj* or *pravit' stranoj* 'govern a country'. The relationship of domination implies two things: on the one hand, change in the nature of the substantival referent is irrelevant, on the other hand, it implies a relationship of total dependence of the substantival referent upon the verbal process, and by implication, upon the agent of the verb. The instrumental relegates the relation between the substantival referent and the agent of the verbal process to the narrated situation, that is, to the duration of the verbal process. The instrumental implies that this agent plays a rôle only as long as the narrated situation lasts. The duration of the narrated situation is represented by the duration of the verbal process. Thus, the instrumental restricts by implication the rôle also of the agent to the narrated situation with the exclusion of the speech situation. The relevance of the speech situation has indeed been considered, but rejected. Hence, the instrumental implies the total dependence of the objective of the verbal process upon the agent of the process. For this reason the instrumental is used to indicate objectives of verbs implying domination. It is interesting to note that a combination of dependence (suggested by the marginality

[restrictedness] feature) and extended effect (suggested by directionality [extension] feature) also exists. Verbs implying the exertion of an influence (for better or for worse) are followed by a dative objective: *služit'* 'serve', *pomogat'* 'help', *vredit'* 'harm', *grozit'* 'threaten', etc. As is the case with verbs of domination, in these verbal processes, too, a change in the nature of the verbal objective is not relevant.

Finally, if we distinguish clearly between the speech (transmission) situation and the narrated situation, comparable problems in the use of the genitive find their solution. Why do verbs meaning 'striving for' and 'disengagement' have their objective in the genitive? It is well to keep in mind here Jakobson's formulation: "The genitive in itself indicates only that the extent of its referent's involvement in the narrated situation (der Umfang der Teilnahme des Gegenstandes am Sachverhalt der Aussage) is less than the referent's entire extension. To what extent the involvement of the referent is restricted, is determined by . . . the context" (Jakobson 1936/1971:38). But the same statement could be made about accusatives and instrumentals. We have to go beyond the narrated situation, taking a step the "Beitrag" implies but does not quite undertake. What the genitive indicates in contrast to the other cases is that its objective still must be reached or is being discarded; in other words, it must have an existence independent of the verbal process, that is, independent of the narrated situation. The genitive marks its referent as being identifiable independently of the narrated situation or the speech situation. Consequently, the semantic reflex of the genitive referent seen from the point of view of the syntagmatic context is that it takes part in the narrated situation only to a limited extent. From the point of view of an observer within the narrated situation the attention is focused upon the extent to which the genitive referent participates in the narrated situation. Actually, however, this semantic nuance is due to the fact that the genitive signalizes that its referent has an existence independent of both the narrated situation and the speech situation.

These few examples of the uses of Jakobson's three case features, directionality, marginality and quantification, are intended to demonstrate that in describing them as semantic invariants we must always involve the speech situation. The category of case is (transmissionally) deictic. The case features are differentiated among one another by the various limitations which the narrated

situation imposes upon the range of identifiability. As I have tried to show, most recently in van Schooneveld 1983a, these limitations form an ever-progressing hierarchy of features that seems to find a parallel in the ever-progressing refinement into subsets that takes place in the perceptional mechanism of the central nervous system.

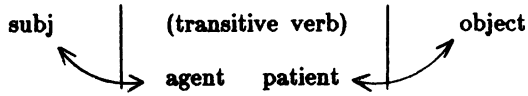
It is, then, a matter of empirical testing that definitions of case are based upon the speech situation and that the system of "Beitrag" and "Nabljudenija" needs to be refined by making a strict distinction between the speech situation and the narrated situation, a distinction which Jakobson (1957/1971) himself suggested. This distinction, in fact, is crucial for the entire semantic structure of Russian (Cf. van Schooneveld 1977:5-6 and 1983a:324-25). In the present paper, however, I should like to use the differentiation between the speech situation and the narrated situation to show its importance for the syntax of case. I should like to show that reference to the speech situation, or transmissional deixis, as I call it, plays a critical role in syntax. For instance, transmissional deixis, in conjunction with a relation which by itself is restricted to the narrated situation, can create a syntactic relationship. I shall take as an example the relation between the accusative of the direct object and the transitive verb.

In describing the relation between the accusative of the direct object and the transitive verb we must keep in mind one crucial point: semantic relations in syntax are based upon identities of referents. By this I mean the following simple fact. When two words are adjacent or near to each other, they can have the same referent or not. For example, in the sentence *ja videl knigi zelënye stoly pokryvajuščie* 'I saw the (green) books covering the (green) tables' the adjective *zelënye* 'green' can modify *knigi* 'books' or it can modify *stoly* 'tables'. In other words, it is not necessary at all that there exist a (modification) relationship between two words. In fact, the mere existence of a modification is just as surprising as its potential non-existence. What does a modification relationship consist of? In the case of adjectival, adverbial or verbal modification (I differ with Tesnière (1959:13) only in that I think that the finite verb modifies the subject) the answer is clear: the modifier has the same referent. It refers to the same segment of exogenous reality. In. . .*knigi zelënye stoly*. . .it is the speaker and receiver who decide for themselves whether *zelënye* modifies *knigi* or *stoly*; they make essentially a semantic choice. This semantic choice is based on the question of whether the individual actant

sees *knigi zelënye* as one referent or whether he sees *zelënye stoly* as one referent. The sentence (leaving intonation and other prosodic markers aside) is obviously ambiguous. The decision is taken during the once-occurring message, that is, during Saussure's *parole*. In fact, syntax always involves *parole* since it always involves the once-occurring pronunciation of more than one word. Saussure's (1916/1922:172) self-imposed dilemma as to whether syntax belongs to *langue* or to *parole* must be answered in the sense that the rules of syntax are codified *parole* (Cf. Chomsky 1968:19-20). Codifying individual acts is not exceptional in language; in fact, it is a phenomenon which is at the foundation of all linguistic meanings.

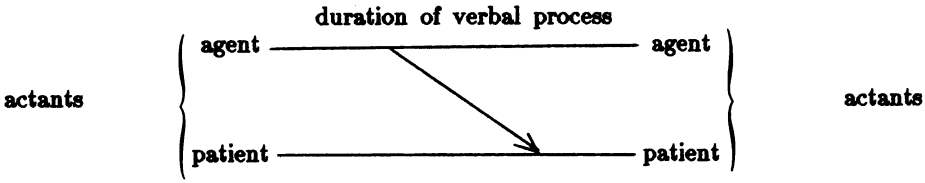
The fact that syntax always involves ([rules of] transmissional) deixis, and the fact that the category of case is (transmissionally) deictic, gives us another way of describing the relation between transitive verb and direct object. Stating that the object of a transitive verb is a NP immediately dominated by VP is a mere distributional statement. Domination is a distributional notion based on what are ultimately semantic criteria. The notion of direct object, in turn, is derived from the concept of domination. As far as traditional linguistic lore is concerned, the rule is that the direct object of a transitive Russian verb is in the accusative. In this formulation, direct object and transitive verb are essentially distributional notions arrived at on the basis of semantic criteria.

A transitive verb is distinguished from an intransitive verb in that it implies a patient. Even used without a direct object, *on pišet* 'he writes' still implies that the subject is an author of books or whatever, or is in the process of writing a letter or suchlike. The distributional concept of two-argument versus one-argument verbs should be applied internally, within the lexical meaning of the given verb, and not externally. If we use "agent" and "patient" to mean operational units of the lexical semantic mechanism and "subject" and "object" for the corresponding syntactic units, we can say that the latter two redundantly repeat the information regarding agent and patient inherent in the verbal lexical semantic mechanism itself aside from the fact that they contribute their own lexical meaning. In other words, in a phrase like *učenik pišet zadaču* 'the pupil is writing the assignment' the only information contributed by *učenik* 'pupil' and *zadaču* 'assignment' are their lexical meanings. Thus:

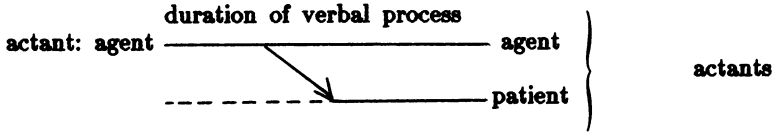


Besides the fact that a finite verb can be in the plural, indicating that the process has more than one agent, a transitive verb can have more than one patient, without this being indicated morphologically on the verb. In that sense, the number of actants (subject and patient[s]) of a transitive verb is always a non-finite plurality. If we consider the singular to be the unmarked member of the number category and the plural to be the marked member in that the latter indicates a non-finite plurality, whereas the former does not specify whether we have to do with more than one or not, we may say that verbal transitivity is a variant of the plurality feature, as well as the grammatical category of substantival plurality, in that it indicates that there is more than one actant at the end of the verbal process. (Semantic features constituting verbal lexical meaning always bear upon the end of the process). Whether there is more than one actant at the beginning of the process is not signalized by verbal lexical transitivity. In fact, there is in German linguistic literature a tradition of making a distinction between affective and effective objects, the former assuming that the object existed at the beginning of the verbal process, the other not. If we substitute the (internal) concept of patient for the (external and distributional) concept of object, we can symbolize the two types as follows:

AFFECTED PATIENT



EFFECTED PATIENT



In the second type (c.f. *delat'* 'do/make') the very existence of the patient is seen to be due to the verbal process. This type may illustrate the case in which there is only one actant (unless the verb is in the plural) in the initial situation but there is more than one in the terminal situation. As a matter of fact, the difference between agent and patient is secondary. A verb always implies an evolution in time, whether it is static (*ležat'* 'lie') or not (*xodit'* 'go'). Every verb, whether transitive or intransitive, has an agent. But a verbal agent in turn is a point of departure to which a terminal position is assigned; this point of departure, or initial status of the agent, may be regarded as locationally determined or merely determined in time; e.g. *xodit'* 'go' and *(u-)meret'* 'die', respectively. By the same token, one may view the actants at the terminal situation as terminal statuses. In a transitive verb at least one terminal status (if the verb is in the plural, more) will be assigned to, that is, identified with the initial status(es), that is with the status (of an actant) which has been existing from the beginning of the verbal process. The other actants (statuses), because only their existence at the termination of the verbal process is vowed for, will make the impression of having been influenced (affectively) or having come into being (effectively) due to the verbal process in which the initial actant has been involved. Thus, what one might call the surplus of actants will make the impression of patients, whereas the initial actant(s) will make the impression of having directed the influence of the verbal process upon the patient and therefore make the impression of being the agent(s), controlling the verbal process. The initial actant will be seen as independent of the patient(s), whereas the patient is the actant dependent upon the process and hence upon the agent. Thus the contrast between agent and patient is due to the mechanism of lexical verbal semantics, and more specifically to the mechanics of the lexical plurality feature, which creates a surplus of actants at the end of the verbal process.

Thus, transitivity says that at the end of the verbal process there exists a relation between an actant (the patient) which owes its nature or even its existence to the verbal process and an actant (the agent) that does not owe its existence to the verbal process and which owes its way of appearance only to the fact that at the end of the verbal process it is contrasted to the patient. Suppose we, the recipients, now wish the speaker to identify the patient. The lexical meaning of the verb does not identify the patient(s), it

merely says there is one. Therefore the speaker would say: "there is a substantival referent" [I use the term "substantivity"] "which still is identifiable at the moment of speaking and which during the narrated situation, as the patient, was in relation to an independently given substantivity (the agent); moreover, the first relationship is retrievable too".

This is precisely what the sole marking of the accusative case, the extension feature, does. The extension feature states that its referent has been looked at in a narrated situation, where it stood in a relationship to another component of that narrated situation, and states that this referent has retained its identity after the original narrated situation has terminated. In the prepositional system the feature opposes *po* (+ ext.) to *na* (ø). One can represent the extension feature graphically as follows:

EXTENSION

duration of initial modification relation (narrated situation)

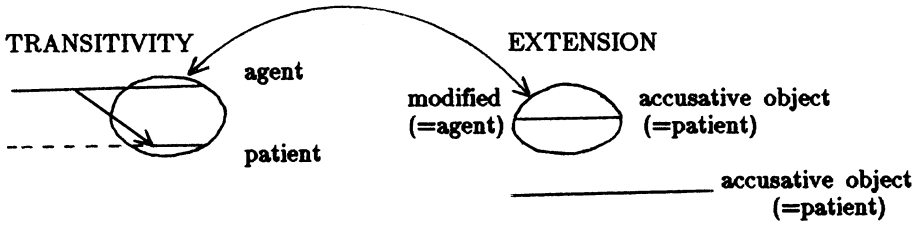
modified ——————— referent

duration of extended narrated situation

(modified) ——————————————— referent

The extension feature looks at the referent twice: first, during the relationship to another element in the narrated situation, and secondly, after this relationship. Note again that case, and hence the extension (directionality) feature of case, is (transmissionally) deictic. In other words, it says that its referent can be identified by means of and during the speech (transmission) situation. In order to identify the referent the scanning has to be limited to the period of the transmission situation. Yet, what is being designated by the speech situation, that is, by the given *parole*? That which is pronounced, i.e. all the words in the sentence, including a given form of the transitive verb. Any linguistic form becomes (situationally) transmissionally deictic at the moment that it is pronounced. Syntax requires pronunciation; hence in syntax everything becomes deictic simply because it is being pronounced. The extension feature, however, is codally deictic. Its referent is *a priori* deictic. The referent is given as already having been identified as such in the speech situation. Extension has a referent which has already been identified beforehand in the speech

situation. It is not difficult to see that the extension feature carried by the accusative presents a deictic replay of the transitivity mechanism. Graphically:



(For the sake of simplicity, I have left out the affective type of transitivity.) It presents a replay because transmissionally deictic extension says that its referent has been identified before. This referent was tentatively identified in the patient of the transitive verb. The accusative referent and the referent corresponding to the patient of the transitive verb are necessarily identical.

Such an interaction between a transmissionally deictic morphemic category and syntax is not unique. We find a comparable instance in the relation between a determinate verb of motion and its goal if the latter is identified by the syntactic context. In a determinate verb, the goal of the process is transmissionally deictically given, again by the extension feature, which is in this type of verb a transmissionally deictic lexical feature. This feature says that the terminal point of the motion as it appeared in its relation to the agent during the verbal process remains identifiable through the speech situation. If the syntactic context presents a goal in a separate noun phrase, this goal must be the terminal goal of the verbal process. Thus, in *idti v školu* 'go to school', *idti* 'go' is marked for lexical transmissionally deictic extension (as opposed to *xodit'* 'go', which is unmarked for this feature). *Idti* says that this goal is still identifiable and is only identifiable during the speech situation. *V školu* 'to school' has therefore already been earmarked to further identify this goal; whereas in *xodit' v školu* the modifier *v školu* does not identify the terminal point of the verbal process (Cf. van Schooneveld 1968).

It is understandable that the extension feature, which asks the question: "And what happened afterwards?", is particularly appropriate to create anaphora, whether syntagmatically retrospective (as in the transitive + accusative construction) or

prospective (as in my example of the determinate verb + modifier construction). On comparable levels of deixis we find the extension feature back as the lexical marking of the personal pronoun *sebja* (van Schooneveld 1982), which by the anaphoric working of the extension feature surfaces as a reflexive pronoun, or in agreement, where the grammatical morphemes of the agreeing form refer to grammatical categories already identified in the grammatical morpheme of the head word (van Schooneveld To appear a).

To conclude: syntactic relations are essentially identity relations between referents (van Schooneveld 1977). These identities are established by semantic mechanisms operating with deixis. There are a number of different mechanisms and several types of deixis. In the foregoing, I try to explain in detail just one of them. Generally, however, one can say that two procedures are crucial: 1. one of the members of a syntactic relationship presents a replay of the perception event of the other member; the relationship of the accusative object and the patient of a transitive verb is an example of this type. 2. a morpheme carries singulative deixis; that is, a deixis which restricts the referent uniquely to the given perception situation. For instance, singulative perceptional deixis (van Schooneveld To appear b, 1983a, 1983b) restricts the identifiability of the referent to the narrated situation which is in the process of being referred to by other morphemes as well. If the singulatively perceptionally deictic morpheme carries no other markings to the contrary, it will work anaphorically. Examples are the personal pronouns, including the so-called reflexive pronoun.

The Meaning of a Case: A Study of the Polish Dative

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1. *Introduction*

The basic assumption of this paper is that cases have meaning and that this meaning can be stated in a precise and illuminating way. In assuming this, I adopt of course the position advocated and brilliantly implemented by Roman Jakobson (1936/1971). My further assumptions, however, are those introduced and justified in Wierzbicka 1980a, 1980b, 1981 and 1983: (1) that a case has one core meaning, on the basis of which it can be identified cross-linguistically (as, say, 'dative' or 'instrumental'), and a language-specific set of other, related meanings, which have to be specified in the grammatical description of a given language; and (2) that all the meanings of a case—like all other meanings—can be stated in intuitively understandable and intuitively verifiable paraphrases in a semantic metalanguage based on natural language.

1.1. *The core meaning of dative*

For the purposes of this paper, dative can be identified as the case used to designate the recipient in sentences of GIVING in Indoeuropean languages such as Latin, Russian or German. This is not to say that in ANY given language the case of the recipient will be regarded as dative: in those languages in which the recipient (as a human participant) is treated like a direct object, over and above the thing given, the core meaning of the case marking the recipient is different from its counterpart in European languages, and, consequently, it cannot be regarded as the same case.

I think a useful definition of dative can be based on the following semantic structure:

(1)

X did something with thing Y
wanting person Z to come to have it
something happened to Y because of that

one could assume that Z would come to have Y because of that

This formula is meant to suggest that, in the speaker's mind, the target of the action, i.e. the intended recipient, is less affected than the thing transferred; it is not even clear whether the intended recipient does come to have that thing in the end. For example, the sentence:

Ewa rzuciła jabłko Adamowi.
'Eve threw Adam:DAT a/the apple.'

does not imply that Adam necessarily caught, and got, the apple. It implies, on the other hand, that something did happen to the apple, and also that the apple came within Adam's reach, so that it became likely that Adam would get it. In this respect, dative differs from a prepositional phrase. Sentences such as:

Ewa rzuciła jabłko do Adama.
'Eve threw an/the apple to Adam:GEN.'

Adam kupił jabłko dla Ewy.
'Adam bought an/the apple for Eve:GEN.'

imply that something happened to the apple, but they don't imply that as a result the intended recipient did become able to have it. It appears that sentences with a prepositional target contain one semantic component less than their counterparts with a dative:

(1a)

X did something with thing Y
wanting person Z to come to have it
something happened to Y because of that

1.2. *Language-specific extensions of the core use*

Assuming that we can identify the dative case in a language, if there is one, it soon becomes obvious that the case in question has uses absent from some other languages which have a dative. For example, while Polish, German and French can all use a dative to designate a person caused to SEE something, or a person caused to KNOW something, as well as a person caused to HAVE something, German, but not Polish, can also use it to designate a person caused to FEEL something, and French, but not Polish, can use it to designate a person caused NOT to KNOW something:

Ewa dała mu jabłko.
Eve lui a donné une pomme.

Eva hat ihm einen Apfel gegeben.
'Eve gave him:DAT an apple.'

Eva schlug ihm ins Haupt.
*Ewa uderzyła mu w głowę.
'Eve hit him:DAT in the head.'

Eve lui a caché la verité.
*Ewa ukryła mu prawdę.
'Eve hid "him":DAT the truth'
'Eva hid the truth from him.'

I conclude that attempts to assign the Polish dative—or any other dative—a unitary meaning, necessarily have a limited explanatory potential. If we want to be able to predict the entire range of uses that the dative has in a particular language, we have to establish a full list of semantic constructions permitting the use of dative in this language. When such lists are compared, the overlap between different languages will often be considerable; nonetheless each SET of uses is language-specific and has to be stated, explicitly, as such.

2. *Polish datives with external causes*

The Polish dative has a very wide range of uses. It will be convenient to divide this range, roughly, into two broad classes: datives which involve external causes and datives which do not. Within each broad class, several subclasses have to be distinguished. In this section (Section 2) I will discuss datives with external causes, and in the following one (Section 3)—datives without external causes.[1]

2.1. *Causing to have, or not to have*

I have proposed 'causing to have' (with the 'datum' rather than the recipient treated as the direct object of the action) as the prototypical use of dative. In this prototypical use, something happens to an object because an agent is doing something to it, intending another person to come to have it because of that.

However, in Polish the dative can also be used when the agent is not acting upon an object to be had by the recipient; in particular, it can be used when the object to be had is CREATED through the action, as in the following sentences:

Adam usmażył Ewie omlet.
'Adam fried Eve:DAT an omelette.'

Ewa uszyła Adamowi spodnie.
'Eve sewed Adam:DAT a pair of trousers.'

For 'patientless' sentences of this kind the following semantic formula can be proposed[2]:

(2)

X did something with some M (material)
wanting Z to come to have a Y
something happened to M because of that
one could assume that Z would come to have Y because of that

It should be noted that in some other languages dative can be used even more broadly, covering cases of 'spontaneous' acquisition as well as those of acquisition due to somebody else's transitive action:

Ein Hund ist uns zugelaufen.
a dog has run us:DAT
'A dog has "adopted" us.'

(cf. Neumann 1983). But in Polish, one can't say this using a dative:

*Przybłąkał nam się pies.

Similarly, one can say in French:

Une lettre lui parvint.
a letter came him:DAT
'A letter reached him.'

But in Polish one can't say this using a dative.

*List mu przyszedł.

On the other hand, one can use dative for 'spontaneous loss':

Pies mi uciekł.
dog me:DAT ran away
'My dog has run away (on me).'

List mi zginął.
letter me:DAT got-lost
'I lost a letter.'

Wino nam się skończyło.
wine us:DAT finished
'We've run out of wine.'

The following semantic formula can be assigned to sentences of this kind:

(3)

Z ceased to have Y
not because someone did something with it

Admittedly, one can also use dative in sentences such as the following ones, in which spontaneous acquisition does seem to be involved:

Syn nam się urodził.
son us:DAT was-born
'A son was born onto us.'

Krowa nam się ocieliła.
cow us:DAT calved
'Our cow has just calved.'

This dative, however, seems to be restricted to situations when something comes into existence in a place rather than is acquired from outside. It can be called, therefore, 'dative of emergence' and can be assigned the following formula:

(4)

Z came to have Y
because Y came to be in Z's place
not because it came from some other place

Furthermore, it appears that Polish has what might be called a 'dative of addition'. Thus, while one cannot say:

*Przyszło nam wielu studentów.
came us:DAT many students:GEN PL

one can say:

Przybyło nam studentów.
came-more us:DAT students:GEN PL
'Our student numbers have increased.'

The relevant meaning can perhaps be formulated as follows:

(5)

Z came to have more Ys than before
not because somebody did something with some Ys

The victim of a loss which does involve an agent can also be designated by a dative:

Adam ukradł Ewie jabłko.
Adam stole Eve:DAT apple
'Adam stole an/the apple from Eve.'

It is worth noting in this connection that the so-called internal

dative in English, which can fulfill many functions of the Polish, Russian or Latin dative, can be used for agentive acquisition (roughly, 'giving'), but not for agentive loss (roughly, 'taking'):

Eve gave Adam an apple.
*Eve stole Adam an apple.

A sentence such as:

Adam took Eve some apples.

is acceptable, but only on the interpretation that Eve is a recipient, not a loser (Cf. Wierzbicka 1986).

Finally, Polish (unlike, say, French) doesn't have a dative of straight (stative) possession:

Les bijoux m'appartenaient.
*Klejnoty mi należały.
jewels me:DAT belonged
'The jewels belonged to me.'

It does, however, have a dative of CONTINUED possession:

zostało mi $10
was-left me:DAT $10
'I had $10 left.'

This is in keeping with the 'dynamic' nature of the Polish dative, which seems to always imply a change, or a possibility of change.

2.2. *Causing to see*

Here, the prototype example is *pokazać* 'show':

Ewa pokazała Adamowi jabłko.
'Eve showed Adam:DAT an/the apple.'

But the condition is semantic, not lexical; in principle, any verb could be used as long as the sentence meets the semantic formula:

(6)

X did something with Y
wanting Z to come to be able to see Y
one could assume that Z would come to see Y because of that

For example:

Piotr zademonstrował Pawłowi swój wynalazek.
Peter demonstrated Paul:DAT his invention
'Peter demonstrated his invention to Paul'

2.3. *Causing to hear for pleasure and causing to know*

Dative can be used in Polish to refer to an intended hearer, provided that the audible action is performed for the hearer's pleasure. Thus, one can say:

Jaś zaśpiewał Kasi piosenkę.
'Johnny sang Kate:DAT a song.'

Kasia przeczytała Jasiowi bajkę.
'Kate read Johnny:DAT a fairy tale.'

I propose for this construction the following semantic formula:

(7)

for some time, X was doing something
causing Y to be able to be heard
wanting Z to hear it for pleasure
one could assume that Z would hear Y and feel pleasure
because of that

This may seem to be too restrictive, as dative can also be used in Polish to refer to the addressee of speech not intended as entertainment, as in the sentence:

Jaś powiedział Kasi prawdę.
'Johnny told Kate:DAT the truth.'

However, the two uses—the dative of entertained audience and the dative of addressee—cannot be subsumed under one 'dative of hearer', because in Polish the intended hearer can't always be referred to by a dative, as it apparently can in French:

C'est bien fait, cela t'apprendra, lui cria son passager. (Delange 1948:28)
*Dobra robota, to cię nauczy, krzyknął mu pasażer.
'Well done, that will teach you, his passenger shouted "him":DAT' (i.e. to him)

Nor can one use a dative in Polish when the object of speaking (i.e. what is said) is not specified, as one can in French:

J'obtiens beaucoup plus de mes interlocuteurs en ne leur parlant pas l'anglais. (Delange 1948:98)
*Więcej osiągam od moich rozmowców nie mówiąc im po angielsku.
'I get more out of my interlocutors when I don't speak "them":DAT English', i.e. 'when I don't speak English to them.'

In Polish the addressee can be referred to by a dative only if the

action (speech) has a tangible result for the addressee, that is to say, if a specific message is conveyed:

Powiedziała mu prawdę.
'She told him:DAT the truth.'

Powiem ci sekret.
'I'll tell you a secret.'

Powiedział mi dzień dobry.
'He said hello to me.' (DAT, no preposition)

The object of speaking doesn't have to be articulated speech, as long as the message conveyed is clear, as in the following folk song:

Nie chodź do lasu czypać bzu i nie wierz chłopcu jako psu,
Bo każdy chłopiec ma w sobie jad, kiedy cię kocha powiedz mu: at!
'Don't go to the forest to pick lilac, and don't trust a boy any more than you'd trust a dog, for every boy has poison in him, when he loves you say to him: at!' (a contemptuous interjection)

Since the same verb, for example *powiedzieć* or *mówić* 'say, tell', can or cannot be used with a dative depending on the overall meaning of the sentence, it is clear that the constraint in question is not lexical but semantic.

To account for these facts, a further dative construction has to be postulated for Polish: causing to know. It should be noted that in this construction hearing is not really essential; the message can be conveyed by some other means than audible speech.

Napisz mi całą prawdę.
'Write me:DAT the whole truth.'

Opisał mi wszystko dokładnie.
'He described me:DAT everything.'

Both these constructions—the dative of entertained audience and the dative of intended addressee—have their counterparts in the use of the 'internal dative' in English (Cf. Wierzbicka 1986):

She sang him a song.
She played him a sonata.
She told him the truth.

The distinction between speech conveying a message and speech not necessarily conveying a message, marked in Polish by the use *vs.* non-use of dative, is signalled in English lexically as well as syntactically:

She told him the truth.
She said something in Chinese.

But the exact conditions on 'causing to know' are not the same, as in Polish one can say:

Powiedziała mu dzień dobry.
she said/told him:DAT hello.
'She said hello to him.'

whereas in English one can't say:

*She told him hello.

Apparently, in English the message has to be specified explicitly, whereas in Polish it can be merely implied (as good wishes are implied by a greeting). This difference can be captured in semantic formulae as follows:

English internal dative
(8a)

X said Y to Z
wanting Z to come to know Y
one could assume that Z would come to know Y because of that

Polish dative
(8)

X said something to Z
wanting Z to come to know Y because of it
one could assume that Z would come to know Y because of that

In another respect, however, the use of dative in Polish is more restricted than the use of 'internal dative' in English: in Polish, one can use a dative to refer to a person caused to KNOW THAT, but not to refer to a person caused to KNOW ABOUT. Thus, while one can say in English, or in French:

She taught him geography.
Elle lui enseignait geographie.

one can't say in Polish:

*Uczyła mu geografii.

It is also interesting to note that while Polish allows a dative to be used in reference to a person caused to KNOW, it doesn't allow it to be used in reference to a person caused NOT to KNOW. (cf. Section 1.2.)

2.4. *Causing to be able to do something*

This use of dative, too, has a counterpart in the English 'internal dative' construction (Cf. Wierzbicka 1986):

Piotr otworzył Pawłowi puszkę sardynek.
'Peter opened Paul a tin of sardines.'

Piotr usmażyl Pawłowi jajko.
'Peter fried Paul an egg.'

Piotr uprasował Pawłowi koszulę.
'Peter ironed Paul a shirt.'

But in English, this usage of 'internal dative' appears to be restricted to situations when the thing acted upon is to be used directly by the target person, i.e. when the expression referring to it is the direct object of the target person's expected action as opposed to an object with an interposed preposition. In Polish, however, the dative is acceptable for both types of objects:

Piotr przysunął Pawłowi krzesło.
'Peter pulled a chair for Paul (to sit on).'
?Peter pulled Paul a chair.

Piotr umył Pawłowi filiżankę.
'Peter washed a cup for Paul (to drink from).'
?Peter washed Paul a cup.

Piotr zatemperował Pawłowi ołówek.
'Peter sharpened a pencil for Paul (to write with).'
?Peter sharpened Paul a pencil.

Furthermore, in Polish the dative can refer to a person who is expected to do something with the object, without necessarily 'using' it for any guessable purpose. Thus, one can say:

Przetnij mi ten sznurek!
Cut me:DAT this string!
'Cut this string for me!'

Potrzymam ci młotek.
I'll hold you:DAT the hammer
'I'll hold the hammer for you.'

The semantic formula proposed for the Polish construction reads:

(9)

X did something with Y
wanting Z to be able to do something with Y
one could assume that Z would do something with Y because of that

2.5. *Causing a change in an object*

Dative can be used in Polish to refer to a person seen as affected by a change in a thing belonging to him or her, as in the following sentences:

Ewa zreperowała Adamowi maszynę do pisania.
'Eve repaired Adam:DAT his typewriter.' (i.e. she repaired it for him)

Adam zepsuł Ewie zegarek.
Adam ruined Eve:DAT watch
'Adam ruined Eve's watch.'

The change of state doesn't have to be guaranteed lexically (as it is in the sentences above):

A.

?Pies polizał mi but.
dog licked me:DAT shoe:ACC
'The dog licked my shoe.'

B.

Pies polizał mi bułkę.
dog licked me:DAT breadroll: ACC
'The dog licked my breadroll.'

Sentence A is odd because it is hard to see what effect the action could have on the object; but sentence B is perfectly acceptable because the action can easily be interpreted as causing the object to become uneatable.

A further constraint seems to be that the change in the object has to be seen as either 'bad' or 'good'. Thus, sentences about destroying or repairing someone's possessions lend themselves particularly well to this use of dative. If the change is not inherently 'bad' or 'good', the dative will still imply that it was either desirable or undesirable. Thus, a sentence such as:

Adam ufarbował Ewie sukienkę.
Adam dyed Eve:DAT dress:ACC
'Adam dyed Eve's dress.'

will be interpreted as reporting a useful or a harmful act (a service or a disservice). A sentence such as:

?Pomalowałam budę Rexowi.
I painted kennel:ACC Rex:DAT
'I painted Rex's kennel for him.'

sounds odd because it implies that Rex (a dog) wished for the

kennel to be painted.

Syntactically, sentences of this kind don't have to have a direct object; what matters is that the semantic formula is met:

(10)

X did something with Z's thing Y
Y came to be in a different state because of that
it was bad/good for Z

Dative can also be used if a spontaneous, agentless, change occurs in a person's possessions. It appears, however, that in sentences of this kind the change has to be seen as 'bad':

Mleko wylało mi się na sukienkę!
milk spilled me:DAT on dress
'Milk got spilled on my dress!'

Buty mi się podarły.
shoes me:DAT tore
'My shoes wore out (on me).'

Samochod mi się zepsuł.
car me:DAT broke
'My car broke down (on me).'

I propose for sentences of this kind the following semantic formula:

(11)

something bad happened to Z's thing Y
not because someone did something with it
Y came to be in a different state because of that
it was bad for Z
(one could assume that Z would feel something because of that)

It is true that agentless sentences can also imply a welcome change in an object, as in the sentences:

Ciasto ładnie mi się upiekło.
cake baked me:DAT nicely
'My cake came out nicely.'

Jabłonie pięknie nam obrodziły w tym roku.
apple trees nicely us:DAT bore fruit this year
'Our apple trees bore lots of fruit "for us" this year.'

However, positive sentences of this kind imply partly luck and partly the beneficiary's success in doing something. In Wierzbicka 1979 I've called this construction 'the dative of lucky agent.' (See also Wierzbicka 1985). It is less like the dative of affected

possessor than it may seem, as the object of 'lucky agent's' action does not have to belong to him. There is, on the other hand, a symmetrical construction of 'unlucky agent':

Mięso mi się przypaliło!
meat me:DAT burnt
'The meat got burnt (on me)!'

Mleko mi się wylało!
milk me:DAT got spilled
'The milk got spilled!'

I postulate for the datives of lucky and unlucky agent the following semantic formulae:

(12)

something happened to Y
that Z was doing something with
not because someone did something with it
it was good/bad for Z
(one could assume that Z would feel something because of that)

2.6. *Causing something to happen to a related person*

A person can be seen as affected by an action undergone neither by himself nor by one of his possessions but by a person related to him. In Polish this, too, triggers the use of dative, with the proviso that the effect of the action has to be seen as either bad or good. Thus, one can say:

Zbałamucił mi siostrę.
He seduced me:DAT sister.
'He seduced my sister.'

Wyleczył mi dziecko.
he cured me:DAT child
'He cured my child.'

Przekabacił mi siostrę.
he 'converted' me:DAT sister (pejorative verb)
'He "converted" my sister (to some deplorable views).'

but hardly:

?Przekonał mi siostrę.
he convinced me:DAT sister
'He convinced my sister.'

On the other hand, no matter how 'bad' or 'good' the effect of the

action on the patient is, a dative can't be used unless the action produces a specifiable change of state. Thus, one can say:

Zabili (zamęczyli) mu żonę.
they killed (tortured to death) him:DAT wife
'They killed (tormented to death) his wife.'

but hardly:

?Torturowali (męczyli) mu żonę.
they tortured (tormented) him:DAT wife
'They tortured (tormented) his wife.'

Thus, the following semantic formula seems to be called for:

(13)

X did something bad/good to person Y related to Z
Y came to be in a different state because of this
it was bad/good for Z
one could assume that Z would feel something because of that

Dative can also be used to refer to a person affected by an agentless event involving a related person, provided that the effect is bad, both for the person directly involved and for the one indirectly affected. Thus, one can say:

Żona mu umarła.
wife him:DAT died.
'His wife died (on him).'

but not, unless in jest,

?Żona mu wyzdrowiała.
wife him:DAT recovered.
'His wife recovered.'

A further example (a list of 'transitive' misfortunes):

Dwóch mi synów w rekruta wzięli, jeden mi chłopak w rzece utonął, jeden najmłodszy spalił mi się na strychu śpiacy . . . (Konopnicka)
'Two of my sons were taken into the army (me:DAT), one boy drowned in a river (me:DAT), the youngest one burnt to death in the attic, while asleep (me:DAT)'

However, in the case of agentless events involving a related person it is not necessary that there should be a change of state in the person directly involved. One can say, for example:

Dzieci mi chorują.
children me:DAT are sick.

'My children are sick ("on me").'

The semantic formula for the agentless subtype would read, then:

(14)

something bad happened to person Y related to person Z
it was bad for Z
one could assume that Z would feel something because of that

This usage can be extended to undesirable actions of related people, as in the sentence:

Córka uciekła mu do Ameryki.
daughter fled him:DAT to America.
'His daughter ran away to America (on him).'

It appears that the undesirable actions of this kind must have lasting effects, and also that they have to be seen as strictly objectless (i.e. they have to be described by intransitive or reflexive verbs). Thus, one can say neither:

*Córka mi kłamie (kradnie).
daughter lies (steals) me:DAT

nor:

*Córka mu popełniła morderstwo (samobójstwo)
daughter him:DAT committed murder (suicide)

One can say, however:

Córka mu się zabiła.
daughter him:DAT killed-Refl.
'His daughter got killed/his daughter killed herself.'

The following semantic formula can be proposed for this subtype:

(15)

person Y related to person Z did something that Z didn't want Y to do
it was bad for Z
(one could assume that Z would feel something because of that)

2.7. *Dative of warning*

Dative can be used in the imperative (and in other irrealis contexts) to refer to a 'related person' (normally, a child) whom another person (normally, the speaker) feels responsible for and wants to protect:

Tylko mi się nie przewróć! (tylko mi nie zachoruj!)

only me:DAT don't fall down (only me:DAT don't get sick)
'Just don't fall down (on me).' (just don't get sick)

Typically, sentences of this kind include the word *tylko*, 'only', which implies: 'I want this one thing, nothing more'. The following formula might be proposed to account for this usage:

(16)

you could do something that would cause something bad to happen to you
I don't want it to happen
(one can assume that) it would cause me to feel something
I assume that I should cause it that bad things don't happen to you

This usage can be extended to situations when the addressee could do something bad which the speaker himself would 'have to' punish:

Tylko mi się nie buntuj!
only me:DAT don't rebel
'Just don't get it into your head that you can rebel against me.'

(I'm not sure what the exact conditions on this usage are.)

2.8. *Causing a change in a body part*

A dative construction can be used in Polish to refer to a person whose body part has undergone a change due to somebody's action:

Adam zabandażował Ewie rękę.
Adam bandaged Eve:DAT hand
'Adam bandaged Eve's hand (for her).'

It is not enough for the body part to be affected; there really has to be a specifiable change of state:

Pies odgryzł Adamowi ucho.
dog bit-off Adam:DAT ear
'A dog bit off Adam's ear.'

Pies ugryzł Adama w ucho.
dog bit Adam:ACC in the ear
'A dog bit Adam in the ear.'

*Pies ugryzł Adamowi ucho.
dog bit Adam:DAT ear
'A dog bit Adam in the ear.'

Furthermore, this change of state has to be seen as lasting, i.e. not merely momentary. Thus, one can't say in Polish, as one can in French:

elle lui saisit (prit, lâcha) la main
*chwyciła (wzięła, puściła) mu rękę.
she grabbed (took, let go) him:DAT hand
'She grabbed (took, let go of) his hand.'

Admittedly, there are some apparent counterexamples to this rule, such as:

Piotr uściskał Pawłowi rękę.
Peter squeezed Paul:DAT hand
'Peter shook Paul's hand.'

Ucałował im paluszki, różowiutkie ich koniuszki. (Brzechwa)
he kissed them:DAT fingers, their rosy tips
'He kissed their fingers, their rosy fingertips.'

A handshake or a kiss doesn't cause a different state in the relevant body part, and yet a dative can be used. I think, however, that sentences of this kind are acceptable because they fit one of the semantic formulae given earlier: that of an action conveying a message. Actions such as shaking a man's hand or as kissing a lady's fingertips are symbolic, and they convey clear messages. This interpretation is supported by the fact that in non-symbolic contexts the same verbs don't allow a dative:

*Pocałowała mu policzek.
she kissed him:DAT cheek.
'She kissed him on the cheek.'

Thus, despite the apparent counterexamples, the dative of affected body part has to be given the following formula:

(17)

X did something with Z's body part Y
Y came to be in a different state because of that
one could assume that Z would feel something because of that

Interestingly, Polish does not allow dative to be used in sentences describing routine bodily actions, whether or not these actions cause a change in the state of a body part. Thus, one doesn't say in Polish, as one does in German or French:

?Myję sobie zęby.
Ich putze mir die Zähne.

je me lave les dents
I clean myself:DAT teeth
'I clean my teeth.'

The Polish sentence could be used only if the action was not routine, and not ordinary (for example, if one was cleaning a denture; see Wierzbicka 1979).

2.9. *Causing contact with a body part*

One can't say in Polish:

A.

*Piotr dotknął Pawłowi ramienia.
Petr touched Paul:DAT shoulder:GEN
'Peter touched Paul's shoulder.'

but one can say:

B.

Piotr położył Pawłowi rękę na ramieniu.
Peter put Paul:DAT hand:ACC on shoulder
'Peter put his hand on Paul's shoulder.'

Neither A nor B imply a change in a body part. Nonetheless, B is acceptable while A isn't. The reason is, I think, that B, but not A, fits another dative construction: one which explicitly refers to an object or body part coming into contact with a part of a person's body. Thus, sentence B mentions a hand coming into contact with someone's shoulder; but no such mention of a moving object (or body part) is made in A. The agentive version of this construction can be represented as follows:

(18a)

X did something with Y
causing Y to come into contact with a part of Z's body
one could assume that Z would feel something because of that

The presence of an agent, however, is not obligatory, as the following sentences show:

Książka spadła mu na głowę.
book fell him:DAT on head
'A book fell on his head.'

Woda lała mu się na twarz.
water was-pouring him:DAT on face
'Water was pouring on his face.'

Consequently, a simpler semantic formula can be proposed:

(18)

Y came to be in contact with a part of Z's body
one could assume that Z would feel something because of that

But an actual contact with a body part is not strictly necessary for dative to be able to be used: it is sufficient that an object should come to be so close to a body part that contact becomes possible (for example, if the person moved that body part). Thus, one can also say in Polish:

Pineska wpadła mi do łóżka.
drawing-pin fell me:DAT to bed
'A drawing pin fell into my bed.'

Ewa wrzuciła Adamowi chrabąszcza za kołnierz.
Eve threw Adam:DAT beetle behind collar
'Eve put a beetle down Adam's shirt.'

Kamień przeleciał mi koło ucha.
stone flew me:DAT near ear
'A stone flew close to my ear.'

Sentences of this kind are acceptable because they meet the following formula:

(19)

thing Y came to be in the place where some parts of Z's body were
it could come into contact with Z's body because of that
one could assume that Z would feel something because of that

I think that this construction encodes the idea of a 'personal sphere' around a person, suggested by Bally (1926). I have explicated this personal sphere in terms of potential contact with a person's body, and his potential feelings caused by that.

If a sentence makes it quite clear that contact did not occur but that nonetheless a person's 'personal sphere' was violated, dative can still be used, with the proviso, however, that a specific body part is mentioned. Thus, one can't say in Polish as one can in French:

*Kręcił jej się dookoła.
Il lui tournait autour.
he her:DAT was turning around

'He was turning around her.'

One can say, on the other hand:

Ciagle stoisz mi za plecami.
'You are constantly standing behind my back.' ("to me":DAT)

Kamień przeleciał mi koło ucha.
'A stone flew close to my ear.' ("to me":DAT)

Another type of dative can be used when something changes in the position or state of an object which is maintained in contact with a person's body (clothes, glasses, a watch, etc.), causing a change in the person's appearance:

Kapelusz zsunął jej się z głowy.
hat slipped down her:DAT from head
'Her hat slipped down from her head.'

Sznurowadło ci się rozwiązało.
shoelace you:DAT got undone
'Your shoelace has come undone.'

For sentences of this kind the following semantic formula can be proposed:

(20)

something happened to thing Y which was in contact with a part of Z's body
Y (or some parts of Y) came to be in a different place because of that
one could assume that Z would look different because of that

A dative can also refer to a person whose body part is being looked at or investigated (cf. Wierzbicka 1979):

Mama zajrzała Jasiowi do gardła.
mum looked Johnny:DAT in throat
'Mum had a look at Johnny's throat.'

Doktor zbadał mu serce.
doctor examined him:DAT heart
'The doctor examined his heart.'

Adam patrzył Ewie na nogi.
Adam was looking Eve:DAT at legs
'Adam was looking at Eve's legs.'

This use extends to investigation of things worn on the body, or otherwise regarded as extensions of the body:

Matka zajrzała Jasiowi do kieszeni.
Mother looked Johnny:DAT to pocket
'Mother looked into Johnny's pocket.'

It can't be extended, however, to possessions not worn on the body:

*Matka zajrzała Jasiowi do szuflady.
mother looked Johnny:DAT in drawer
'Mother had a look inside Johnny's drawer.'

*Jaś obejrzał Józiowi zabawki.
Johnny examined Joe:DAT toys
'Johnny examined Joe's toys.'

Nor can it be extended to knowledge or perception (as opposed to ACTIONS SEEKING knowledge or perception). Thus, one can't say in Polish as one can in Italian:

*Widziałem mu zęby.
Gli vidi i denti.
I saw him:DAT teeth
'I saw his teeth.'

*Zauważono mu ranę.
Gli hanno scoperto una ferita.
they found him:DAT wound
'They found that he had a wound.'

Thus, the following formulae have to be added to our inventory:

Examining the body

(21)

X did something to some parts of Z's body
(or to something that was in contact with some parts of Z's body)
wanting to come to know something about them
one could assume that Z would feel something because of that

Looking at

(22)

X looked at some parts of Z's body
one could assume that Z would feel something because of that

Given that dative is so widely used to refer to potential experiences, how is it possible that it is not used in sentences like

the following:

*Piotr uderzył Pawłowi w twarz.
Peter hit Paul:DAT in face
'Peter hit Paul in the face.'

I have said earlier that in Polish, dative can be used in sentences involving 'causing to have' or 'causing to see' but not 'causing to feel'. Are sentences discussed in the present section compatible with that claim?

I think that they are. The frame:
^{X}Nom. $^{V-ed}$ ^{Z}Dat. ^{Y}Acc.

implies that Y is seen as more affected than Z. It is not always clear who or what in any given situation should be regarded as more affected: a person affected through a body part or the body part itself. Usually, if the body part is very drastically affected—say, broken—and if at the same time the effect can be seen as strictly local, the body part will be presented as more affected.

Adam złamał Ewie rękę.
Adam broke Eve:DAT arm:ACC
'Adam broke Eve's arm.'

*Adam złamał Ewę w rękę.
Adam broke Eve:ACC in arm
'Adam broke Eve's arm.'

However, if the effect can be regarded as global (especially, if pain is implied), the person will tend to be viewed as more affected than the body part, and it will tend to be referred to by the accusative, not by dative:

Adam zranił Ewę w rękę (w brzuch).
'Adam wounded Eve:ACC in the hand (stomach).'

?Adam zranił Ewie rękę.
Adam wounded Eve:DAT hand:ACC

*Adam zranił Ewie brzuch.
Adam wounded Eve:DAT stomach:ACC

Verbs which present a physical action as an interpersonal act, as communication of feelings, may well be seen as focusing on the affected person more than on the affected body part. Polish has grammaticalized this view, since it requires the affected person to be the direct (accusative) object of personal verbs such as ***uderzyć*** 'hit', ***pocałować*** 'kiss' or ***pogłaskać*** 'stroke':

Ewa uderzyła (pocałowała, pogłaskała) Adama w głowę.
'Eve hit (kissed, stroked) Adam:ACC on the head.'

*Ewa uderzyła (pocałowała, pogłaskała) Adamowi głowę.
'Eve hit (kissed, stroked) Adam:DAT head:ACC.'

On the other hand, verbs which signal contact with a body part without explicitly referring to emotions don't allow the affected person to be treated as the primary object of the action (and to be referred to in the accusative):

Ewa dotknęła Adamowi czoła (*Adama w czoło)
Eve touched Adam:DAT forehead:GEN (*Adam:ACC)
'Eve touched Adam's forehead.'

Certainly, it can be assumed that a person touched will feel something. However, if the feeling is not presented as the goal of the action but merely as its potential by-product, it is understandable that the person affected may fail to be seen as central to the event, i.e. as the direct object of the action.

3. *Datives without external causes*

Datives without external causes cover unintentional changes in the body and unintentional processes in the mind. I will start with unintentional processes in the mind, which affect feelings, thoughts and 'wantings'.[3]

3.1. *Unintentional feelings*

Polish has three different ways of presenting emotions: as active and subject to control, as neutral and unspecified, or as passive and involuntary. Voluntary emotions are signalled by means of active verbs, often reflexive in form, with a nominative subject (=experiencer):

Adam żałował (cieszył się, martwił się, smucił się).
'Adam regretted (rejoiced, worried, was sad).'

Neutral emotions are signalled by means of the same or related verbs used in a passive form and with a prefix indicating perfectivity:

Adam był ucieszony (zmartwiony, zasmucony).
'Adam was pleased (worried, saddened).'

Involuntary emotions are signalled by means of impersonal constructions, with the experiencer in the dative. The predicate takes the form of an adverbial with a copula which usually gets

deleted in the present.

Adamowi było żal (wstyd, smutno).
'Adam felt regrets (felt ashamed, felt sad).'

The following semantic formulae can represent the essence of these distinctions:

Neutral: X felt something

Voluntary: X felt something
because he was saying to himself things
which could cause him to feel it

Involuntary: (dative)
(23)
X felt something
not because he wanted to

As the English glosses above indicate, English sometimes draws distinctions of this kind, too (cf. *he worried* vs. *he was worried*). But in English these distinctions are sporadic and marginal; in Polish they are much more systematic and much more richly developed.

3.2. *Unintentional cognitive processes (thoughts and 'imaginings')*

Dative in Polish can signal the occurrence of involuntary thoughts and images, as in the following examples:

Przyszło mi do głowy . . .
'It occurred to me . . . '

Przypomniało mi się . . .
'I recalled . . . '

Zdawało mi się . . .
'It seemed to me . . . '

Śniło mi się . . .
'I dreamed . . . '

This is not a fully productive category, but it is more than a collection of disparate expressions. Some of the expressions in this class have an active, controllable counterpart, with the experiencer in the nominative:

Przypomniałem sobie . . .
'I recalled . . . '

Śniłem . . .
'I dreamed . . . ' (archaic or poetic)

The dative of unintentional cognitive processes may also occur in another version, with the object of thought in the nominative:

Przypomniała mi się córka.
'I was reminded of my daughter.'

Marzyły mi się dalekie podróże.
'I dreamed of long journeys.'

Przyszła mi do głowy pewna myśl.
'An idea occured to me.'

A tentative semantic formula for the dative of unintentional cognitive processes reads:

(24)

X thought/imagined something
because something happened in his mind
not because he wanted it

3.3. *Unintentional 'wantings'*

Volitional processes, too, can be presented as either controllable or not controllable. Again, this semantic difference is associated with the grammatical difference between a nominative (and a verb agreeing with it in number and gender) and a dative (with an impersonal, non-agreeing form of the verb):

Chciałem śpiewać.
'I wanted to sing.'

Chciało mi się śpiewać.
'I felt like singing.'

There are hardly any verbs other than *chcieć* 'want' which can participate in this contrast, and the expression *chce mi się* (with any combination of persons, numbers and tenses) should perhaps be regarded as semi-idiomatic. It is too closely parallel to the other dative constructions, however, not to be regarded as at least semi-regular.

A semantic formula for this subtype is not easy to propose. Tentatively, I propose the following:

Chce mi się robić X. -

(25)

I feel I want to do X
not because I want to want it

(For further discussion of this problem see Wierzbicka 1971.)

It should be noted that the dative construction contrasts not

only with a nominative one but also with an accusative one. Thus, one can also say in Polish:

Korci mnie, żeby to zrobić.
'It-itches me:ACC in order to do it.'
'I feel tempted to do it, I can hardly resist it.'

The accusative construction presents the experiencer as not only not in control but as a helpless, passive victim of the experience. It implies that the experiencer is acted upon by a force different from himself, no matter that this force is internal, not external: it is perceived as a kind of 'foreign body' in the mind. (For further discussion, see the next section.)

3.4. *Unintentional sensations*

Polish has several different grammatical patterns for describing uncontrollable sensations. Some of these use the accusative as the case of the experiencer, and some—dative.

Duszno mi.
'stuffy:ADV me:DAT
'I feel I can't breathe very well.'

Mdli mnie.
it-nauseates me:ACC
'I feel sick (nauseated).'

The semantic difference between the two patterns can perhaps be described, rather loosely, as one between a purely subjective sensation and a sensation caused by an objective state (of the body). The accusative implies that the experiencer is directly affected by some processes independent of him: something is going on in his body which makes him feel something. The feeling is perceived as caused by an 'alien' force, by a tangible internal cause. The dative, on the other hand, doesn't imply any internal cause. The sensation of the dative experiencer is likely to be seen as a reaction to an external situation. The minimal pair of quasi-synonymous expressions:

Mdli mnie.
it-nauseates me:ACC

Niedobrze mi.
unwell:ADV me:DAT
'I feel nauseated.'

is illuminating in this respect. I think that if one feels slightly

sick in response to an unsightly sight one would be more likely to use the dative expression. One might say, for example:

Jak ty wyglądasz! Niedobrze mi się robi jak na ciebie patrzę!
'You look disgusting! It makes me feel sick to look at you!'

But if one attributes one's nausea to a specific internal cause (such as some exceedingly sweet food, eaten in excess, or as prolonged hunger) one would be much more likely to use the accusative expression.

It is also highly suggestive that intense sensations, such as pain or itchiness, require the accusative:

Boli mnie (*mi) brzuch.
hurts me:ACC/*DAT stomach:NOM
'My stomach hurts.'

Swędzi mnie (*mi) noga.
itches me:ACC/*DAT leg:NOM
'My leg itches.'

Intense sensations of this kind make one feel that there is a direct and localized physical cause (i.e. an analogue of an agent acting upon a patient). This localized physical cause can be viewed as a 'bad' state of the body, or of a particular body part. Thus,

Ząb mnie boli.
tooth:NOM me:ACC hurts
'I have a toothache.'

implies that there is something wrong with the tooth. But clearly, nothing of this kind is implied in dative sentences, such as:

Niewygodnie mi.
uncomfortable:ADV me:DAT
'I feel uncomfortable.'

Zimno mi w nogi.
cold:ADV me:DAT in legs
'My feet are cold.'

The sensations described in sentences with a dative experiencer may be unpleasant, but nothing is implied about a 'bad' state of the body or a part of the body.

In general, however, dative doesn't imply that the sensation is necessarily unpleasant. One can say:

Ciepło mi./Wygodnie mi.
warm:ADV me:DAT/comfortable:ADV me:DAT
'I feel warm.'/'I feel comfortable.'

'Accusative sensations', on the other hand, appear to be necessarily unpleasant.

'Dative sensations' sentences often have counterparts in which no experiencer is mentioned (and, consequently, no dative is used):

Zimno. Duszno.
'It is cold.' 'It is stuffy.'

Zimno tu. Duszno dzisiaj.
'It's cold in here.' 'It's stuffy today.'

Sentences of this kind describe an environment (time and/or place) in terms of potential experiences. They suggest that if an experiencer IS mentioned his experiences can be seen as due to the general state of the environment.

This is not to say that 'dative sensations' are necessarily due to the environment. For example, the sentence:

Szumi mi w uszach.
it-rings me:DAT in ears
'My ears are ringing.'

may or may not be due to the situation outside (temperature, altitude, etc.). But the sentence implies that the speaker is not attributing the sensation to any specific localized cause.

It was noted earlier that in Polish, in contrast to, say, German, an action which aims at and necessarily causes a sensation (e.g. hitting) can't take a dative patient/experiencer:

Uderzyła go/*mu w twarz.
'She hit him:ACC/*DAT in the face.'

In the present section, we noted that feelings and sensations CAN trigger the use of dative—on the condition, however, that neither a human agent nor a localized inanimate causer is mentioned. If a sensation is due to another person's action or to some other localized cause (such as a bad state of a body part), the nominative—accusative construction has to be used.

On the basis of the foregoing discussion the following semantic formulae can be tentatively proposed:

'accusative sensations'

(26a)

Z feels something bad in his body (or: in part Y of his body)
because of something bad that happens in some parts of his body

not because someone is doing something to it

'dative sensations'

(26)

Z feels something in his body (or: in part Y of his body)
not because someone is doing something to it
not because something happens in his body

3.5. *Unintentional processes in the body*

A related dative construction is used for uncontrollable bodily processes described regardless of any concomitant sensations. The person involved is not necessarily aware of these processes; it seems however that the processes have to be perceivable (to qualify for a dative description), and the normal assumption would be that the person involved perceives them too.

Burczało mu w brzuchu.
it-rumbled him:DAT in stomach
'His stomach rumbled.'

Odbiło mu się.
it-belched him:DAT
'He belched.'

Serce biło mu głośno.
heart was-beating him:DAT loudly
'His heart was beating loudly.'

As in the constructions discussed earlier, a body part which is the locus of an unintentional process can be referred to either in the nominative or in a prepositional phrase. The verb agrees in gender and number with the nominative noun, if there is one; otherwise it takes an impersonal form.

I would propose for sentences of this kind the following formula (ignoring the difference between nominative and prepositional phrase):

(27)

something happened in Z's body (or: in part Y of Z's body)
not because someone did something to it
one could assume that Z would perceive it

3.6. *Unintentional changes in the position of body parts*

Any unintentional change in the position of a part of a person's body (e.g. when a person is asleep or dozing) can be seen as an event concerning that person, and thus can trigger the use of

dative:

Głowa opadła mu na piersi.
head sank him:DAT on chest
'His head sank onto his chest.'

Ręka zsunęła mu się z oparcia fotela.
arm slipped him:DAT off arm rest
'His arm slipped off the arm rest.'

It appears that sentences of this kind require the presence of a third noun phrase, which provides a reference for the change in the spatial position of the body part. One doesn't say:

?Głowa mu opadła.
?Ręka mu się zsunęła.

The following formula might be proposed for this subtype:

(28)

part Y of person Z's body moved
and came to be in a different place because of that
(coming to be/not to be in contact with some thing W
because of that)
not because Z wanted it

3.7. *Unintentional changes in appearance*

Dative can be used in Polish to refer to a person whose appearance has undergone an unintended change due to an internal process—a usage which goes well beyond the range of acceptable uses of dative in German or French.

Włosy mu posiwiały.
hair him:DAT grew grey
'His hair grew grey.'

Nos mu się wydłużył.
nose him:DAT got longer
'His nose seemed long and gaunt (after illness).'

*Les cheveux lui sont devenus gris.
*Das Haar wurde ihm grau.

The meaning embodied in this construction can be represented as follows:

(29)

part Y of Z's body came to look different
because of something that happened in Z's body
not because someone did something to it

one could assume that Z would look different because of that

3.8. *Unintentional features of appearance*

Generally speaking, the appearance of body parts, whether permanent or temporary, cannot be described in a dative construction:

*Włosy mu są rude.
hair him:DAT is red
'His hair is red.'

*Włosy mu są przetłuszczone.
hair him:DAT is greasy
'His hair is greasy.'

Nonetheless, when the appearance of body parts is described in dynamic terms, as if it were a result of an ongoing process, the dative construction CAN be used:

Włosy mu się kręcą.
hair him:DAT curls
'He has curly hair.'

Nos ci się błyszczy.
nose you:DAT shines
'Your nose is shining.'

Brzuch mu wystaje na pół metra.
belly him:DAT sticks out for half a meter
'His belly sticks out for half a meter.'

I think that the features in question have to be seen as inherently changeable and liable to change spontaneously. Furthermore, they seem to be described in terms of a changeable optical impression, rather than in terms of an objective inherent feature. Thus, the sentence:

Włosy mu się kręcą.

seems to imply that the hair looks as if its appearance was due to a process of curling, and the sentence:

Broda sięgała mu do pasa.
beard reached him:DAT to waistline
'His beard reached his waistline.'

seems to imply that the beard looked as if it had gradually come to reach the waistline.

I'm not quite sure how to formulate semantic conditions on this use.

3.9. *Unintentional speech*

Generally speaking, 'unintentional action' may sound like a contradiction in terms, and it is not encoded in Polish by a dative construction:

*Tak mi się jakoś pobiegło, mimo woli.
somehow "it ran itself to me", unintentionally
'Somehow I ran, involuntarily.'

Unintentional action is of course possible in the sense that one may cause an unintended effect while doing something intentionally. In such cases, however, the agent is still viewed in Polish as responsible, and the event is described in a nominative construction:

Niechcący uderzyłem Ewę.
'I (NOM/deleted) hit Eve, unintentionally.'

*Niechcący uderzyło mi się Ewę.
'I (DAT) hit Eve, unintentionally.'

There is one exception, however: unintended speech. One can use a dative to refer to the speaker who SAID something unintentionally:

Tak mi się jakoś powiedziało—naprawdę wcale tak nie myślę.
'Somehow "it said itself to me"—I don't really think that.'

Tak mi się napisało—sam nie wiem dlaczego.
'It wrote itself to me like that—I don't know why.'

Presumably, verbs of speech (or communication) such as these follow in this respect the model of the non-agentive pattern in which words are treated as entities with a life of their own:

Cholera, wyrwało mu się.
hell, it burst out him:DAT
'"Hell", he burst out.'

Interestingly, more specific verbs of speaking—speech act verbs or manner of speech verbs—cannot occur in this construction:

*Tak mi się poprosiło.
'Somehow "it asked itself to me."'

Tak mi się jakoś szepnęło.
'Somehow "it whispered itself to me."'

Presumably, only non-specific speech verbs (in a broad sense of the term 'speech') are seen as compatible with the idea of unintentionality: one whispers in order not to be overheard, one

asks in order to receive, and so on, so an intention is built into the meaning of these more specific speech verbs.

The formula proposed for this subtype reads:

(30)

person Z said something (Y)
not because he/she wanted to

3.10. *Agent viewed as experiencer*

c An agent can also be referred to by means of a dative if the fact of the action is presupposed and the focus is on its subjective dimension, i.e. on the way the agent experiences it. Two possibilities are provided for: an action which 'goes well' and an action which 'goes badly'. The restriction is not lexical but semantic: any adverb can be used as long as it lends itself to an interpretation in terms of 'well' or 'badly'.

Dobrze mi się tutaj pracuje.
it works itself well to me here
'My work is going well here.'

Świetnie mi się spało.
it slept itself wonderfully to me
'For some reason I slept very well.'

Marnie mi się dzisiaj pisało.
it wrote itself poorly to me today
'For some reason I wrote badly today.'

It appears that the 'badness' or 'goodness' of the experience is attributed by the speaker to the environment in which the action took place, more particularly, to its place or time. It seems also that the action has to have considerable duration. A sentence such as:

Dobrze nam się szło.
well us:DAT went:REFL
'We had a nice walk.'

cannot be taken as referring to a quick walk of five minutes. In fact, some verbs other than action verbs can be used in this construction as well, provided that they refer to long term conditions.

Jak wam się tutaj mieszka?
how does it live itself to you here?
'Do you like living here?'

Jak mu się tam żyje?
how does it live itself to him there?
'How is he getting on over there?'

This construction, which embodies a purely subjective perspective, is largely restricted to first person in statements and second person in questions. If third person is used, it usually indicates 'free indirect style', i.e. narration carried from a point of view situated inside the protagonist's consciousness.

The meaning grammaticalized in this construction can perhaps be represented as follows:

(31)

I assume you know that for some time, not a short time, I was doing thing V
I felt that for some reason I could/couldn't do it well
not because of something that I was doing
(it was because of something that could be said about that place/time)

4. *Conclusion*

We have seen that dative can be used in Polish in a wide variety of constructions. Do these constructions have anything in common? Clearly, the formula proposed at the outset as the core meaning of dative could not be regarded as the semantic invariant of the whole family. In fact, it appears that what links all the different dative constructions is a common theme, so to speak, rather than a clear-cut set of semantic components.

Loosely speaking, the use of dative implies a situation which is not controlled by a person Z but which is likely (though not certain) to have an effect on him. Thus, whether a person is offered something, shown something, told something, or whether things happen in or near his body, he is likely to be affected by these events, and affected in ways in which things—as opposed to people—cannot be affected (i.e. mentally). Things can only be affected when something happens to THEM, but people can also be affected when something happens to SOMETHING ELSE, because they can react mentally to it.

One could try to sketch, then, a unitary semantic formula for dative along the following lines:

(32)

something happened not because person Z wanted it
one could assume that person Z would think/feel/know
something because of that

But if we formulate the semantic rationale of dative constructions as broadly as that, it will perhaps apply to Russian, German or Latin as well as it does to Polish. In fact, however, each of these languages embodies a unique interpretation of this common theme and allows a unique range of uses (despite the considerable overlaps). To ensure that our description of dative has full predictive power it is necessary to specify the precise set of semantic formulae which can generate no more and no less than the entire range of dative sentences acceptable in a given language.

A SUMMARY OF POLISH DATIVE CONSTRUCTIONS

1.

CAUSING TO HAVE (e.g. rzuciła mu jabłko, 'she threw him an apple')
X did something with thing Y
wanting person Z to come to have it
something happened to Y because of that
one could assume that Z would come to have Y because of that

2.

CAUSING TO BE AND TO HAVE (e.g. uszyła mu koszulę, 'she sewed him a shirt')
X did something with some M (material)
wanting Z to come to have Y
something happened to M because of that
one could assume that Z would come to have Y because of that

3.

CEASING TO HAVE (pies mi uciekł, 'my dog has run away')
Z ceased to have Y
not because someone did something with it

4.

COMING TO BE (syn nam się urodził, 'a son was born onto us')
Z came to have Y
because Y came to be in Z's place
not because it came from some other place

5.

COMING TO HAVE MORE (e.g. przybyło nam studentów, 'we've got more students')
Z came to have more Ys than before
not because somebody did something with some Ys

6.

CAUSING TO SEE (e.g. pokazała mu jabłko, 'she showed him an apple')
X did something with thing Y
wanting Z to become able to see Y
one could assume that Z would see Y because of that

7.

CAUSING TO HEAR FOR PLEASURE (e.g. zagrała mu walca, 'she played him a waltz')
for some time, X was doing something
causing Y to be able to be heard
wanting Z to hear it for pleasure
one could assume that Z would hear Y and feel pleasure because of that

8.

CAUSING TO KNOW (e.g. powiedziała mu prawdę, 'she told him the truth')
X said something to Z
wanting Z to come to know Y because of that
one could assume that Z would come to know Y because of that

9.

CAUSING TO BE ABLE TO DO SOMETHING (e.g. usmażyła mu jajko, 'she fried him an egg')
X did something with Y
wanting Z to be able to do something with Y
one could assume that Z would be able to do something with Y because of that

10.

CAUSING A CHANGE IN A POSSESSED THING (e.g. zepsuła/zreperowała mu zegarek, 'she wrecked/repaired his watch')
X did something with Z's thing Y
Y came to be in a different state because of that
it was bad/good for Z

11.

ACCIDENTAL CHANGE IN A POSSESSED THING (e.g. zepsuł mi się zegarek, 'my watch broke')
something bad happened to Z's thing Y
not because someone did something with it
Y came to be in a different state because of that
it was bad for Z
(one could assume that Z would feel something because of that)

12.

LUCKY/UNLUCKY AGENT (e.g. ciasto mi się przypaliło/ładnie mi się upieklo, 'I've burnt the cake, my cake came out nicely')
something happened to thing Y
that Z was doing something with
not because someone did something with it
it was bad/good for Z
(one could assume that Z would feel something because of that)

13.

CAUSING A CHANGE IN A RELATED PERSON (e.g. zabili/uratowali mu syna, 'they killed/saved his son')
X did something bad/good to person Y related to person Z
Y came to be in a different state because of that
it was bad/good for Z
one could assume that Z would feel something because of that

14.

SOMETHING BAD HAPPENING TO A RELATED PERSON (e.g. żona mu umarła, 'his wife died "on him"')
something bad happened to person Y related to person Z
it was bad for Z
one could assume that Z would feel something because of that

15.

BAD ACTIONS OF RELATED PERSONS (e.g. syn mu się rozpił, 'his son turned into a drunk')
person Y related to person Z did something that Z didn't want Y to do
(Y came to be in a different state because of that)

it was bad for Z
(one could assume that Z would feel something because of that)

16.

WARNING (e.g. tylko mi się nie przewróć, 'watch your step, don't fall')
you could do something that would cause something bad to happen to you
I don't want it to happen
one can assume that it would cause me to feel something
I assume that I should cause it that bad things don't happen to you

17.

CAUSING A CHANGE IN A BODY PART (e.g. zabandażowała mu rękę, 'she bandaged his hand')
X did something with Z's body part Y
Y came to be in a different state because of that
one could assume that Z would feel something because of that

18.

COMING INTO CONTACT WITH A BODY PART (e.g. coś mu spadło na głowę, 'something fell on his head')
Y came to be in contact with a part of Z's body
one could assume that Z would feel something because of that

19.

COMING CLOSE TO A BODY PART (e.g. kamień przeleciał mu koło ucha, 'a stone flew past his ear')
thing Y came to be in the place where some parts of Z's body were
it could come into contact with Z's body because of that
one could assume that Z would feel something because of that

20.

ACCIDENTAL CHANGES IN APPEARANCE (e.g. sznurowadło mu się rozwiązało, 'one of his shoelaces came undone')
something happened to thing Y which was in contact with a part of Z's body
Y (or some parts of Y) came to be in a different state

because of that
not because someone did something to it

21.

EXAMINING THE BODY (e.g. zajrzała mu do gardła, 'she looked into his throat')
X did something to some parts of Z's body (or to something that was in contact with some parts of Z's body)
wanting to come to know something about Z's body
one could assume that Z would feel something because of that

22.

LOOKING AT THE BODY (e.g. patrzył jej na nogi, 'he was looking at her legs')
X looked at some parts of Z's body
one could assume that Z would feel something because of that

23.

UNINTENTIONAL FEELINGS (e.g. żal mu było, 'he felt regret')
Z felt something
not because he wanted to

24.

UNINTENTIONAL THOUGHTS (e.g. przypomniało mu się to, 'he was reminded of it')
Z thought/imagined something
because something happened in his mind
not because he wanted to

25.

UNINTENTIONAL WANTINGS (e.g. chce mi się śpiewać, 'I feel like singing')
Z feels he wants to do something
not because he wants to want it

26.

UNINTENTIONAL SENSATIONS (zimno mi, 'I am cold')
Z feels something in his body
not because someone did something to him
not because something happened in his body

27.

UNINTENTIONAL PROCESSES IN THE BODY (e.g. odbiło mu się, 'he belched')

something happened in Z's body
not because Z wanted it

28.

UNINTENTIONAL CHANGES IN THE POSITION OF BODY PARTS (e.g. głowa opadła mu na piersi, 'his head sank onto his chest')
part Y of person Z's body moved
and came to be in a different place because of that
(coming to be/not to be in contact with something W because of that)
not because Z wanted it

29.

UNINTENTIONAL CHANGES IN APPEARANCE (e.g. włosy mu posiwiały, 'his hair had turned grey')
part Y of Z's body came to look different
because of something that happened in Z's body
not because someone did something to it
(one could assume that Z would look different because of that)

30.

UNINTENTIONAL SPEECH (e.g. tak mi się powiedziało, 'I don't know why I said it')
person Z said something (Y)
not because he/she wanted to

31.

AGENT VIEWED AS EXPERIENCER (e.g. dobrze mi się dzisiaj pracuje, 'my work is going well today')
I assume you know that for some time, not a short time, I've been doing V
I feel that for some reason I can/can't do it well
not because I want to
(I assume it is because of something that could be said about this time/place)

NOTES

1. An exhaustive study of the use of the dative case in Polish would of course have to include lexically governed datives. Considerations of space have precluded any discussion of this topic in the present paper. I believe, however, that the basic principles determining which verb will govern dative

case are also semantic, and are closely related to those determining the use of the 'free' dative discussed here.

2. The formulae proposed in this paper are tentative. I have no doubt that some of them will have to be revised and refined.

3. The distinction between datives which have external causes and datives which don't is somewhat arbitrary and has been introduced here for convenience. I don't attach to it much importance. The distinctions which I regard as objectively valid and non-arbitrary are those between different dative constructions posited here and portrayed in the explications.

The Instrumental of Instrument in Polish

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1. If one compares the classical work of this century on case theory (Hjelmslev 1935/1972, Jakobson 1936/1971, Kuryłowicz 1949/1960 and others) with the best known contemporary theoretical studies on the category of case (Běličová 1982, Fillmore 1968, Wierzbicka 1980b), one is led to conclude that within the last decades a clear methodological evolution has taken place in the description of the function of case in the grammatical system of natural languages. In the first structuralist works theoreticians of case stressed the synchronic description of the whole case system and aimed at arranging the traditionally differentiated meanings /functions/ of particular cases by reducing the number of meanings and constructing a system of oppositions. Such a tendency is also characteristic of the theory of R. Jakobson (1936/1971), who proposed a model of description of cases which reduces their different uses to invariant feature matrices. Jakobson's approach, an innovation in methodology at that time, from the point of view of contemporary semantics (shaped to a large extent by generative linguistics) seems to be too general and too subjective to be applied directly to the analysis of the function of case in the semantic structure of a sentence. This is the criticism of Jakobson's theory voiced by Wierzbicka (1980b), with which it is difficult to disagree. Nevertheless, it is above all thanks to classical structuralist theories, such as Jakobson's theory of case, that we are in a position to explicate at present the semantic relations occurring among the components of sentences, whose surface exponents are, among others, case forms. Isolated case forms are not carriers of meaning; one can speak only of meanings of syntactic constructions in which definite case forms or fixed positions for case forms appear.

2. In this paper I shall consider one of the functions of the instrumental case, a case characteristic of sentences in contemporary Polish and many other case languages as well.

One of the most typical features of the instrumental case is the expression of the meaning of *instrument*[1] as, for example, in

the following sentences: *Jan kraje mięso nożem* 'Jan cuts the meat with a knife' *Jan stuka młotkiem w rurę* 'Jan pounds at the pipe with a hammer.' Many other meanings also are expressed naturally in the Polish language with the instrumental case. We may thus distinguish, for example: instrumental object (in action sentences), e.g. *Jan kiwa krzesłem* 'Jan rocks the chair' *Jan szeleści papierami* 'Jan rustles the papers'; instrumental body-part object, e.g. *Jan macha ręką* 'Jan waves his hand' *Jan mruga okiem* 'Jan winks his eye'; instrumental of space, e.g. *Jan idzie polem* 'Jan goes by way of the field'; instrumental of time, e.g. *Jan spaceruje wieczorami* 'Jan walks in the evening'; instrumental of transport, e.g. *Jan jedzie pociągiem* 'Jan goes by train' *Jan płynie łodką* 'Jan goes by boat'.[2] On the other hand, the meaning of *instrument* is also conveyed by means of grammatical forms other than the instrumental case, above all by means of prepositional constructions, e.g. *z* + gen.: *strzela z łuku* 'shoot a bow'; *na* + acc.: *łowi ryby na wędkę* 'fish with a rod'; *w* + acc.: *łowi ptaki w sidła* 'trap birds'; *przez* + acc.: *cedzi zioła przez sitko* 'sift herbs through a sieve'; *przy użyciu/za pomocą* + gen.: *wierci otwór przy użyciu wiertarki* 'drill a hole by means of a drill' *suszy nasiona za pomocą suszarki* 'dry kernels with the help of a dryer'.[3]

3.

3.1 This paper basically attempts to present a method of describing *instrument* as a component of the semantic structure of sentences, hence a method of describing a "deep case," and not the uses of a given case form. Consequently, I shall use the term *instrument* below, and not *instrumental of instrument.* I shall regard the term *instrument* (to be more precise, *instrument of action*) as the name of a certain type of argument characteristic of predicates of a specified class.

3.2 By predicate I mean an expression which communicates a certain property of an object (i.e. referent) or the relations occurring among objects, in other words, an expression by means of which something is said about an object. The argument of a predicate is a variable representing a group of objects (such a group can be a one-element group). In sentences of natural language particular objects (or their groups) are represented by means of their names—language expressions. The names of

objects—used instead of variables—occupy syntactic positions implied by predicates, hence argument positions. Referring to names used in such a manner, I use the term "argument expression."

3.3 In sentences with predicates of more than one argument expression, each argument expression is, as a rule, characterized by other grammatical features and exemplifies a different type of argument (cases of symmetrical relations between predicate arguments aside). The argument is therefore a type of object having different features, so to say a type whose position in the structure of a semantic relation, communicated by a given predicate, is not identical with the position of the remaining types of object-arguments in the same relation. For example, in the sentence *Jan łowi motyle siatką* 'Jan hunts butterflies with a net' (*łowi* is a three-argument predicate), the particular argument expressions serve as examples of different types of objects with respect to the relation communicated by the predicate *łowi*: the expression *Jan* represents the object-person performing a given action, the expression *motyle*—the object which does not perform any action but is subordinated to the action performed by a given person (strictly speaking, objects such as butterflies may of course perform certain actions but this is not stated in the sentence under consideration), the expression *siatką*—the inanimate object which actually does not perform any action independently but is also subordinated to the action performed by a person and is used by this person to act on another object.

The groups of objects, characterized generally, are denoted accordingly by means of the variables X, Y, Z. These variables are the arguments of the predicate *łowi*, and also of many other predicates having an analogical structure. Names—"labels", now current in the literature for at least ten years, can be used for arguments characterized in such a general manner and represented by argument expressions which are used in the positions implied by *łowi*: X - agent, Y - patient, Z - instrument. (See, for example, Fillmore 1968, Chafe 1971, Platt 1971, Bogusławski 1974).

4. Since a relation of implication holds between the meaning of a given predicate and all its arguments, it is impossible to give a semantic representation of the predicate without taking into account the semantic features of its arguments. For example, the

semantic representation of the predicate *rąbie* 'chop' demands a description of the relations among three arguments implied by this predicate, namely, the agent, the patient and the instrument. This is so since the expression *rąbie*, understood in accordance with its meaning (such as it has, for example, in the sentence *Jan rąbie drewno siekierą* 'Jan chops wood with an axe') and used by speakers with certain objects in mind, does not exist without the person who performs the action, without the thing which is subordinated to the action, and without the thing used by the person to perform the action.

The relations which hold among the arguments of a given predicate make up a part of its semantic structure, and thus constitute a certain substructure of the predicate, which is constant for all the predicates of a given class, that is for predicates implying the same types of arguments. The semantic relation whose component is the instrument constitutes a certain semantic substructure of lexical units belonging to the class of three (or more) argument action verbs. Such a relation is implied by the meanings of a certain number of such verbs no matter how they are used, in particular regardless whether the syntactic position of the instrument is occupied by some expression in the sentence where the given verb appears. On the other hand, the meanings of the verbs alone are more complex than the relation in which the instrument is an element; they thus contain a larger number of semantic components. The description of the instrument is therefore a consequence of the description of the class of predicates implying the instrument. In order to explain the notion of instrument, let me first present the semantic explications of some selected predicates implying this type of argument. (Cf. 6.2 below)[4]

5.

5.1 The description of a verb as an n-argument predicate coincides with the description of the basic predicative expression. (Here I follow Bogusławski 1974.) By basic predicative expression we mean an expression having a predicate with all the arguments implied by this predicate, e.g. X_n *kocha* Y_a. The description of the basic predicative expression can be considered as a generalization based on an analysis of examples of basic predicate-argument expressions. The basic predicate-argument expression is such a

basic predicative expression where the variables have been replaced by argument expressions, for example: *Jan kocha Marię* 'Jan loves Maria' *Matka kocha córkę* 'The mother loves her daughter' *Piotr kocha brata* 'Piotr loves his brother'.

5.2 A sequence of expressions made up of the basic predicate-argument expression and of the expression not occupying a position implied by the basic predicate (this expression is added to the basic predicate-argument expression) is called a polypredicative expression. See, for example, *Maria zaśpiewała na prośbę ojca* 'Maria started singing at the request of her father' *Jan siedzi na tapczanie, a matka czyta książkę* 'Jan sits on the couch and mother reads a book'. The expression added to the basic predicate-argument expression is by itself a separate basic predicate-argument expression (that is, with another basic predicate), e.g. *Jan wziął parasol, bo pada deszcz* 'Jan has taken his umbrella because it is raining', or is only a part of another basic predicate-argument expression, e.g. *Maria kupiła buty bez wahania* 'Maria bought the boots without hesitation'. With regard to the place it occupies within the polypredicative expression, such an added expression can be called a reduced predicate-argument expression.

5.3 An expression representing an instrument does not have to be a component of the basic predicate-argument expression for the predicate with which it appears in a given sentence, but can represent the argument of another predicate which has not been used. The given sentence can then be interpreted as a polypredicative expression, whereas the expression, by itself, representing the instrument, is the reduced predicate-argument expression. For example, the expression *widelcem* in the sentence *Jan je ciasto widelcem* 'Jan eats cake with a fork' does not represent the argument of the predicate *je*, but the argument of the predicate *wkłada*, for which the basic predicative expression could have such a form: X_n *wkłada* Y_a Z_i *do* T_g; for example, *Jan wkłada ciasto widelcem do ust.* 'Jan puts cake with a fork to his mouth'. Also, for example, *Jan pije herbatę łyżeczką* 'Jan drinks tea with a spoon'.

Polypredicative expressions which contain argument expressions functioning as the instrument will not be discussed here.

6.

6.1 As the preliminary representation of the predicates *łowi* and *rąbie* indicates (see 3.3 and 4.), the instrument is implied only by those action predicates which also imply two other types of arguments, namely the personal agent and the patient. The number of arguments implied by such predicates can be greater than three: some predicates can imply the product of an action, e.g. *Jan rzeźbi dłutem figurę w marmurze* 'Jan is carving a figure in marble with a chisel', or two arguments functioning as the patient (the animate object and a part of his body), e.g. *Jan szturcha Piotra parasolem w nogę* 'Jan pokes Piotr in the leg with his umbrella'.

6.2 In order to give a representation of the semantic relations obtaining among the agent, patient and instrument, it is essential to have certain basic and relatively simple notions such as, above all: *action* ('someone performs an action/movement'), *contact* ('something touches something'), *change* ('something happens to something/something becomes something'), *cause-effect relation* ('someone/something makes something else happen').

Here are examples of semantic explications of the basic predicative expressions for the following verbs: *uderza, tnie, piłuje, kopie, ostrzy, czyści, glansuje, klepie, rzuca*:[5])

X_n *uderza* Z_i *w* Y_a:

'X performs some movements using Z and this makes Z touch Y many times'
e.g. *Jan uderza młotkiem w stół.*
'Jan hits the table with a hammer.'

X_n *tnie* Y_a Z_i:

'X performs some movements using Z and this makes Z touch Y and move over Y, and this makes Y become parts of Y and each part of Y begin to be further from every other part of Y than it was'
e.g. *Jan tnie płótno nożycami.*
'Jan cuts the cloth with scissors.'

X_n *piłuje* Y_a Z_i:

'X performs some movements using Z and this makes Z touch Y and move over Y many times, and this makes Y become parts of Y and each part begin to be further from every other part of Y than it was'
e.g. ***Jan piłuje drut pilnikiem.***
'Jan files wire with a file.'

X_n *kopie* Y_a Z_i:

'X performs some movements in the soil using Z and this makes Y, which was beneath the earth surface, begin to be on the earth surface'
e.g. ***Jan kopie ziemniaki motyką.***
'Jan digs up potatoes with a hoe.'

X_n *ostrzy* Y_a Z_i:

'In order that Y becomes sharp, X performs some movements using Z and this makes Z move over the surface of Y and this makes Y become sharp'
e.g. ***Jan ostrzy ołówek scyzorykiem.***
'Jan sharpens the pencil with a penknife.'

X_n *czyści* Y_a Z_i:

'In order that Y becomes clean, X performs some movements using Z and this makes Z touch Y and move over Y, and this makes Y become clean'
e.g. ***Jan czyści buty szczotką.***
'Jan cleans his boots with a brush.'

X_n *glansuje* Y_a Z_i:

'In order that the surface becomes shiny, X performs some movements using Z and this makes Z move over the surface of Y many times, and this makes the surface of Y become shiny'
e.g. ***Jan glansuje buty szczotką.***
'Jan polishes his boots with a brush.'

X_n *klepie* Y_a Z_i:

'In order that Y becomes thinner and flat, X performs some strong movements using Z and this makes Z touch Y many times'
e.g. ***Jan klepie blachę młotem.***
'Jan taps the sheetmetal with a hammer.'

X_n *rzuca* Z_i *w* Y_a:

'In order that Z touches Y, X performs some movements using Z and this makes Z stop touching X and move, without touching anything, toward the place where Y is'
e.g. ***Jan rzuca kamieniem w szybę.***
'Jan throws a stone at the window.'

7. On the basis of these examples, it can be stated that the interpreted verbs possess a certain common semantic substructure, regardless of the degree of their semantic complexity. Namely, these verbs express a relation which could be characterized as follows: 'X performing some action using Z makes something happen to Z and Z touch Y, and this makes something happen to Y.'

Thus, the semantic structure of predicates implying the *instrument* involves at least one cause-effect relation. In this relation the instrument occupies an "indirect position": the changes which the object represented by the instrument undergoes are the effect/result of the action of the person-agent and, at the same time, the cause of changes in the patient/object.[6]

8.

8.1 It is absolutely necessary to differentiate argument expressions representing the instrument, hence names of inanimate material objects, from such argument expressions which are the names of body parts of the person performing actions, which do not function as instrument or patient, e.g. ***Jan dotyka ręką sufitu*** 'Jan touches the ceiling with his hand' ***Jan stuka palcem w szybę*** 'Jan taps his finger on the glass'. Expressions of the type ***ręką, palcem*** represent a quasi-instrument[7] in the sentences quoted above, whereas expressions of the type ***głową, okiem*** in the sentences ***Jan kiwa głową*** 'Jan shakes his head' ***Jan mruga okiem***

'Jan winks his eye' represent the patient.

8.2 It is also necessary to distinguish argument expressions representing the instrument from argument expressions denoting such inanimate objects which indeed serve as the means by which the person-performer of an action acts on some other objects but, contrary to instruments, become, as a result of the action, parts (or like-parts) of the objects being acted upon. Examples of such argument expressions are provided by the nouns in the instrumental case in the sentences: *Jan łata okno dyktą* 'Jan boards up the window with plywood' *Jan krasi zupę śmietaną* 'Jan seasons his soup with sour cream' *Jan owija rękę bandażem* 'Jan wraps his hand with a bandage' *Jan zakleja kopertę taśmą* 'Jan seals the envelope with tape' *Jan smaruje chleb miodem* 'Jan spreads the bread with honey'.

The argument represented by such expressions can be referred to by the term "matter".[8] Two facts lead us to differentiate clearly the instrument and the matter: on the one hand, the fact that the conjunction of expressions representing these arguments is permissible (e.g. *Jan maluje obraz pędzlem i farbami* 'Jan paints the picture with a brush and paints' or *Jan smaruje chleb masłem przy użyciu noża* 'Jan spreads the bread with butter by means of a knife'), and, on the other, the fact that the alternative of such expressions is precluded (**Jan maluje obraz pędzlem albo* ('or') *farbami* and **Jan smaruje chleb masłem albo* ('or') *nożem*).[9]

8.3 The instrument and related, but not identical, types of arguments such as, for example, quasi-instrument or matter are characteristic of predicates of DIFFERENT classes. The description of respective types of arguments is really a generalized description of predicates implying these arguments. In other words, it will be possible to make a complete description of "deep cases" only after a semantic description of particular verbs has been achieved.

NOTES

[1] For example, Łoś 1904, Ivić 1954, Staniszewa 1958, Worth 1958, Mrázek 1964, Lakoff 1968, Grochowski 1975, Wierzbicka 1980b, Běličová 1982.

[2] Here I apply the terms used by Wierzbicka 1980b with reference to the function of the instrumental in Russian.

[3] I have dealt with this subject more extensively in Grochowski 1975.

[4] In one of my earlier books (see Grochowski 1975) I presented the descriptions of more than one hundred Polish imperfective verbs, without prefixes, implying an instrument. The explications included in this article are modified versions of earlier ones.

[5] Explications are made using semantic metalanguage which is part of natural language. I adopt the basic methodological assumptions of semantic description proposed by Bogusławski (1966) and Wierzbicka (1969b and 1972).

[6] The notion of the purpose of the action is not a semantic element of an instrument relation in spite of the fact that it belongs to the semantic structure of many predicates implying an instrument. Since actions can be performed both for a certain purpose as well as for no special purpose and since both such actions can be performed using some instrument, it would be groundless to recognize the notion of purpose as a semantic element of each predicate implying an instrument. The relation between the notion of purpose and the notion of action was discussed in Grochowski 1980, where I polemicized with the theses, among others, of Wierzbicka 1969b and 1975. (The problem of the semantic interpretation of sentences having an instrument was considered by Lakoff 1968 (among others) from the viewpoint of the opposition: purposive vs. accidental action.)

[7] I have already explained the difference between instrument and quasi-instrument. See Grochowski 1974 and 1975. In such uses the function of instrument was attributed to the names of body parts by, among others, Łoś (1904), Ivić (1954), Staniszewa (1958) and Worth (1958).

[8] Wierzbicka (1980b) distinguishes, among others, the category "Instrumental of Matter in Action Sentences."

[9] The term "matter" comprises two types of arguments, which I singled out earlier (see Grochowski 1975) using the terms "substance" and "material". Presently I think that the opposition of these arguments is unnecessary.

Remarks on the Pragmatics of the "Inalienable Dative" in Russian

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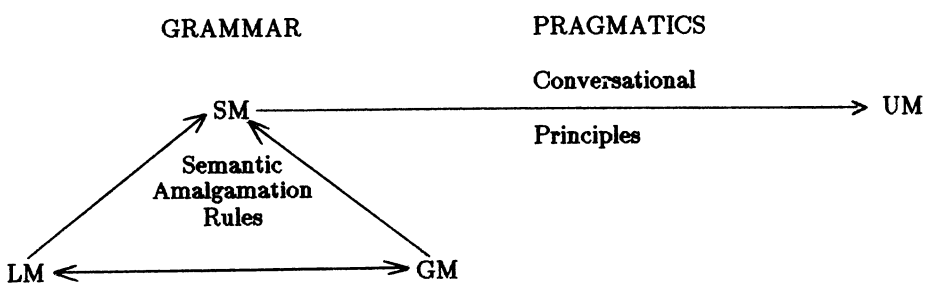
1. *Introduction.* It has been widely observed that linguistic expressions involving body parts (and other entities) belonging to an "interested person" often have unique grammatical properties, for example, the dative case in Russian. This observation has led some scholars, in their attempt to account for such properties, to invoke a notion traditionally referred to as Inalienable Possession (IP). I use the word "notion" to describe this phenomenon, for at least as far as Russian is concerned, the theoretical status of IP—whether it is a matter of semantics, pragmatics, or part of both domains—has yet to be determined. The present paper is intended as a contribution toward an understanding of IP in Russian. In particular, I will discuss the so-called "dative of IP," addressing among other questions, how to reconcile the invariant meaning of the dative case with the notion of IP.

In linguistic descriptions of Russian, IP has typically been treated as a phenomenon of grammar. For example, Isačenko (1954:141-45) grants IP the full status of a grammatical category, claiming that the noun in Contemporary Russian expresses alienability, along with the categories of animacy, gender, number and case. Kilby (1977), in his localist account of Russian case, proposes a structural definition of IP. He argues that the dative of IP obtains when a DYN(amic) verb dominates a LOC(ative) node.[1] Bethin (1983:472) refines and elaborates on Kilby's analysis. She argues that in motional sentences the semantic difference between IP and AP correlates with differences in underlying case relations. In her account, AP (manifested as *k* + dative of human nouns) arises from an underlying structure with *two* Locative relations, whereas IP (manifested as the prepositionless dative) arises from a structure with a *single* Locative relation. In Levine 1980 I characterized IP as a "grammatical feature," but left open the question as to the proper locus of this feature in a linguistic

description of Russian. For as I tried to show in that paper, though IP has undeniable repercussions for Russian grammar, there is evidence suggesting that certain properties of IP expressions are attributable to pragmatic principles, not to grammatical rules. In a more recent paper (Levine 1984), I noted (but did not emphasize the point) that a distinction must be drawn between semantics and pragmatics if one is to give an adequate account of the dative/genitive alternation in Russian sentences expressing possession. I wish to elaborate on this view in the present paper. In particular, I will argue that elements of the theoretical apparatus used to explain indirect speech acts, metaphor and other kinds of figurative meaning (in general, linguistic expressions in which what is conveyed departs in some way from what is said), can be fruitfully used to account for certain properties and nuances associated with the "inalienable dative" construction in Russian.

2. *Theoretical Assumptions.* As background for the discussion, I will make the following minimal assumptions. A general theory of linguistic communication allows for the distinct but interdependent domains of semantics and pragmatics. The former is concerned with the meaning of linguistic expressions, the latter with what speakers mean (i.e., intend to convey) when they use these expressions in a given speech situation. Accordingly, the study of meaning in such a theory also distinguishes SENTENCE MEANING (SM) from speaker's UTTERANCE MEANING (UM).[2] The term SM refers to the part of the message that is grammatically encoded in the sentence (its semantic content). SM is derived by semantic amalgamation rules from the lexical meaning (LM) and grammatical meaning (GM) of morphemes in a sentence (cf. Brecht, in press). The term UM refers to information that is conveyed from speaker to hearer when a linguistic expression is uttered in a particular context. UM consists of "meaning" in excess of, or differing from, SM and is inferable from pragmatic principles of conversation of the sort that Grice (1975) has called "cooperative maxims"; i.e., principles of rational linguistic behavior which speakers and hearers are generally assumed to observe, and upon which successful communication depends. The picture of the theory I have outlined can be roughly depicted as below.



3. *The Inalienable Dative.*

Let us begin by first examining a set of data that represents what I understand to be paradigm instances of the construction traditionally called the "dative of IP."[3] The essential constituents of this construction include a dative NP signifying a possessor, a dynamic verb (i.e. one implying a change of state), and an accusative NP (with or without a preposition), typically the name of a body part or some intrinsic property of the possessor. As the examples below indicate, this construction is pervasive both in literal, as well as in figurative usage:

(1)
Remen' režet emu plečo.
strap cuts to-him(D) shoulder(A)
'The strap is cutting into his shoulder.'

(2)
Dožd' xlestal nam v lico.
rain beat to-us(D) in face(A)
'The rain was beating against our faces.'

(3)
Slezy zastilali ej glaza.
tears blurred to-her(D) eyes(A)
'Her eyes clouded up with tears.'

(4)
On vyvernul ej ruku.
he twisted to-her(D) arm(A)
'He twisted her arm.'

(5)
Sobaka ukusila mne nogu.
dog bit to-me(D) leg(A)
'The dog bit me in the leg.'

(6)
Ego golos režet mne slux.
his voice cuts to-me(D) hearing(A)
'His voice grates on my ears.'

(7)
Ja šeju emu svernu.
I neck(A) to-him(D) will turn
'I'll wring his neck.'

(8)
Vino udarilo ej v golovu.
wine hit to-her(D) in head(A)
'The wine has gone to her head.'

(9)
Emu v odno uxo vletaet, v drugoe vyletaet.
to-him(D) in one ear(A) flies-in, in another flies-out
'With him things go in one ear, and out the other.'

(10)
On pererezal ej dorogu.[4]
he cut-off to-her(D) way(A)
'He blocked her path.'

The interesting fact about sentences like (1)-(10) is that they regularly occur with the possessor NP in the dative, not the genitive case.[5] Though the use of the genitive (or possessive pronoun) would not constitute a violation of any grammatical rule, native speakers nevertheless judge such sentences to be "awkward" or "unnatural." The explanation for these facts, I believe, can be found in Jakobson's (1936/1971) semantic characterization of the dative case. As is well known, in Jakobson's system of case oppositions, the dative stands in a correlative relationship with the accusative: the former is marked for the feature "peripheral," while the latter is unmarked for this feature and has a *Hauptbedeutung* of non-peripheral or "central." At the same time, the dative, like the accusative, indicates that an action is "directed at," and "affects," its referent. If one accepts this analysis, then there is a plausible explanation for why the dative is the only "correct" choice of case for the possessor NP in sentences like (1) - (10). Each of these sentences expresses the unique part-whole relation that obtains between a part of the body and the person to whom it belongs. In the context of this "inalienable" relation, we

know that when an action directly affects the part, it is most natural to think of it as having a concomitant effect on the whole. I would like to suggest that it is this piece of extra-grammatical knowledge, this general understanding of the relations which hold between parts and wholes in the real world that motivates the speaker in his selection of the dative case. Put differently, the dative—the case of the "peripherally affected object"—is the one case in Russian that is semantically compatible with the notion of IP.

4. *Metaphorical Extensions.* Let us now turn to another set of data, which, though superficially quite similar to sentences (1) - (10), nevertheless differs from them in some interesting ways. Like the inalienable dative construction, these data include a dative NP denoting a possessor (or "interested person")[6], a dynamic verb, and an accusative NP that denotes some object that belongs to the possessor. However, in these examples, the possessed object is something other than a body part. Consider first sentences (11) - (13):

(11)
Pulja popala emu v kasku.
bullet struck to-him(D) in helmet(A)
'The bullet struck his helmet.'

(12)
On ispačkal ej plat'je.
he soiled to-her(D) dress(A)
'He soiled her dress.'

(13)
Sobaka porvala mne rubašku.
dog tore to-me(D) shirt(A)
'The dog tore my shirt.'

These sentences describe events in which something has happened not to a part of the body, but to some article of clothing. Nevertheless, these sentences are normally understood to "mean" that the possessor is *wearing* the article of clothing at the time of the event. Note, however, that this interpretation is not part of the *sentence meaning*, but the speaker's *utterance meaning*. In other words, this part of the message is not semantically encoded in sentences (11) - (13); rather, it is pragmatically implied.

Submessages of this sort, conveyed indirectly from speaker to

hearer, are what Grice (1975) calls "conversational implicatures."[7] According to Grice, such implicatures are "calculable," that is, inferable, on the assumption that participants in a conversation normally cooperate with one another by observing certain rules of discourse, or maxims. The maxims proposed by Grice, collectively known as the Cooperative Principle, are listed in simplified form under (14):

(14) *The Cooperative Principle*

(a) Make your contribution as informative as is required.
(b) Make your contribution one that is true.
(c) Be relevant.
(d) Be perspicuous.

These (and other) maxims may be thought of as general principles governing conversational exchanges for the mutual benefit of speaker and hearer. Thus, the assumption by each participant that the other is observing the Cooperative Principle offers a potential explanation for the speaker's ability to communicate more than he actually "says," or from the hearer's viewpoint, the ability to infer this additional meaning, or implicature.

The cooperative maxims, however, are only part of the apparatus needed to account for the phenomenon of pragmatic implicature. To determine that a particular implicature is present, the hearer must also rely on his knowledge of the conventional meaning of the words used, and certain background information he shares with the speaker.

Let us now see how this apparatus is capable of accounting for the fact that when a speaker utters sentence (11), the hearer normally interprets it to mean that the possessor is wearing the helmet at the time of the event. In other words, how does the hearer calculate the presence of this implicature from the sentence meaning:

A. Sentence Meaning: The bullet struck the helmet (thereby) X is affected.

B. Utterance Meaning: X is wearing the helmet.

The following is a brief account of the sort of inductive reasoning by which the hearer might get from A to B.[8]

STEP (1): The speaker has used the dative case thereby informing me that X was somehow affected by what happened to his helmet (knowledge of conventional meaning of Russian).

STEP (2): I assume that the speaker is cooperating in the

conversation and that therefore, (a) he intended this piece of information to be relevant and (b) he is being as informative as is required by the situation he is describing (Cooperative Principle).
STEP (3): I know that a helmet is something that a person would normally wear on his head (factual background information).
STEP (4): If X was in fact wearing the helmet when the bullet struck it, X would probably have been affected (inference), since having the bullet strike his helmet would be similar in certain respects to having the bullet strike his head (background knowledge).
STEP (5): Therefore, X was probably wearing the helmet (inference).

Notice that in this interpretive strategy, it is the speaker's use of the dative case that triggers in the hearer's mind the inferential process enumerated in STEPS (1)-(5). Since the speaker's use of the dative case does not follow automatically from the context (since, in other words, affecting an article of clothing does not "naturally" involve affecting the possessor of the clothing), the hearer is led to seek an interpretation that is consistent with the Cooperative Principle, the conventional meaning of the words and morphemes, and with his background knowledge about helmets, bullets, etc. This brings up an important difference between sentences like (1)-(10) on the one hand, and those like (11)-(13) on the other. In the former examples, the dative is the only case that is semantically compatible with IP and, in fact, is obligatory in this context. However, in the latter examples, the use of the dative is optional; sentences like (11)-(13) have perfectly good variants with the possessive (genitive) pronoun, rather than the dative case:

(11a)
Pulja popala v ego kasku.
'The bullet struck (in) his helmet.'

(12a)
On ispačkal ee plat'je.
'He soiled her dress.'

(13a)
Sobaka porvala moju rubašku.
'The dog tore my shirt.'

Nevertheless, the two sets of variants are not equivalent. Semantically, sentences (11)-(13) represent the possessor as an

affected participant, while (11a)-(13a) are silent with regard to any involvement of the possessor in the event. Pragmatically, only (11)-(13) carry the implied submessage that the possessor was wearing the given article of clothing. These differences between the variants are of course directly related: As we have seen, the pragmatic interpretation associated with (11)-(13) arises from the semantics of the dative case marking on the possessor NP in these sentences.

4.1 Thus far we have examined sentences in which the possessor NP receives dative case marking when the action denoted by the verb affects either a part of the possessor's body or some article of clothing worn by the possessor at the time of the event. The latter examples may be considered a subpart of the former: in sentences (11)-(13) the possessor's clothing may be viewed as an extension of the body and so the possessor is duly represented as affected. However, there are also instances in which the possessor NP may be marked dative even though it is not pragmatically obvious that the relation between the possessor and the possessed object is an inalienable one, i.e., when the lexical meaning of the possessed object NP does not fall within the semantic domain of body parts, inherent properties, etc. Consider, for example, sentences (15)-(20):

(15)
Emu urezali zarplatu.
to-him(D) they-cut salary(A)
'His salary was cut.'

(16)
Im perevernuli vsju kvartiru.
to-them(D) they-overturned whole apartment(A)
'Their whole apartment was turned upside down.'

(17)
Xuligany pocarapili mne mašinu.
hooligans scratched to-me(D) car(A)
'Vandals scratched my car.'

(18)
Ty emu zagubil vse opyty.
you to-him(D) ruined all experiments(A)
'You ruined all of his experiments.'

(19)
Ty rasstroil mne rebenka.
You upset to-me(D) child.
'You upset my child.'

(20)
Fabričnye otxody zagrjaznjajut nam vozdux.
factory wastes pollute to-us(D) air(A)
'Factory wastes are polluting our air.'

In selecting the dative case in these sentences the speaker is expressing a certain empathy with the possessor, who is felt to be "upset" by what has happened to his property. Moreover, the possessed object in each instance is understood to be somehow "important" to the possessor. This reading is perhaps assisted by the lexical meaning of the possessed object NP in sentences (15) - (20): people normally have a certain degree of emotional investment or concern for their children, the air they breathe, the amount of their salary, the condition of their houses, cars, etc. However, the same interpretation is also given to sentences like (21)-(24), where the lexical meaning of the possessed object NP does not, by itself, suggest something of obvious import:

(21)
Ona porvala emu gazetu.
she tore to-him(D) newspaper(A)
'She tore his newspaper.'

(22)
On nastupil ej na pomidory.
he stepped to-her(D) on tomatoes(A)
'He stepped on her tomatoes.'

(23)
Ona slomala emu karandaš.
she broke to-him(D) pencil(A)
'She broke his pencil.'

(24)
Ty mne pereputal vse bumagi.
you to-me(D) messed up all papers(A)
'You messed up all my papers.'

Since the same nuances are present both in sentences (15)-(20), as well as in (21)-(24), it is clear that these nuances can not be attributed solely to the nature of the possessed object in question;

rather, the lexical meaning of the verb and especially the grammatical meaning of the dative case must also play a role in generating these nuances. Let us take as a specific example, sentence (25).

(25)
Ona nastupila emu na portfel'.
she stepped to-him(D) on briefcase(A)
'She stepped on his briefcase.'

If we observe the distinction discussed above between sentence meaning (semantics) and utterance meaning (pragmatics), we must analyze (25) roughly as follows:

A. Sentence Meaning: She stepped on a/the briefcase
(thereby) X is affected

B. Utterance Meaning: (i) X is upset
(ii) X is fond of his briefcase
(iii) the briefcase is like a part of X

In other words, here, as in sentences (11) - (13), the nuances that make up the utterance meaning are calculable if it is assumed that both speaker and hearer are obeying Grice's cooperative maxims and that the hearer is exercising his powers of rationality and inference. Thus, in (25), just as in (11) - (13), it is the speaker's use of the dative case with its literal meaning "affected," that triggers in the hearer's mind the set of inferences indicated in (i) - (iii). This is because, once again, the meaning of the dative case is not semantically congruent with the context, i.e., it does not follow that an action effecting a change in someone's briefcase should have a concomitant effect on the owner of the briefcase. Confronted with this "incongruity," the hearer, on the assumption that the speaker is cooperating in the conversation (i.e., is being appropriately informative, relevant, etc.), seeks an interpretation that goes beyond the literal meaning of the sentence. In this instance the interpretation is typically that (i), the possessor is upset (psychologically affected), a state that is likely to arise if (ii), the possessor is very fond of his briefcase. From here it is not difficult to see how hearers may interpret (25) metaphorically to mean that (iii), the briefcase is like an appendage of the possessor. Such an interpretation may arise if the hearer knows or imagines that the person in question is always carrying his briefcase so that the one is viewed as "inseparable" from the other.

5. *Positive vs. Negative Affectedness.* In attempting to account for the nuances associated with the inalienable dative construction we have thus far identified as contributing *semantic* factors both the lexical meaning of the possessed object NP and the grammatical meaning of the dative case. But there is another factor that must be considered in analyzing the meaning of this construction: the semantics of the verb.

In section 3 we characterized the verb in this construction quite generally: we said merely that it was "dynamic," that is, indicating a change of state or condition. However, considering the glosses of the illustrative sentences in (11) - (25), each suggesting an event detrimental to the possessor, one might be tempted to assume that the verb in this construction is the source of this negative nuance, i.e., that it must have negative connotations. Yet, upon closer examination, this assumption proves to be misguided. While it is certainly true that some of the verbs in (11) - (25) seem to imply a negative effect, (e.g. *zagrjaznjat'* 'to pollute', *ispačkat'* 'to soil', *zagubit'* 'to ruin'), for others this is less clear (e.g. *popast' 'to land/strike', nastupit'* 'to step'). In fact one can find verbs in this construction that might be described as "neutral" and still others that would seem to be "positive." Consider sentences (26) and (27):

(26)
On razrisoval nam vsju komnatu.
he painted-pictures to-us(D) whole room(A)
'He painted pictures all over (the walls of) our room.'

(27)
On raskrasil mne vsju diagrammu.
he colored to-me(D) whole diagram(A)
'He colored my whole diagram.'

These sentences contain "neutral" verbs and are in fact ambiguous as to whether they portray events that are to the possessor's benefit or to his detriment. Only the situational context can provide the answer. Thus, in both (26) and (27), if the agent is a mischievous child who was finger painting or scribbling with crayons, the possessor will be perceived as "upset" and the sentence given a negative interpretation. However, if the agent is an artistically gifted friend who has complied with a request to do the painting, then the possessor will be perceived as a "beneficiary," and the sentence given a positive interpretation.

Now consider sentence (28):

(28)

Nam srubili vse bol'šye derev'ja v sadu.
to-us(D) they-chopped all big trees(A) in garden
'They chopped down all the big trees in our garden.'

Here we have the verb *srubit'* 'to chop down' which might, at first glance, seem to be a verb with a "destructive" nuance, i.e., one with certain negative connotations. Yet the possessor in (28) can be perceived as either positively or negatively affected, depending on whether he did or did not wish the action to take place. This point is clearly illustrated in sentence (29), where the verb *srubit'* occurs in each clause of the same complex sentence, the first clause being interpreted positively, the second, negatively.

(29)

Nam srubili vse bol'šye derev'ja v sadu, no
to-us(D) they-chopped all big trees(A) in garden, but
zaodno oni nam srubili vse jabloni.
at-the-same-time they to-us(D) chopped all apple trees(A).
'They chopped down all the big trees in our garden, but at the same time they chopped down all our apple trees.'

Finally, there are examples of the inalienable dative construction that contain what might be called "constructive" verbs, i.e., those implying a positive effect. For instance, sentence (30) contains the verb *ubrat'* 'to tidy up', but the possessor is nevertheless perceived here as annoyed (negatively affected):

(30)

Ona mne vse ubrala tak, čto ja teper' ničego
she to-me(D) all(A) cleaned such that I now nothing
ne mogu najti.
not able to-find
'She did such a (thorough) job cleaning up all my belongings that now I can't find a thing.'

Sentence (30) can be compared with sentence (31) in which the same verb is used, but where the possessor is now perceived as the beneficiary of the action.

(31)

Ona mne vse ubrala, tak čto u menja teper'
she to-me(D) all(A) cleaned so that by me now
polnyj porjadok.
complete order

'She cleaned up all my things so that now (my room) is in perfect order.'

It seems clear from these examples that the positive or negative perspective of the sentences containing the inalienable dative construction can not arise exclusively from the lexical meaning of the verb. Few verbs, it would appear, should be thought of as inherently positive or inherently negative, for in theory the action of any verb, in the appropriate context, can be regarded either as beneficial or detrimental to someone. To be sure, certain combinations of lexical items in a given utterance tend to suggest one or the other point of view. But neither the positive nor the negative nuance should be considered part of the semantic code of this construction. Rather, these nuances, being contextually determined, arise from within the domain of pragmatics.[9]

6. *Conclusion.* The construction known traditionally as the "dative of IP" has a range of meanings associated with it, some of which are grammatically encoded, while others are pragmatically derived. In the analysis presented above, I attempted to relate the semantic and pragmatic aspects of IP utterances within the framework of Grice's theory of implicature.

Jakobson's characterization of the invariant meaning of the dative case appears to be viable. However, to be justified, the "non-quantified," "directional/affected," "peripheral" meaning of the dative case must be reconciled with all its contextual variations, including IP. I have argued above that this cannot be done without some, albeit pre-theoretical, pragmatic component.

NOTES

[1] Kilby's study assumes that Russian grammar distinguishes alienable possession (AP) from inalienable possession (IP), and focuses especially on the "dative of inalienable possession". However, his study does not concern itself with determining the proper domain of IP; rather, it attempts to define the semantico-syntactic environment in which the inalienable dative occurs.

[2] These are the terms typically used by philosophers of language in discussions of indirect speech acts (cf. Searle 1975, 1979). However, one may also find other terms in the literature referring to notions that correspond to what is described here as SM and speaker's UM. Thus, the distinction between the two meanings of "means" found in "Sentence *S* means *X*" and "Speaker *s* means *X* by *S*" is characterized by Grice (1975) as the difference

between what is "said" and what is "implicated." Leech (1980:12) prefers to speak of this distinction in terms of the "semantic sense" vs. the "pragmatic force" of a linguistic expression. In the present paper it is understood that UM *contains* "implicated meaning" and that this "extra effect," as suggested by Leech's term, is attributable to the pragmatics.

[3] Data similar to these, but from languages other than Russian, are discussed in Wierzbicka 1979. Though concerned with much the same set of grammatical facts, Wierzbicka frames her investigation, not in terms of IP, but in terms of what she calls the "problem of the body–person relation" in natural language. (She claims that the notion IP suffers from a certain vagueness and has been inaccurately applied to part–whole relations that are not "organic.") Following the Whorfian thesis that the grammar of a language embodies in its structure the distinctive "world–view" of its speakers, Wierzbicka analyzes and compares corresponding syntactic constructions in a number of languages in an effort to learn how these speech communities view the relation between the body and the "possessor of the body." Thus, for Wierzbicka, this problem lies in the domain of the philosophy of grammar. While I'm not wholly in agreement with her assumptions and method of analysis, there is no question that her unique approach yields valuable insights into the meaning of the constructions she treats. See, also, Wierzbicka (this volume) where similar data from Polish are discussed.

[4] I consider sentence (10) a valid, if unusual, example of this construction. One might also include here:

(i)
My otrezali vragu put' k otstupleniju.
we cut–off to–enemy(D) path(A) to retreat.
'We cut off the enemy's retreat.'

(ii)
Ona smotrela emu vsled.
she was–looking to–him(D) after
'She followed him with her eyes.'

Such examples appear to involve an intrusion into what Bally 1926 calls an individual's "personal space." A very interesting discussion of this notion can be found in Wierzbicka 1979.

[5] There are certain contexts in which the genitive, rather than the dative, is the appropriate case for the possessor NP. However, these are just those contexts where the body part is viewed semantically or syntactically *individuated*. This problem is discussed in Levine 1984.

[6] The term "interested person" is perhaps just as appropriate here as "possessor," since a possessive relation between the referent of the accusative NP and that of the dative NP is not explicit, but merely implied. In fact some scholars have used the term "dative of interest" to describe what is referred to here as the dative of IP (e.g. Browne 1974). In the present paper I apply the notion of IP to contexts in which an entity is understood *metaphorically* as inalienable, i.e., as something of special interest or importance to a person.

[7] Perhaps it would be more correct to say that pragmatically derived inferences of this sort are what Grice would call *implicatures*, leaving aside the

question of whether they are "conversational," "conventional" or some other type. In the present paper I analyze them as being derived on the basis of his cooperative maxims and thus treat them as conversational implicatures. However, the fact that the pragmatic inferences discernible in IP utterances are all attached in some way to the dative case morpheme, suggests the possibility of an alternative approach that would treat them as conventional implicatures. (For a discussion of implicature, in all its varieties, see Levinson 1983). The analysis presented below should therefore be viewed as a tentative, preliminary attempt to account for the way in which the implicated meanings in this construction may be decoded.

[8] The interpretive strategy enumerated in steps (1) – (5) is modeled on the approach to indirect speech acts developed in Searle 1975.

[9] Wierzbicka (this volume) observes that in certain Polish dative constructions a change of state in a person's belongings must be viewed as either "good or bad" for the possessor. An important difference between Wierzbicka's analysis of the Polish dative and the analysis presented here is that in her explications of case constructions, she does not distinguish pragmatic inferences from semantically encoded (invariant) meaning, whereas I have argued for an approach that would separate and interrelate the pragmatic and semantic elements in these utterances.

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