David A. Kilby

# Deep and Superficial Cases in Russian

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# IN RUSSIAN

# PREFACE

This work was originally written and presented as a Ph.D. thesis at the University of Edinburgh, in 1972. The present version is revised in a number of ways - minor factual errors have been corrected, some of the presentation has been altered to make it more attractive (I hope), and an appendix has been added to give at least some idea of what the whole thing would look like as a system of rules.

Although many of the ideas presented in this thesis are such that I would not now care to present them in precisely the same way, I think it is perhaps worth publishing the thing as a whole because it represents the most coherent expression (which is not to say very coherent at all!) of an approach to surface cases which is still fairly novel. Although there have been other attemps to describe individual superficial cases of Russian in terms of an approach rather similar to this one, (see for instance Miller 1974 on the dative), I know of no attempt other than this one to look on the Russian case system as a whole within a generative framework. With all its faults, it might still be a useful beginning to a more complete and adequate approach to Russian cases.

I am indebted to a number of people for their comments and criticisms of this approach. While the whole thing was still being written, I profited from many discussions and detailed criticisms from Jim Miller and John Anderson; subsequent comments which have been of great use to me have come from profs. Y. Ikegami and R.D. Keil, Bernard Comrie and Josif Kesel'man. I am sure the result would have been better if I had taken more notice of their comments. I am also grateful to Mrs E.F. Merčanskaja and Rima Greenhill for acting (sometimes unwittingly) as native informants. Last but not least, I must thank my wife Jackie - for her stylistic improvements, her typing, and for putting up with me while I was revising the text.

# CONTENTS

1.

   The purpose of the present study is to search for some
theoretically satisfying way of describing the case system of
Russian. Of course, there are many studies that attempt to deal
with the description of cases by simply listing uses, but these
studies miss many important generalisations that can be made
about the uses of cases; other studies provide a harmonious
theoretical framework, but only succeed in accounting for the
varied uses of cases by some sleight of hand. I attempt to show
in § 1. that, whatever insights such studies may provide, they
do not provide a useful basis for future theoretical development.

   Given that transformational grammar has managed to provide
unexpected insights into many areas of grammar, the solutions
offered by transformational grammarians to the problem of case,
(or, as most of these studies are of English, of prepositions),
are examined in § 1.2. and found to be surprisingly unrevealing.
Even 'case grammar', which one might expect to solve if anything
the problem of cases, does not have much more than other theories
to say about the introduction of superficial cases. However, it
does seem to offer a more promising basis than most other bran-
ches of transformational theory in the analysis of case.

   The fundamental justification of this study therefore is
that the problem of superficial cases, in spite of being one of
the most researched areas of language, has not been given a sat-
isfactory solution - so much so that even the problem of what to
look for in an analysis of cases is completely open. The value
of examining previous analyses of the Russian case system would
therefore seem to lie chiefly in avoiding the mistakes made by
previous investigators.

1.1.

   Although an extraordinary number of linguists have dealt
with the cases of Russian at one time or another, not many
accounts are of particular theoretical interest. Most modern
Russian linguists adopt a strictly taxonomic approach, while
Jakobson is the prime example of a linguist who has attempted to

provide a plausible framework of general grammar around a sys-
tematic analysis of case.

1.1.1.

Jakobson's case theory is founded on the doctrine of a
'general meaning' ('Gesamtbedeutung'; 'signification générale')
of morphological forms, which lies at the basis of each indivi-
dual use of a morphological form (e.g. a case). As a unified
system within a language, cases cannot be given individual sem-
antic specifications, but are all defined and given a place
within a system of semantic oppositions (or 'correlations').

Given this framework (which Jakobson shares with Hjelmslev)
it is not possible to posit 'logical' oppositions where the two
poles are mutually exclusive, because, for example, a case such
as the nominative in Indo-European languages would resist defi-
nition, nobody having suggested a plausible meaning for the nom-
inative. Thus Jakobson (and Hjelmslev too) is led to posit
oppositions,one pole of which is positively defined in terms of
a semantic feature, the other one of which is defined as not spe-
cifying either the presence or absence of that feature: i.e.
"falls die Kategorie I das Vorhandensein von a ankündigt, so
kündigt die Kategorie II das Vorhandensein von a nicht an, d.h.
sie besagt nicht, ob a anwesend ist oder nicht." (Jakobson 1936
p. 56) Consequently, the unmarked member of an opposition in-
cludes in its range of meaning the meaning of the marked member.

In 1936, Jakobson posited four oppositions for the Russian
case system:

    (1) Direction (Bezugskorrelation) - acc. and dat. posi-
                                         tively specified.

    (2) Scope (Umfangskorrelation) - gen. and loc. positively
                                       specified.

    (3) Position (Stellungskorrelation) - instr., dat. and
                                  loc. positively specified.

    (4) Formation (Gestaltungskorrelation) - loc. II and gen.
                                  II positively specified.

The fourth opposition is disposed of in Jakobson's 1958 paper, making the system an optimal one for eight cases. This system of oppositions suggests that the Russian nominative, being positively marked for no oppositions, can express any meaning, while the accusative, for instance, can express any meaning which is directional.

In addition, each case has a 'basic meaning' ('Grundbedeutung', 'signification fondamentale') which cannot be expressed in any other way; thus for the instrumental, this is the expression of the instrument meaning, for the dative - that of addressee.

Jakobson criticises Hjelmslev for the latter's claim that case and word order operate on the same level: for Jakobson, although word order may have the same syntactic function as case, it cannot be identified at any level with cases, which are purely morphological elements not necessarily isomorphic with syntactic functions. Consequently, he objects to Hjelmslev's syntax-oriented interpretation of the Gothic nom. and acc.; however, he is surely wrong in claiming that this treatment violates the principles laid down by Hjelmslev himself. In fact, Jakobson's over-morphological approach lays him open to the sort of criticism put forward by Ebeling (1955); if morphological forms have a meaning what is the meaning general to syncretised morphological forms - e.g. *syna* (acc., gen. I and gen. II)? Jakobson does not say.

Any attempt to test the validity of Jakobson's theory must compare the constraints it places on the use of cases with their actual use in sentences, but this is not straightforward. One possible way of constructing such a validating procedure would be to use semantic frames filled in with the features of direction, scope and position. (This latter feature does not fit very well in a semantic frame, but that does not seriously affect my argument, although it may be seen as a defect of Jakobson's theory.) For example, in order to construct a frame to convey the information that Ivan killed Peter, we must specify *Peter* as directional (because an action is being directed at - against - him), non-limited (because the action causes a change of state

in him - he dies), and non-peripheral. When used in such a con-
text, features have to be specified either positively or negati-
vely - unmarked features can only occur on the grammatical level.
However, given the fact that cases are specified either posi-
tively or neutrally, only negative features in a semantic frame
can be incompatible with any particular case, as any positive
specification is compatible equally with another positive speci-
fication and a neutral one. The two negative specifications in
the above example will exclude dative, instrumental, genitive and
locative, leaving nominative and accusative as possibilities:

> (1) Ivan ubil Petra (A). "Ivan killed Peter"  and:
>
> (2) Petr (N) byl ubit Ivanom. "Peter was killed by Ivan."

Of course, the theory does not show why the syntactic construc-
tion has to change with the case - why we cannot have:

> (3) *Ivan ubil Petr (N).  or:
>
> (4) *Petra (A) byl ubit Ivanom.

So far so good, but this appears to pose more problems than
it solves; given all possible semantic frames, something less
than half of the cases will be excluded. Thus, if one could find
a frame positively specified for all three oppositions, any case
would be possible. The same point from a different angle is rai-
sed by Anderson (1971a) in discussing Hjelmslev:[1]

> "However, such an account, while avoiding such difficul-
> ties by assigning typically a complex value to nomina-
> tives, fails to explain the particular value the nomin-
> ative has in any one instance" (p. 8.).

A related criticism is that Jakobson's system provides no means
of co-ordinating the realisations of cases in sentences such as
those above, where the active and passive constructions simul-
taneously affect the cases in both nouns.
In other words, by virtue of the fact that it is non-syntactic,
Jakobson's theory of cases is inherently incapable of dealing
with certain casual phenomena which depend on syntagmatic rela-
tions - the representation of superficial subjects, and their

wholly regular alternations with other cases. The most that
Jakobson can claim for his theory with respect to these areas of
language is that it is not actually inconsistent with the data -
merely it does not make any predictions about it.

These problems do not bring into question the validity of
Jakobson's oppositions as such, but a much more fundamental
objection to his theory is that the inadequacy of his definitions
of the oppositions renders his claims virtually unverifiable.
Thus, however intuitively satisfying one finds his characterisa-
tion of the accusative and dative as cases of direction, it is
distressing to find that there is no attempt to chracterise the
notion of direction, even by simply giving examples. Indeed,
Jakobson's definition of the accusative is unrivalled in its
unclarity:

> "Der A besagt stets, dass irgend eine Handlung auf den
> bezeichneten Gegenstand gewissermassen gerichtet ist, an
> ihm sich äussert, ihn ergreift." (p. 57)

This appears to suggest that these same three characteristics
have something in common; just what this common something is,
is not made clear. Similar objections may be made of the other
oppositions; thus in dealing with the extent-correlation,
Jakobson brings forward the phrase *krasota devuški* ("the girl's
beauty"), in which we are told, the quality is abstracted from
its holder, who is consequently considered only partially, and
is in the genitive case.[2] This line of reasoning is totally
unsatisfactory, as it brings the concept of limitation to com-
plete vacuity; one might say that in this phrase the quality is
limited in that it is considered only in relation to the girl;
or that any member of any sentence of more than one word is limi-
ted by association with the other(s). Jakobson's treatment of
the locative case gives rise to similar objections:

> *"Poduška ležit na divane* 'das Kissen liegt auf dem Sofa':
> es ist das ganze Kissen, aber bloss die Oberfläche des
> Sofas ist in der Aussage beteiligt." (p. 79)

This sort of argument could 'justify' anything.

One might quibble further on details. For instance,
because of his morphological bias, Jakobson insists that cases
and prepositions have different categorial status by virtue of
their differing modes of meaning:

"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 im präpositionslosen Gefüge etwa zu einer Eigenschaft
des Gegenstandes wird." (p. 55)

He sees further evidence for this difference in the fact that a
preposition may govern several cases, and a case may be governed
by several prepositions. The first argument is unprovable, while
the second is true, but does not prove the point that they are
categorially distinct (see 1.3.1. for a discussion of this pro-
blem).

In spite of his rejection of syntactic evidence as relevant
to case theory, Jakobson appears to violate his own principles
quite seriously; the opposition of marginality appears to be
purely syntactic, although it also has certain connexions with
what has been called 'information structure' (Halliday 1967) or
'functional sentence perspective' (Firbas 1966). Thus the affec-
ted object which, in general, is expressed by the accusative, is
expressed by the dative in construction with the 'pro-verb' -
i.e. *delat' čto komu* ("to do something to somebody"). There is
no semantic explanation for the opposition, but this can be
expressed in fairly simple syntactic terms; where the verb mea-
ning is expressed by a verb-noun combination, the affected object
cannot go in the accusative, so must go in the dative - i.e. the
central syntactic position of object is occupied, so a peripheral
(syntactic) position must be chosen. Consequently, the dat. -
acc. opposition, which Jakobson expresses by the notion of mar-
ginality, is a syntactic one. But the way in which Jakobson
describes the behaviour of the marginal cases is not very much
different from that in which he describes the accusative:

"Eine Peripherie setzt ein Zentrum voraus, ein Randkasus
setzt das Vorhandensein eines zentralen Inhaltes in der
Aussage voraus, welchen der Randkasus mitbestimmt. Dabei
muss dieser Zentralinhalt nicht unbedingt sprachlich aus-
gedrückt sein." (p. 68)

"Die Bedeutung des A-s ist so eng und unmittelbar mit der
Handlung verbunden, dass er ausschliesslich von einem
Zeitwort regiert werden kann und sein selbständiger Ge-
brauch immer ein ausgelassenes und hinzugedachtes Zeitwort
empfinden lässt." (p. 57)

If this implies that the accusative is also marginal, then
Jakobson's classification is wrong. But even if not, Jakobson's
theory of markedness implies that the accusative should be able
to express marginality; I wonder how one could tell the dif-
ference?

In spite of these shortcomings, Jakobson's theory is a
very attractive one, which undoubtedly is valid in many res-
pects. However, its faults of vagueness and of failing to
account for the individual meanings of a case make it unsuitable,
in my opinion, as a basis for further investigation of Russian
cases; it will simply be an added bonus if the results of an
explicit investigation turn out to coincide partially with
Jakobson's.

It is, however, interesting to note that Růžička (197o)
uses Jakobson's features in a generative model of a small part
of Russian syntax. However, he has to modify them so that they
are specified either positively or negatively (but not unmarked)
in order to formulate explicit case introduction transforma-
tions. Unfortunately, so little exemplification of this is
given that it is impossible to assess its adequacy. I remain
sceptical.


1.1.2.

Jakobson's study, although widely quoted, has left little
impression on Soviet linguistic thought, and it is therefore

possible to treat Russian case theory as a single line of devel-
opment, apart from Jakobson. Many of the newer trends would no
doubt treat case in a rather different framework (e.g. Šaumjan
Apresjan,[3] etc.), but none of them have yet treated it expli-
citly.[4]

The basic idea behind most Soviet treatments of Russian
cases appears to be the splitting of each case into as many
sub-groups as possible; this is accomplished primarily by for-
mal criteria (adverbial/adnominal, with or without prepositions
etc.), and secondly by fairly transparent semantic criteria
(time, place, cause, etc.). There may also be some less obvious
semantic sub-divisions. The ideal of this approach, it seems,
would be a system of purely formal sub-divisions, resulting in
a series of semantically homogeneous groups.

An early example of this sort of approach is Peškovskij
(1956); he separates verbal and nominal government, cases with
and without prepositions, and then each case is divided into
sub-groups; these may be established by purely formal criteria
- e.g. the ad-verbal, prepositionless gen. has sub-groups for
its use with negated transitive verbs, and for its predicative
use - or by supposedly semantically homogeneous labels - e.g.
of aim with *ždat'* ("wait for"), *želat'* ("desire"), *dostigat'*
("reach"), *trebovat'* ("demand"). As with Jakobson's features,
there is no way other than intuitive feeling to justify these
groups. It is interesting that Peškovskij defines the dative
as the only case with a single meaning - that of indirect object
(addressee). It is however disappointing that he only attempts
to justify this for verbs with double objects, while he claims
that this meaning is 'almost annulled' (reduciruetsja do neu-
lovimosti - p. 3o1) by its syntactic environment. Here again,
his definition may be intuitively pleasing, but there is little
or no evidence to go with it.

The two Academy grammars (Vinogradov et al. 1952-4,
Švedova 197o), both of which aim for as complete a description
as possible of all levels of Russian grammar, examine Russian
cases in three sections; morphology - where the fundamental

meanings of cases are explained, phrase-level (slovosočetanie) -
where all governed cases are exemplified in their various mean-
ings, and sentence-level, where non-governed uses of cases are
exemplified. There is a very considerable overlap between these
three sections, and much of what is said in one could equally
well be said in another. In the old Academy Grammar this is per-
haps understandable, as it aims to put forward a system of norma-
tive rules which will be accessible to everyone. The new Academy
Grammar, on the other hand, aims to "show linguistic phenomena
in a system, consistently separating its formal and functional
aspects ..... In the treatment of grammatical phenomena, the
authors have sought precise definitions". (pp. 3-4)

The old Academy Grammar uses sub-divisions very like those
of Peškovskij, although the individual analyses differ consider-
ably. The final sub-divisions may be purely syntactic - e.g.
the predicative instrumental, semantico-syntactic - e.g. the
instrumental of agent in passive constructions, or purely sem-
antic - the 'instrumental of content', which includes *paxnet
senom* ("smells of hay"), *rukovodit' zanjatijami* ("supervise
studies") and *dorožit slavoj* ("values fame") (Vinogradov et al.
Vol. 1, p. 127). From this we see that there has been no pro-
gress since Peškovskij in supporting analyses. In the phrase-
level section, a distinction is made between strong and weak
government, the former being given the semantic (?) label of
'objective', the later being given such labels as 'spatial',
'temporal' and 'causal'.

In the new Academy Grammar, the morphological section is
largely redundant, as it is mostly repeated in greater detail
in the phrase-level treatment. However, this is the only place
in which the nominative is mentioned in any detail, and it is
worth while repeating the definition given there to demonstrate
the strange use of the word 'meaning':

> "Of these six cases, only the meaning of the
> nominative is unified: it denotes the absence
> of any relation between words, i.e. the null
> relation." (p. 326)

I cannot interpret this statement in any way what would make it
true. The chapters on government, along with the following sec-
tion 'parataxis' (as Axmanova's dictionary translates *primyka-
nie*), is based on a taxonomy of considerable ingenuity. All the
sub-divisions of the old Academy Grammar are used; there is
also the distinction of government and parataxis,[5] the latter
apparently somewhat weaker than weak government; government may
be single or double (i.e. with one or two objects), variative or
non-variative (i.e. with or without other cases as synonyms),
and an object may be transformable into a noun in the nominative
by passivisation or not. Objects may be abstract or concrete
with regard to the relations they express; abstract relations
have three subdivisions - objective, which "denotes an object
onto which is directed an active or passive quality (i.e. an
action or a property)" (p. 49o), subjective, which "denotes an
object which is producer of that action or bearer of that pro-
perty which is named by the governing word" (p. 49o), and com-
pletive, in which "the dependent word is an obligatory semantic
addition supplementing the informational inadequacy of the gov-
erning word." (p. 487) These definitions, as well as being some-
what unclear, do not seem to be mutually exvlusive of each other.
Concrete relations are sub-divided into circumstantial (obsto-
jatel'stvenno-xarakterizujuščie), and something called 'sobstv-
ennoxarakterizujuščie'. The circumstantial relations are fairly
clear, being divided into spatial, temporal, causal, quantita-
tive, purposive, replacive, sociative, etc. The other group is
not defined except by examples, but appears to refer to examples
involving possession of some sort.

Something in the region of 45o sub-divisions are labelled
by a combination of the criteria just outlined. A further hun-
dred or so sub-divisions are brought in without any label,
mainly in the area of strong, prepositionless, non-variative
government. One might be excused for expecting the resulting
sub-groups to be homogeneous in some respect at least. But if
one looks, for example, at the sub-groups under the heading of
strong, single, invariative, prepositionless, dative, passivis-

able, government, four of them look as follows:

(1) sočuvstvovat' ("sympathise"), verit' ("believe"),
    aplodirovat' ("applaud"), pomogat' ("help"), služit'
    ("serve").

(2) vredit' ("harm"), protivorečit' ("contradict"),
    grozit' ("threaten"), naskučit' ("bore").

(3) upodobit'sja ("become similar"), podčinjat'sja ("obey"),
    prinadležat' ("belong"), naučit'sja ("learn").

(4) sootvetstvovat' ("correspond"), godit'sja ("be of use"),
    ponravit'sja ("please").

This seems to me the precise opposite of showing linguistic
phenomena as a system, and of precision in definitions - the
avowed intentions of this grammar.

The treatment of cases at sentence level is largely unnec-
essary, even within the theory expounded in the grammar, with
the possible exception of the instrumental of agent in passive
sentences. Predicative nominatives might best be treated under
the heading of concord, while predicative instrumentals have
very close parallels in phrase-level syntax (if such a creature
has to exist at all). (cf. § 4.1. below for more discussion of
predicative instrumentals, nominatives and datives).

It may be that the methodology exemplified in these three
treatments of case is a fairly convenient way of setting out the
data (although the cumbersome nature of the terminology in the
New Academy Grammar shows that this is not the purpose there),
but it is an approach calculated to throw the least possible
light on the nature of case in general or individual cases in
particular. For not only does one not learn very much about,
say, the dative case, when it is treated in hundreds of diffe-
rent small groups, but also the possibility of making generalisa-
tions about such things as the peculiarities of double object
verbs or the different roles of weak and strong government is
excluded when each of these things is dealt with only in rela-
tion to individual uses of cases. The alarming proliferation
of sub-divisions apparent from a comparison of the two Academy

grammars, and the persistence of groups with no apparent seman-
tic homogeneity, point to the lexicon as the inevitable logical
end for this sort of approach to cases (this is advocated for
the purposes of machine translation by Apresjan 1967). One may
say that every case has just one meaning: one may say that
every case has as many meanings as it has collocations; presuma-
bly one might find a principled method for establishing a number
of meanings somewhere between these extremes, but Russian case
theory contains no hint of any such method.

Consider for example, the analyses of the Russian instru-
mental contained in Bernštejn 1958 and Mrazek 1964. Although
many of the general headings for instrumental meanings are the
same, none of their subdivisions are absolutely identical. Only
Mrazek makes purely syntactic groups as well as semantic ones,
although some of Bernštejn's groupings are partially syntactic.
But the differences between these accounts seem small when one
compares them with the analysis of the Russian instrumental made
by Worth (1958). Worth uses only the notions of sentence consti-
tuents (including simple formal sub-categories of verbs and
nouns), and the transformational potential of sentences. Even
with this simple framework, the number of possible sub-divisions
is enormous, and many of those that Worth does make are clearly
not necessary - thus the reflexivity or otherwise of the verb
is irrelevant in the sentence:

> *on vernulsja starikom*  "he came back an old man", and:
> *on priexal starikom*   "he arrived an old man".

Worth uses his transformations fairly sensibly, but they are
capable of infinite and irrelevant analysis of sentences, espe-
cially when, like Worth's, they are not meaning preserving.
Thus even an approach which is purely formal does not seem to
be able to provide a principled basis for a choice of meanings
for a case when these are more than one in number, and less
than the maximum conditioned by co-occurence relations.


1.1.3.

Non-Russian attempts to define Russian cases have been

even less successful. Ebeling (1955) curiously imports some
ideas from phonology into case theory; thus he claims that the
instrumental in *on rabotal sudej* "he worked as a judge" has no
meaning as it cannot be replaced by other case forms in the same
frame. He also uses the notion of minimal pairs in claiming
that the *na stol / na stole* ("on/onto the table") distinction,
which does not occur in absolute minimal pairs (the sentences:
*on prygal na stol(e)* "he jumped on(to) the table" have different
constituent structures)[6] is less typical of the distinction bet-
ween accusative and prepositional cases than is the pair *v noč'/
v noči*, which constitute a minimal pair. In fact, the former
opposition is incomparably more significant because of its much
greater productivity, and although there are always differences
in the contexts of the two forms, it is not at all necessary
that the case form should be conditioned by the context, as opp-
osed to both the form and the context being conditioned by the
meaning. As for Ebeling's first point, the opposing claim made
by Jakobson that the fundamental meaning of a case is found where
it is the only possible case is much more likely. Ebeling's
own system is a semi-algebraic one, and although he can force a
number of sentences into it, it offers no great insight into the
structure of Russian. His conclusions therefore have little
force:

> "The vagueness of Jakobson's definitions is due to his
> objective - the collocation of the Russian cases into a
> symmetrical system ..... We have not striven to obtain
> symmetry and therefore we were much freer. We regard
> the Russian case system as a system in decay; the Russian
> cases have mostly lost their meanings in exchange for
> syntactic functions. For that reason we do not expect a
> regular system." (p. 222)

Sørensen's attempts at an analysis of the Russian cases system
(1949, 1957) add nothing of great note to the analysis of Rus-
sian cases. They are rather attempts to analyse the case sys-
tem in terms of Hjelmslevian formalisms, respectively those of
his "Catégorie des cas" (1935-7) and a glossematic algebraic

system, but in terms of data and primary analysis, they rest very heavily on Jakobson.

## 1.2.

This analysis of previous studies of case in Russian demonstrates that none of them provides a suitable starting point for an explicit and systematic investigation of the cases of Russian. The most explicit analyses of case-like elements have been provided in the last few years by exponents of various schools of thought in the transformationalist tradition in relation to English prepositions; these seem to be close enough to morphological cases in languages that have them to require similar methods of analysis (cf. § 1.3.1. below).

## 1.2.1.

Gruber (1965) assigns an important role to prepositions in what he calls 'pre-lexical structure' - a level deeper than deep structure which determines both semantic interpretation and syntactic form, but which contains no lexical items. Gruber is concerned less with the constraints on the generation of pre-lexical structures than with the process of lexical insertion of verbs. Consequently, he is less than explicit about the assumptions he is making. Furthermore, many of his statements are suggestive, possibly even correct, but are not backed by any very compelling evidence. For instance, he makes an interesting claim about the negative status of ablative prepositions, which is supported only by impressionistic statements of semantic equivalence, but there is no syntactic evidence whatsoever.

Two features of Gruber's investigations appear to me to have special relevance and value in this study. The first is the decomposition of prepositions into more elementary (semantic) units, such as 'pure' location (perhaps misleadingly called *AT* by Gruber), motion, etc. Although Gruber does not make this clear at any point, it seems obvious that the two elements in *AT ON* (the pre-lexical structure of *on*) are elements of a totally different status, the first being a two-place relation, the

second being a 'nominal' element of position. Gruber further
fails to make clear why these two elements are juxtaposed, while
an element such as 'Motional' is assimilated into the pre-lexical
verb; this is presumably the influence of the surface. The
other feature of special relevance is Gruber's process of 'incor-
poration', a process "designed to effect a mapping onto prelexi-
cal strings of lexical items." (p. 14) A single lexical item may
correspond to more than one juxtaposed lexical items; in this
case, the less important pre-lexical item (the preposition in
relation to a verb, for instance) is said to be incorporated in
the verb; this process may either be optional (compare "The pen-
cil pierced through the cushion" and "The pencil pierced the
cushion", which are synonymous for Gruber) or obligatory ("John
crossed the road", where *across* is incorporated). Gruber marks
each individual lexical item for its behaviour with regard to
incorporation, although he does not exclude the possibility that
some regularity may be discovered which will render this unnec-
essary.


1.2.2.

It is interesting to compare this with the very different
proposal made by Postal (1971), and apparently now characteris-
tic of 'generative semantic' approaches to both prepositions and
cases (cf. Ross 1967, Andrews 1971). Although Postal does not
propose any criteria for choosing between any two prepositions,
he places prepositions as a whole within a system of transforma-
tions which is as carefully worked-out as any in the literature.
The basic thesis of this approach is that prepositions are inser-
ted transformationally, and then deleted in certain contexts,
such as in subject position. The advantages which this approach
has is that it can give highly general solutions to such proces-
ses as English case-marking transformations, which Postal attri-
butes simply to the presence of prepositions before an NP, ord-
ering it after subject-preposition deletion. Another apparent
advantage is that it gives NP status to prepositional phrases,
which corresponds to their syntactic behaviour. Postal says
little about the criteria for insertion of particular preposi-

tions; he says: "The actual shape of the preposition associated with a particular NP is determined by many factors in ways I do not pretend to understand fully. Obviously, the lexical head of the NP, its logical relation to verbal elements, lexical proper- ties of the verbal head, and other factors play a role." (Postal 1971 p. 2o6) This is unsatisfactory not only because of its vagueness, but also because the references to lexical properties of the noun and the verb seem to be tantamount to claiming that there are virtually no generalisations concerning prepositions, but that they are all idiosyncratically connected with particu- lar verbs and nouns. Of course, with preposition insertion tak- ing place as a transformation, there seems little likelihood that this grammar can assign semantic properties to prepositions. However, even supposing that Postal could find adequate criteria for introducing individual prepositions, which is itself unlikely there remains the problem of dealing with constructions which take different prepositions in different syntactic environments, e.g. "to pierce through the screen" and "the piercing of the screen" (Gruber's example). To be fair, however, the treatment of prepositions is a comparatively minor point in Postal's mono- graph, and will no doubt be improved.

1.2.3.

Fillmore's approach (1966, 1968, 1969a) involves underly- ing elements called 'cases', many of which will be superficially realised as prepositions. This has the advantage over Gruber's approach that it does not require each preposition to have a corresponding underlying element, and is more explicit about the status of underlying relational elements. On the other hand, the presence of these underlying elements makes preposition- introduction a much more feasible operation than in Postal's above proposal. Fillmore's contention is that these cases are elementary semantic relations, and that a small number of these are sufficient to describe nominal roles and to sub-categorise verbs:

"The case notions comprise a set of universal, pre-

sumably innate, concepts which identify certain types
of judgements human beings are capable of making about
the events that are going on around them." (1968 p. 24)

A curious feature of Fillmore's repertoire of cases (whe-
ther or not they are universal or innate), is that some of them
are differentiated solely by criteria which do not appear to be
strictly casual. For instance, the agentive/instrumental and
dative/locative oppositions rest primarily on the animate/
inanimate distinction.[7] Further coincidences in relation to
these cases not remarked on by Fillmore, are that verbs speci-
fied with an Instrumental must also be specified with an Agen-
tive and that Dative and Locative are separately stated to con-
trol *have*-insertion in English. This would seem to suggest that
the cases posited are not as elementary as Fillmore suggests.

A further possibly dubious feature of Fillmore's grammar,
is its potential implications for the status of superficial
cases - Fillmore allows for a fairly large number of deep cases:
"Agentive, Instrumental, Objective, Factitive, Locative, Bene-
factive, and perhaps several others." (1968 p. 32) Then in dea-
ling with the relationship between deep and surface cases, he
states:

> "Two deep cases may be represented in the same way
> in the surface structure, as when D and O direct
> objects are both represented with the 'accusative'
> case in many languages (where the determining fac-
> tor may be the occurrence immediately after the verb
> at some stage of derivation). ... The rules for
> English prepositions may look something like this:
> the A preposition is *by*: the I preposition is *by* if
> there is no A, otherwise it is *with*." (1968 p. 32)

From this we see that Fillmore places no principled constraints
on the correspondence of deep and surface elements in this field.
It might be difficult to conceive of a system in which indivi-
dual deep items were not realised on the surface by varying
superficial elements, but the converse - to claim that surface
elements are realisations of several different underlying ele-

ments, - is not at all obvious, and should be justified in detail by anyone holding it. Fillmore places far too few constraints on the deep cases in general, and there is nothing in his system to prevent the creation of several more cases, which might defy generalisations which one could make about all other cases.

For instance, in its present form, Fillmore's theory allows any case to be advanced as subject, and therefore to be put in the nominative. But there is no principled objection to the creation of another case (a predicative case might sound a fairly plausible one) which was not susceptible to subjectivisation, and which would therefore need to be explicitly excluded from the rule allowing cases to be advanced as subjects. This step is in fact taken by Stockwell, Schachter and Partee (1973 p. 29), who postulate an Essive case for predicate nominals.

## 1.2.4.

A rather different, and much more heavily constrained system of underlying cases is proposed in Anderson 1971a, where "the now discredited localist view" (Fillmore 1968 p. 9) of cases is resurrected in the context of deep grammar. The relations expressed by these cases are very much more abstract than those of Fillmore, covering both concrete and abstract grammatical relations. The first step in the creation of this system is to posit two pairs of cases - the local (locative-ablative) and the non-local (nominative-ergative). It is claimed that these abstract relations exhaust the list of possible roles - i.e. Fillmore's "and possibly several others" is dispensed with. It is also recognised that these cases are probably not all atomic concepts - a further departure from Fillmore's implicit assumptions.

The evidence for Anderson's approach is of varying sorts: the parallels between concrete and abstract relations may be observed in the systems of direction and transitivity (whose similarity in many languages was noted by Allen 1964). Some sentences consist of a simple nom. case ('the stone fell'),

others of a nom. and an erg. ('the boy kicked the stone'), and
yet others ('reflexive' sentences) of a combined nom. and erg.
for a single noun phrase ('the boy ran'). Similarly, locational
expressions may be classed as locative ('in the park'), ablative-
allative ('from here to there') and combined ablative-allative
('through the wood'). As locative and allative are for Anderson
positional variants of the case loc., it can be seen that the
systems of transitivity and direction are broadly isomorphic in
structure - nom.,    nom-erg,    $\begin{bmatrix} nom \\ erg \end{bmatrix}$ , on the one hand,

loc.,    loc-abl,    $\begin{bmatrix} loc \\ abl \end{bmatrix}$ , on the other.

Then there are morphological parallels in many languages
between ergative and ablative (e.g. Russian *ot*, Latin *a(b)*, cf.
§3.1. below), as well as a semantic parallel, transitivity being
action directed onto an object. Furthermore, the ergative case
does not co-occur with any local cases in a simple sentence
except those which can be interpreted as causative. If these
are interpreted as involving superordinate causative verbs, a
proposal which has much independent support, erg. and abl.
become mutually exclusive in a simple sentence. On the other
hand, the evidence which Anderson brings forward for the iden-
tity of loc. and nom. is very weak, especially as they are quite
clearly not in complementary distribution. One possible piece
of evidence for their identity is in the pro-form *do something
to someone* (Rus. *delat' čto komu*), where the dative (Locative)
corresponds to what is generally accusative when this pro-form
is specified as an actual verb phrase (e.g. a specification of
'he did something to *someone*' could be 'he hit *her*').

This leads to two alternative hypotheses; either we have
a three-case system, with ergative and ablative fused into one
case, and a +/-/O specification according to a Hjelmslevian
sort of algebraic system, or the cases may be split into two
oppositions - [+/- local] and [+/- negative] (cf. Gruber's equa-
tion of abl. with neg. loc.) resulting in four cases. The lat-
ter is the stronger proposal, but as we have seen, the evidence
for it is much weaker. However, whichever of these proposals is

adopted, it is clear that Anderson's proposal is superior, ce-
teris paribus, to that of Fillmore, in that the number of cases
is strictly limited, and yet, while being more abstract than
Fillmore's cases, more likely to correspond to superficial real-
isations, which, at least historically,[8] are frequently based on
local concepts. Thus, although it is difficult to be definitive
about the relative merits of various proposals which are still
in a state of development, Anderson's work seems to me the most
likely to be fruitful, at least insofar as its treatment of the
repertoire of cases is concerned.

1.3.

Although ready to take over wholesale the repertoire of
cases proposed by Anderson, I feel that their theoretical status
is rather obscure in the system he proposes. He notes (1971b)
that a dependency grammar with cases in it allows one to reduce
the number of categories required in the grammar to two - noun
and verb, relating these by means of cases. This combines the
economy of dependency grammar in not needing non-terminal cate-
gories with the Postal-Lakoff proposal that verb and adjective
are categorially identical. But in the framework within which
he makes this proposal, the cases are already fully determined
by the semantic specification of the verb - i.e. the elements
relating verbs and nouns are free as regards the choice of
nouns to go with them, but are themselves fully determined by
the choice of verb. Furthermore, the closer the verb approa-
ches the status of an atomic semantic element, the closer it is
in meaning to a case; for instance, the verb *kill* presupposes
an agent (ergative case), but it cannot be said that an agent
presupposes a killing; however, the verb *do* also presupposes
an agent and it is equally true that an agent presupposes that
something is done. With these doubts in mind, it should be use-
ful to consider in rather more detail what the status of 'case'
can usefully be in deep grammar.

Even an examination of the superficial cases should be
enough to convince one that they are not parallel in most res-

pects to the other superficial categories of the noun - number, gender, animacy, etc. Gender, for instance, is normally associated uniquely with the lexical item; the noun *stol* ("table"), is masculine in Russian, and the noun *palka* ("stick"), is feminine. The very fact that most nouns have a paradigm of cases is proof that a single case is not uniquely associated with any particular nouns or class of nouns. Number and animacy, and sometimes also gender, are related to the referent of the noun; *devuški* ("girls") is feminine, animate and plural because its referent also has these qualities. A parallel hypothesis with case might be that referents which were active should go in some case (say the instrumental as the case of agent); thus any active referent would go in the instrumental. Of course, any noun can occur in any case (with the exception of morphological freaks like *mečta* ("dream") which has no genitive plural) and the hypothesis is therefore wrong. Case belongs with the noun only insofar as the noun is included in a grammatical structure, and generalisations about cases can be made only in relation to classes of configurations of syntactic or semantic elements. Thus, for instance, Peškovskij claims that in verbless sentences, "the presence of an adverb or of an oblique case of a noun ... serves as a mark of an elliptical sentence". (1956 p. 378) Only the nominative, the least marked case occurs on its own without being felt as elliptic.

## 1.3.1.

It is commonplace in the linguistic literature to find reference to the common linguistic functions of cases and prepositions:

> "Il paraît en effet que les prépositions constituent
> un système dont les dimensions sont les mêmes que
> celles du système casuel, et qu'il s'agit ici d'une
> catégorie double qui se manifeste à la fois dans le
> système grammatical et dans le système lexicologique".
>
> (Hjelmslev 1935, p. 1o7)

"Whether the term 'case' should be extended beyond

its traditional application, to include prepositions
as well as inflexional variation, is also a question
of little importance. The difference between inflex-
ional variation and the use of prepositions is a dif-
ference in the 'surface structure' of language."

(Lyons 1968, p. 3o3)

Similar points of view are put forward by Kuryłowicz (1949),
Benveniste (1949), Fillmore (1968), and many others. However,
it is also not uncommon to find reference to the common lin-
guistic functions of prepositions and verbs:

"Au moyen age ... on n'avait pas vu que cette caté-
gorie [relation D.K.] est présupposée par le concept
de liaison inhérent aux conjonctions et aux préposi-
tions et à la copule inhérente au verbe."

(Brøndal 1948, p.243)

"Ainsi, dans les langues indo-européennes tout rap-
port grammatical est verbal. La grammaire tout
entière est dans le verbe; inversement, tout verbe
exprime par lui même ou contient de la grammaire,
car il est un copule ou en contient un. ... Malgré
sa forte lexicalisation, le verbe transitif est tou-
jours reductible (logiquement) à *avoir* ou *être à*."

(Bally 1944, p. 1o6)

A similar claim within the theory of generative grammar is to be
found in Becker and Arms 1969. The first of these claims - the
identity at a deep level of the categories of case and preposi-
tions does not seem to me to be in much doubt. The second claim
- which amounts to saying that prepositions are verbal in nature
or vice-versa - is not obviously true, but I know of no evidence
to say that it is untrue. It also seems a little mystifying
that nobody has (to my knowledge) claimed that cases and verbs
are similar in function; perhaps this could be ascribed to the
influence of superficial realisation, as well as to the fact
that prepositions tend to be more concrete than cases (Lyons
1968, p. 3o4). But with definitions like: "Est cas une catégo-
rie qui exprime une relation entre deux objets." (Hjelmslev

1935, p.35), the similarity between verbal and casual meaning is brought out fairly forcefully. If the cases we consider are 'deep cases', then this similarity appears to be even more plausible.

## 1.3.2.

If cases may be described as underlying verbs, then the question naturally arises as to what relation they bear to superficial verbs. I think that Fillmore has shown that this is a fairly close relation, as he has characterised a large number of verbs by associating them with the case frames compatible with them (see, e.g., Fillmore 1969b). To take a simple example, the feature stative is used in two senses in the literature; in one sense (Lakoff 1966) it corresponds broadly to the absence of ergative (agentive) in the clause, while in its narrower sense (Miller 197o) it corresponds to the presence of a locative as subject of the verb. What is claimed here, in distinction to what is said in the works of Fillmore and Anderson, is that these cases are not merely associated with the verb in some comparatively loose way, but are actually inherent in the verb, themselves forming its structure. Thus instead of saying that a verb such as *put* is associated with the frame O + L + A (or nomloc-erg), we might analyse "X put Y on Z" as (X CAUSE (COME ABOUT (Y ON Z))), (cf. §1.4. for an analysis of these elements) where it would be possible to stop talking about 'verbs' or 'cases', or both. It is also noteworthy that the three verbs which are generally recognised as pro-verbs - *do, be* and *have* - bear an approximate resemblance to respectively ergative, nominative and locative, (in Anderson's terminology). For instance, it is a diagnostic of stative verbs (in Lakoff 1966) that they do not occur in environments of the type:

    *What he did was + V, e.g.

(5)*What he did was know the answer.

Stative verbs are, in case grammar terms, those which are not associated with ergative/agentive (Anderson 1971a p. 41). This

provides some evidence for the analysis of *do* as being closely associated with ergative case. *Have* is fairly straightforwardly associated with the locative, both in its possessive use, and in its use in sentences of the type:

(6) My brother had some books given to him.

(7) The garden has fairies in it.

These sentences are associated with superficially simpler sentences, in which the noun that is subject in the 'have' - sentences is in a locative phrase:

(8) Some books were given to my brother.

(9) There are fairies in the garden.

*Be* is less straightforwardly associated with nom, but as I am going on to claim (§1.4.2.) that nom. does not exist as a separate case, this is not too worrying.

It is important to note from the start some of the implications of this approach, which will restrict any model representing it; if it is true that each verb is associated with one ore more cases - and this is a very likely assumption - then the possible repertoire of underlying verbs will not exceed the number of cases. This is because any verb which is associated with a case not identical to itself will inevitably be internally structured, with a structure containing that case. Consequently, it is an extremely restrictive theory, with only three or four underlying relational elements if Anderson's theory is adopted. If, therefore, it proves to be consistent with the facts of language, this restrictiveness will be very much in its favour.[9] It is the purpose of this study to discover the limits of this theory by applying it to the Russian case system.

## 1.4.1.

What sort of base structures would be produced by such a proposal? It presupposes that the basic categorial distinction is that of relational and non-relational elements; thus nouns, verbs and adjectives, insofar as they are not purely relational,

are not categorially differentiated, and are presumably somewhat similar to Bach's class of 'contentives' (1968). Structures are composed of relational elements linking non-relational elements in trees of some sort. In some of his later work, Anderson too seems to be moving towards this sort of approach; for instance, he says: "I think indeed that it can be argued that the 'lexical' elements N and V are always 'linked' by some functional element." (Anderson 1973a p. 38). Although he here preserves categorial distinctions, Anderson is making a further distinction of lexical and functional elements which is very similar to that made here.

I shall assume without much argument that such a proposal will be better represented in dependency trees than in constituent structure trees. Whatever the differences in formal properties between dependency and constituent structures (for argument see Robinson 197o and references there),[10] it seems intuitively more natural to have dependency trees in this proposal, where the relational elements are manifestly relational,[11] than constituency trees, where the relational elements appear in the trees in a position not visibly different from non-relational elements. Dependency trees also appear to render redundant some of the considerations brought forward in McCawley 197o about underlying word order.[12]

The general structure of the trees under this approach will consequently be:

R(elator)
E(lement)        E                    Fig. 1

Being recursive, this will give trees of the general structure:

R
E       R                          Fig. 2
   R       E
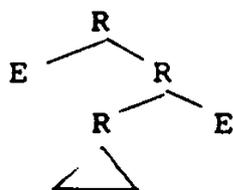
Binary sub-division as is exemplified in the diagram appears to me to be justified on the ground that no relational element with more than two places would possibly be described as ele-

mentary. In fact, there are so few relational elements envisaged for this model that a simple list of them should be enough to convince anyone that they are only two-place.

1.4.2.

I have already indicated my preference for the system of deep cases proposed by Anderson over that proposed by Fillmore. I shall start off by operating on the three case system proposed by Anderson, because while he has shown that ablative and ergative are in complementary distribution (i.e. never co-occur in a simple predication), this is manifestly not the case with locative and nominative. However, there will be plenty of opportunity to change this decision, for as the system of cases is the object of this study, each case will have to be justified fairly thoroughly if it is to be accepted as a base element.

Another reason why Anderson's nominative case should not merely be seen as a locative emerges as a curious result of the choice of cases as verbal elements. Anderson posits a case which is obligatorily present in all simple predications, and which is semantically neutral. Therefore given a structure of the type shown in fig. 1, it is clear that one of the elements in it must be neutral - i.e. the equivalent to the Fillmore/ Anderson O/nom. We shall decide arbitrarily that the element which would be marked by a 'positive' case in a Fillmore/ Anderson type grammar is the one on the right of the predication. Thus the sentence:

(1o) "John is in the park" will be given the structure:

loc.

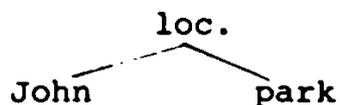John        park                    Fig. 3[13]

For convenience, I shall refer to the element which would have had the positive (i.e. loc.) case in Fillmore or Anderson's approaches as the 'marked' member of the relation.

What then of examples adduced in favour of nom-loc identity like "do something to someone"? (cf. §1.2.4.) Here it is

necessary to recognise that a revision of Anderson's model as
extensive as the one proposed here will involve a radical recon-
sideration of the structure of many sentences. Two claims in
particular are made in this proposal; first, that it is impos-
sible to have a simple predication in which there are two nomin-
ative elements, as there is no way of formalising that notion
here;[14] secondly, that sentences with three lexical elements
(e.g. John hit Bill) will be a realisation of a base structure
with at least three underlying non-relational elements.[15] It is
therefore not at all clear that in the hierarchy of predications
which will result as an inevitable consequence of more than two
elements being related by two-place relators, the 'objective'
element will turn out to be the neutral element represented by
Anderson's nominative. This is a matter for further analysis at
a later stage.

## 1.4.3.

The concept of the intransitive verb, as this applies to
surface structure, is rendered more or less redundant at the
deep level by the sort of abstract relations that this model
involves. However, certain verbs which a 'generative semantic'
grammar might use and call intransitive must be posited; these
correspond approximately to what Seuren has called 'operators'
(1969). It is not at all clear to me whether quantifiers should
be included in this class, but at this stage of development, it
is sufficient to give two examples ot this category.

The first is negation, being represented as:

```
      neg.
       |
       R
      / \
     E    E
```
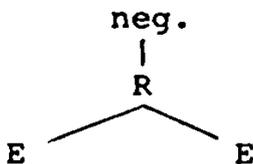Fig. 4

Although I shall assume that all negation is sentential, and
that negation of elements is reducible to the sort of proposal
made by Bach (1968 p. 97), I shall abbreviate where necessary
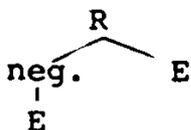
as:
```
           R
          / \
      neg.    E
       |
       E
```
Fig. 5

This is to avoid going into the irrelevant (here!) problem of relative clauses. Thus, for example, the representation of a sentence like:

(11) He didn't come

will simply be the structure of

(12) He came

dominated by a negative element:

neg
△
he came

Fig. 6

(cf. Paduĉeva (1969, 1970, 1974) for further analysis along these lines.)

For the second 'intransitive verb', consider the Russian verb *stat'*, which represents inchoativity - the beginning of a state or action; it also has a positional meaning of "stand up". But not all states can be associated with this verb:

(13) On stal nervnym.    "He became nervous."
(14) On stal ĉitat'.    "He began to read."
(15) On stal pisatelem. "He became a writer."
(16) On stal na nogi.    "He stood up (on his feet)."
(17)*On stal v komnatu. "He became into the room."

Verbs of motion are used instead of *stat'* with positional states

(18) On voŝel v komnatu.    "He went into the room."

The verb *naĉat'* is of more limited range than *stat'*, co-occurring only with verbs denoting actions:

(19) On naĉal ĉitat'.    "He began to read."
(20)*On naĉal nervnym.    "He began nervous."
(21)*On naĉal znat'.    "He began to know."
(22)*On naĉal v komnatu.    "He began into the room."

It seems a not unreasonable hypothesis to posit a single underlying source for these elements; further evidence is provided by the use of verbs of motion to denote inchoativity of non-positional states and actions. (Lakoff 1970; §4.15 also envisages this possibility; cf. also Binnick 1968 and Miller 1970)

(23) Ivan priŝel v jarost'.[16] "Ivan came into fury."

(24) On pošel pljasat'.          "He went to dance."
(25) On pristupil k čteniju.     "He proceeded to reading."
          (This sentence is synonymous with (16)).
This element I shall call dyn(amic).

We have now tentatively established four elements (i.e.
dyn, erg, loc & nom) which, linking together more concrete
elements, may be capable of representing a large part of the
categorial semantic structure of Russian. The structures which
are possible will not embody every possible configuration of
these elements; the element *dyn*, for instance, cannot be dir-
ectly dominated by *loc*, while an *erg* governing a *loc* predication
must have an intercalcated *dyn*. The exemplificatory sentence
produced in §1.3.2. "X put Y on Z" can now be given the struc-
ture:
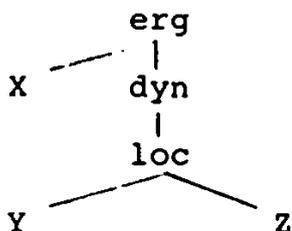


Fig. 7[17]

It might at this stage be appropriate to consider what
difference, if any, would be made if one were to decide to
treat, say, negation and 'dyn' as features on other elements, as
opposed to being elements in their own right. The first ques-
tion to be asked is whether the choice of features would make
any difference to the generative power of the grammar. Although
I do not know enough to be able to prove this, it seems to me
that the addition of features, or at least those of a certain
sort, adds a great deal of power to the grammar, and is there-
fore undesirable. (e.g. cf. Postal 1974 p. 1o3) In an 'Aspects'
type model, features are used on both verbs and nouns as cumu-
lative restrictions on the extension of the lexical item. They
therefore fulfil a function which is not duplicated by any
other procedure in the grammar, and they are relatively homo-
geneous. However, if one looks at the type of features used in
Anderson 1971a, it is clear that these include a certain number
of Aspects-type features, but also a large number of features

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which fulfil completely different functions; thus +stative is a
normal feature restricting the extension of the verb, while a
lot of features, such as +abl-oblique, are designed to determine
the position of nouns in surface structure, rather than to add
semantic information to the verb or the sentence. Studies are
not infrequently found where the use of features is even more
arbitrary than this (e.g. Dougherty 197o),[18] and where the sole
aim appears to be to engineer the right result in the final
string. It would therefore appear that it might be a useful con-
straint on grammars to avoid the use of features, or at very
least, to avoid the use of features which do not fulfil the
simple sub-classificatory function they are given in 'Aspects'.

Another consideration which arises when base structures are
semantic entities is that it is reasonable to expect parallels
and differences between various types of semantic connexion to
be captured in the various types of formal devices for expres-
sing relationships. It must therefore be to some extent an emp-
irical question whether there is a relation characteristic of
features as opposed to other linking devices; at least with
respect to superficial verbs, I would claim that this is a ques-
tion which should be answered in the negative; if one can dis-
card such notions as stativity in favour of decomposing super-
ficial verbs into more atomic entities, and if rules for the
positioning of nouns can be established without features on
verbs (for one way of doing this see §1.4.4.; for another, see
Anderson 1972), there is no reason for proposing features on
verbs. Whether non-relational elements will be associated with
such features is a question I shall not discuss.


1.4.4.

One of the topics which will remain on the periphery of
this study, but which is clearly of tremendous importance in
any linguistic theory, is the way in which the string of ele-
ments which constitues a sentence is chosen on the way 'up'
from the base structure - i.e. how many units are chosen to
represent a given structure, and which syntactic and linear

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position they are assigned. This, indeed, does not seem to con-
stitute a single question at all, and yet it seems impossible to
isolate a set of criteria, say for the establishment of linear
order, which will not be relevant in some language in establish-
ing subjects and objects. It is now generally accepted that the
choice of word order is at least partially connected with the
status of individual elements in relation to the preceding dis-
course (Halliday 1967), and this is especially so in languages
such as Russian, which have relatively fewer constraints imposed
on word order by grammar than do languages like English (Adamec
1966, Bivon 1971). But this is not to say that the grammar can
be treated independently of communicative considerations. For
instance, in some constructions, elements which are preposed in
accordance with functional sentence perspective are put into the
nominative case (Popov 1964). This might suggest that the choice
of nominative is closely connected with thematic structure, but
there are other criteria which have been put forward as deter-
minants of the subject in various languages; Dubois 1967, for
instance, mentions the necessity of maintaining a single inter-
pretation as a determinant of the passive (Le gouvernement a
hautement apprécié ses mérites - ambiguous. Ses mérites ont été
hautement apprécié par le gouvernement - unambiguous. The
ambiguity lies in the fact that the pronoun in the active sen-
tence might refer to either the subject or to something else,
while in the passive sentence, the pronoun refers to some person
or thing not mentioned in the sentence.), the tendency to esta-
blish a canonical ordering animate-inanimate, and also singular-
plural. Similar principles are expressed for English by Jesper-
sen 1933.

   How then can we work proposals like these into the model?
Given a simple predication with a relator and two related ele-
ments, one of these will have to be chosen as the element which
will be promoted from the predication; I propose that this will
depend primarily on the hierarchy animate - concrete - abstract,
where the highest element will leave the predication. This can
be justified on two grounds; in any simple predication an ani-

mate member will tend to be most prominent, while only abstract elements will be absorbed into the structure as parts of superficial verbs (the first point needs to be modified in the case of the curious construction of possessives). For instance, simple concrete locatives will obligatorily have an animate superficial subject if one of the members is animate:

(28) Ivan v škafu.     "Ivan is in the cupboard."

(29)*Škaf vmeščaet Ivana.   "The cupboard contains Ivan."

(3o) Škaf vmeščaet knigi.   "The cupboard contains books."

The second point can be simply illustrated; given the structure:

erg

Ivan     dyn

loc                  Fig. 8
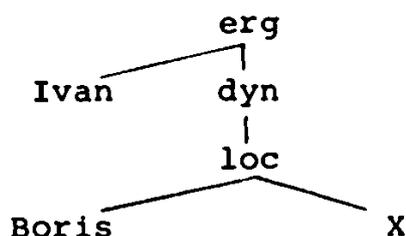
Boris         X

- X may be replaced by either *komnata* (room) or *razdraženie* - (annoyance). Among the sentences which may arise are:

(31) Ivan vvel Borisa v komnatu.   "I. brought B. into the room."

(32) Ivan privel Borisa v razdraženie.   "I. brought B. into annoyance."[16]

(33) Ivan razdražil Borisa.   "I. annoyed B."

But there is no word *vkomnatet'* meaning 'to bring into a room', and the theory predicts that there cannot be such a word given the conditions on types of nouns.[19] In this connexion, the type of theory put forward by Lyons (1966) characterising nouns as 'thing'-words can usefully be incorporated into this general framework.

The mechanism for taking an element out of a simple predication will be the raising transformation familiar in the literature of generative semantics (e.g. McCawley 197o, De Rijk 1968, Lakoff 1971). Its effect will be to raise the element from the node on which it is dependent to the next higher node. There have been various proposals as to what to do in the case of subjects; for instance, Anderson 1972 contains a hierarchy of empty nodes, which serve, among other things, to determine the

subject of the superficial sentence. Under this proposal the subject position is available but unfilled at the deep structure level. An alternative might be to formulate a rule of subject formation in which an element is 'promoted' so that the rest of the predication depends on it: thus fig. 9 will become fig. 1o:
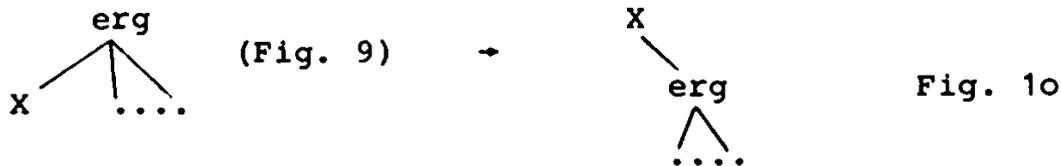


In some ways this is an intuitively rather pleasing solution, as it captures the notion of the nominative case as expressing an independent concept (Jakobson 1936). It also brings out clearly the fact that, while the verb may be considered the 'dominant' category at a deep level, the subject 'governs' the verb at a more superficial level when the processes of concord are operative. I shall tentatively adopt this proposal in the rest of this study.

Further discussion of the role of communicative and semantic elements in determining the order and segmentation of superficial elements would be otiose in the absence of a detailed study of the problem on the basis of a large corpus of data and a native-speaking linguist's intuitions. This I do not intend to do here, so I shall assume that the structures generated by the grammar will be constrained only in the crude way given above.

1.4.5.1.

Consider the following two quotations:

"La langue dispose d'un nombre restreint de cas
pour exprimer des relations très diverses, ce qui
oblige le grammairien, lorsqu'il traite les cas
comme l'expression de ces relations, à reconnaître
des fonctions plus ou moin nombreuses à un même cas."
(Perrot 1966 p. 218)

"Un cas comme une forme linguistique en général ne

signifie pas plusieurs choses différentes; il
signifie une seule chose, il porte une seule notion
abstraite dont on peut déduire les emplois concrets."
(Hjelmslev 1935 p. 85)

Common sense, and the majority of linguists who are expli-
cit about this question, would at first seem to be on the side
of Perrot's argument. But this is a position which is unlikely
to give a solution with a large amount of evidence in favour of
it, as a justification would really demand that it form part of
a complete grammar of a language. Thus Hjelmslev's position is
more desirable from this point of view, as counterevidence is
possible, given that one cannot add a few ad hoc meanings to
patch up the analysis. The ridiculous lengths to which sub-
division of case meanings can go has already been seen in the
Russian Academy grammars (§ 1.1.2.). It is perhaps worthwhile
noting, however, that Hjelmslev's position does not imply that
each superficial case corresponds uniquely to a single deep sem-
antic element. What it does mean is that each case is defined
in terms of a single characteristic, whether this be an under-
lying element, a configuration of elements, a transformation or
some other construct. To the extent to which this study fails
to do this, it is to be regarded as not having gone deep enough
into the relevant phenomena. In this respect, I am following
the principle of Hjelmslev 1928: " Une fois constatée une catégo-
rie formelle, il faut toujours lui présumer un fond significa-
tif." (p. 169) Further objections to this position have been
made from a transformational viewpoint in Comrie (1971):

> "Where attempts are made to characterise 'indirect
> object' semantically - to include not only the objects
> of verbs of saying, ordering, compelling, but also of
> giving, perhaps of harming and helping - this involves
> a hopeless confusion of semantic and syntactic criteria
> (given that for each of these verb-classes there is
> some language where the appropriate noun phrase stands
> in the dative case)." (p. 58-9)

Although I have not claimed that the dative can be analysed as
the same in all languages, this quote may be taken as a direct

attack on a position very similar to that taken in this thesis.
The confusion, it seems, is not all on one side; a semantic
characterisation of the dative does not involve saying that all
datives mean the same, but rather that there is some area of
meaning common to all of them. In the absence of a complete
semantic theory, it is difficult to see how such a position
could be refuted (although of course, any individual example of
it could). Perhaps the most important point is that the ques-
tion of whether dative case (or indirect object) is capable of a
semantic characterisation is purely a matter of empirical fact;
the only way to establish this one way or the other is to take
the strongest hypothesis and put it in a form in which a falsi-
fication is theoretically possible. Choosing a weaker hypothe-
sis will not establish anything.

1.4.5.2.

It should be evident by now that this hypothesis is in
spirit a 'generative semantic' one. It is very easy to get too
simple-minded in such a debate in claiming that one has 'dis-
proved' the opposite point of view, or in using small areas of
language to claim empirical advantages for one's own favourite
approach. However, I am of the opinion that a certain measure
of success in establishing unified definitions for Russian cases
on the basis of a model such as that set out above would be evi-
dence in favour of a generative semantic model insofar as no
other attempt to do the same thing has met with any great degree
of success. On the other hand, rejection of this model would not
be any argument in favour of anything, as the basic model of
generative semantics (i.e. the Ross-Lakoff theory), which uses
case-introduction transformations, does not claim that super-
ficial cases are unitary elements (not explicitly, at least).
The basis for hope that Russian cases will turn out to be amen-
able to an analysis of this sort is the fact that government of
cases in Russian is manifestly not arbitrary - verbs of similar
semantic specifications tend to govern the same case. This
might possibly be explained by some vague notion of analogy, but

this would not be a very helpful explanation. The idea that
there is an inherent connexion between the semantics of the verb
and the governed case is a much more attractive hypothesis,
which may, however, turn out to be false in the end.

It is interesting, however, that the elements which have
emerged from various generative-semantic analyses have been very
like the cases and other elements posited above - ergative
(=causative), dyn (=inchoative), neg. and loc. For instance,
Lakoff 197o, which was written in 1965 and is not very divergent
from the 'Aspects' model, analysed the sentence:

(34) John deactivated the bomb    -    as:

```
                S
          ┌─────┴─────┐
         NP           VP
          │      ┌────┴────┐
          N      V         NP
          │      │        ╱  ╲
        John  ┌─────────┐ N    S
              │+V       │ │  ┌──┴──────────────┐
              │+CAUSATIVE│ it  NP              VP
              │+PRO     │   ╱  ╲               │
              └─────────┘  N    S              V
                          │  ┌──┴──┐        ┌──────┐
                          it  NP   VP       │+V    │
                              │    │        │+INCHO│
                              │    │        │+PRO  │
                          the bomb  V       └──────┘
                                 ┌────────┐
                                 │+V      │
                                 │+Adj.   │
                                 │+Neg.   │
                                 │+Active │
                                 └────────┘
```
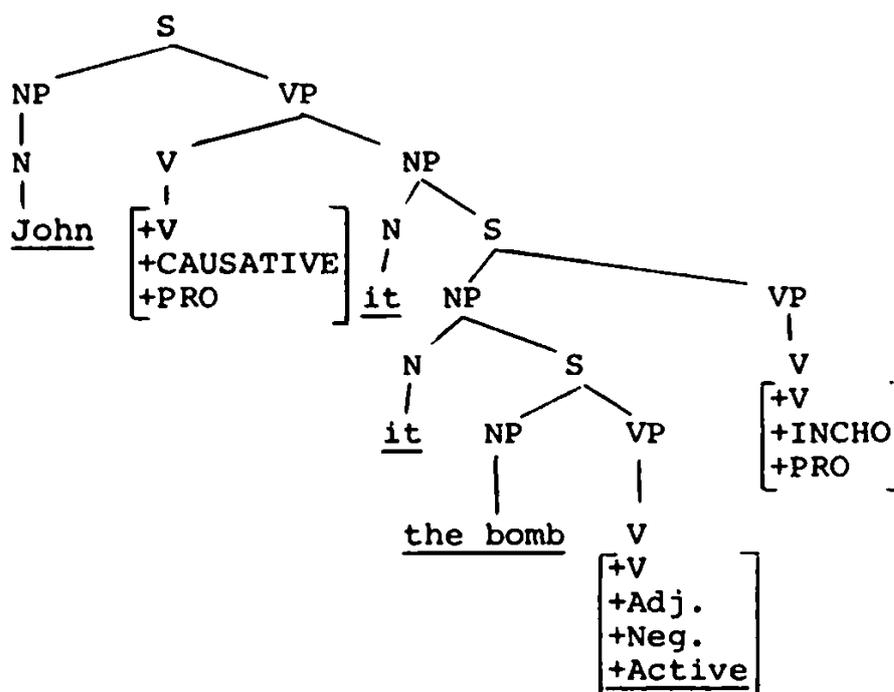
Fig. 11

Similarly, Postal (after McCawley) has analysed sentences of the
type: 'X killed Y' as: (fig. 12: over page).

The interest in these particular elements is the frequency with
which they recur; other elements occur (e.g. *strike* and *similar*
in the same Postal article), but only three are really frequent.
The other element I have posited (locative) is not frequent as
a verb, but this may be due more to entrenched prejudice against
treating 'cases' as 'verbs' - certainly with superordinate expr-

```
                          S
         ┌────────────────┼──────────────┐
       Pred              NP             NP
        │                 │              │
      CAUSE               X              S
                                  ┌───────┴──────┐
                                Pred            NP
                                 │               │
                               BECOME            S
                                          ┌───────┴──────┐
                                        Pred            NP
                                         │               │
                                        NOT              S
                                                  ┌───────┴──────┐
                                                Pred            NP
                                                 │               │
                                               ALIVE             Y
```
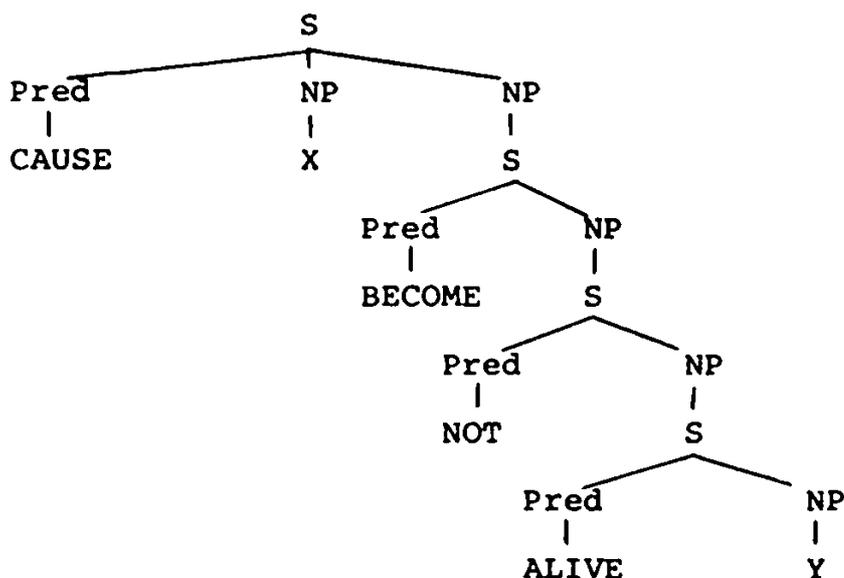
Fig. 12
(Postal 197o,
p. 233)

essions of time and place, a locative predicator would seem
fairly natural. What makes the claims of this theory more radi-
cal than those of the 'standard' generative semantic theory is
that I claim that *only* these four predicators are necessary.
This is not so radical as it may seem at first sight, but is
more like the rejection of a system of 'distinguishers' distinct
from 'semantic markers' in the old Katz-Fodor type semantic
theory (e.g. Bierwisch 1969). It is interesting that when gene-
rative semantics is viewed in this manner, it really does not
differ in its standard form from case grammar except in the
shape of its trees.


1.4.5.3.

A problem arises in relation to the justification of the
analyses of cases; obviously they will be acceptable only if
the analysis is compatible with all individual uses of cases.[20]
Furthermore, the analyses of verbs into atomic elements must be
checked with reference to the meaning relations holding between
the verbs to see if they are consistent. Obviously, however, it
would be an impracticable task to analyse all the (classes of)
verbs in the Russian language, even if I could be sure of doing
it for each individual verb. It must therefore be expected that
a certain amount of indeterminacy will arise in the analysis of
cases, and it will have to be accepted that any particular piece

of the analysis can stand for the time being simply in the absence of a clear piece of data to the contrary.

1.4.5.4.

At least two areas of language which should be relevant to the analysis of case will be given only minimal consideration here. Firstly, the area of temporal expression, which appears to be more idiomatic than spatial or abstract expressions. Secondly, the use of (prepositions and) cases in the construction of the complex sentence. It is clear that coordination and subordination have a lot to do with case expressions (Miller 1971), but the topic of this study is broad enough already without having the study of the complex sentence added to it.

# Footnotes to Chapter 1.

1. Hjelmslev and Jakobson's theories are identical at least in this respect; for claims that they are in fact notational variants, cf. Vogt 1949, Sørensen 1949.

2. Jakobson also says of the genitive: "Das Nomen, von dem der G abhängt, schränkt den Umgang des Genitivgegenstandes direkt ein." (Jakobson 1936 p. 65). Exactly the same objections apply to this definition - it may be true, but it is also true of every other combination of words, and is therefore uninteresting as a definition.

3. I find it unlikely that either of these approaches could provide a really satisfactory account of cases - Šaumjan because his theory is far too powerful generally, Apresjan because cases would be specified in the lexical entry for verbs, leading to enormous redundancy and little generalisation.

4. I exclude from consideration the purely morphological analyses of case which attempt to define the repertoire of cases and nothing else - e.g. Gladkij 1969, Dešerieva 197o.

5. Raspopov (197o) says of parataxis: "What is in fact meant by this is examples involving subordination of uninflected words - adverbs, gerunds, infinitives." (p. 46)

6. The simple locative would (in an 'Aspects' - type theory) have the structure: $_S(_{NP}(on)_{PREDP}(_{VP}(prygal)_{LOCP}(na$ stole))), while the motional sentence would have the structure: $_S(_{NP}(on)_{PREDP}(_{VP}(_V(prygal)_{LOCP}(na stol))))$.

7. Fillmore later retracts this claim, giving a more general definition to agentive and instrumental, and redistributing dative between Experiencer and Objective. (Fillmore 1971).

8. The 'at least' here is meant to be taken literally. The

weakest hypothesis one can realistically make about the use
of local prepositions in non-local expressions is that they
are historically derived from local expressions. Of course
given a model like Anderson's, a claim is being made that
these correspondences are not just historical, but are
inherent in the synchronic state of the language.

9. A comment from Chomsky might be relevant here:

> "For example, such a device [i.e. the use of
> abstract verbs D.K] could be used to esta-
> blish, say, that all verbs are derived from
> underlying prepositions. If one wishes to
> pursue this line of reasoning, he might begin
> with the traditional view that all verbs con-
> tain the copula, then arguing that "John vis-
> ited England" is of the same form as "John is
> in England" (i.e. "John is visit England")
> where *visit* is a preposition of the category
> *in* that obligatorily transforms to a verb inc-
> orporating the copula. Thus we are left with
> only one 'relational' category, prepositions.
> To rule out such absurdities, it is necessary
> to exclude the devices that permit them to be
> formulated or to assign a high cost to the use
> of such devices." (197o, p. 218)

1o. One of the advantages that dependency grammar has over con-
stituent structure grammar is that it has a natural repre-
sentation for the head of a construction, a concept which
has been found to be of value in much modern grammatical
work (cf. Robinson 197o). This is because dependency
grammar does not contain non-terminal categories (NP, VP,
etc.) but places one major terminal category in dependence
on another; thus a constituent structure $X$ will be a

$$
\begin{array}{c}
X \\
\diagup \; \diagdown \\
Y \qquad Z
\end{array}
$$
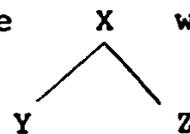
dependency structure:  $\begin{array}{ccc} Y & \text{or} & Z \\ | & & | \\ Z & & Y \end{array}$

A related advantage over constituent structure is noted by Lyons (1968, § 7.6.8.); constituent structure grammars do not specify that a consistent correspondence holds between phrase-level constituents and their subconstituents; thus, if VP and NP were interchanged in a set of PS rules, the two sets of rules would still be strongly equivalent. Dependency grammar does not face this problem because phrase-level constituents are defined (if they need to be defined at all) in terms of their head - i.e. a noun phrase is a string governed by a noun.

11. In claiming that dependency trees are 'manifestly relational' I mean only that given trees like (a) and (b):

a.
```
        X
       / \
      Y   Z
```

b.
```
      / | \
     X  Y  Z
```
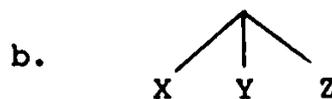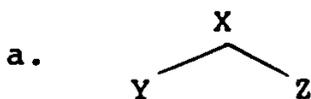
There is no path from Y to Z which does not go through X in (a) while in (b), X, Y and Z are equally likely to be relational elements, and the same formal difference would be made to the tree if any one of them were deleted.

12. At least in the sense that order is less important in dependency structure trees: (a) and (b), for instance, are identical in all respects except for order:

a.
```
        x
       / \
      y   z
```

b.
```
      x
       \
        \
         y   z
```
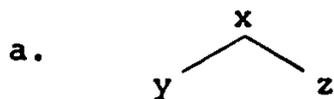
The comment is perhaps also true in that transformations such as 'Predicate Raising' have an extremely natural formulation within the framework of dependency grammar.

13. As it is clear from such a tree which elements are relational and which are not, this representation seems typographically the most economic; it is equivalent in every way to a representation such as:

```
             R
           /   \
         E   :   E
         :   :   :
         :   :   :
         :  loc.  :
       John      park
```
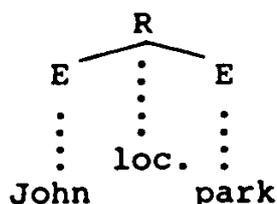
14. This is not an apology. The basis of some later claims
    will be that the constraints which this theory imposes on
    the possibilities for combinations of cases are closer to
    the facts than those imposed by other theories.

15. One interpretation of this sentence might be that the three
    non-relational elements in the deep structure are *John*,
    *Bill* and *blow*, and that these are related by relations of
    causation, direction and location. However, this is only
    one possibility.

16. The use of *pri-* instead of *v-* in this sentence is connected
    with the abstractness of the motion.

17. This and all other tree diagrams here are of course highly
    oversimplified.

18. This would no doubt be contested by Dougherty; however,
    what could not be achieved by a procedure such as marking
    a sentence with a feature as (+respectively), and then
    using 'feature percolation' to mark every other node in
    the simple sentence with that feature? (Dougherty 197o,
    p. 886) Apart from the fact that it is ad hoc, it is also
    excessively powerful.

19. A verb like *hammer* in English is not an exception to this,
    as it does not necessarily imply that a hammer was used:
    e.g.:
        (i) John hammered the nail in with his shoe.
    But things are rather more complicated than this in fact:
    cf. McCawley 1971, Green 1972.

2o. Except, perhaps, for a few idiomatic exceptions.

/

2.1.

The most obvious form of locative in Russian may be found in such sentences as:

> (1)    a. On sidit v komnate.    "He is-sitting in the-room."
>
>        b. Kniga ležit na stole.    "The-book is-lying on the-table."

There are various prepositions which combine with nouns denoting concrete objects or geographical locations to give a locative phrase. The most common of these are:

> *v/na* + locative case.    ("in"/"on")
>
> *pered/za/pod/nad* + instrumental case.    ("in front of"/ "behind"/"under"/"over")
>
> *u/okolo* + genitive case.    ("near"/"around")

A complete system of contrasts with these prepositions is possible only with nouns referring to three-dimensional objects. Any other type of noun will display a much reduced system of contrasts, if any. Even given a full system of contrasts, it is usually possible to isolate a 'favourite' locational expression, although this may be more a matter of real-word situations than of linguistic structures. It is because of this that Žolkovskij and Mel'čuk (1967 p. 211) can postulate a locational parameter, which provides *zavod* ("factory") and *Kavkaz* ("Caucasus") with *na*, *škola* ("school") and *Krym* ("Crimea") with *v*, *kapitalizm* ("capitalism") with *pri*, etc., independently of the lexical meaning of these prepositions. However, one must allow for sentences like:

> (2) On letaet nad Kavkazom.    "He flies over the Caucasus."
>
> (3) On živet pod školoj.    "He lives under the school."

The difference between prepositions with the locative and those with the instrumental seems to correspond broadly to what Hjelmslev (1935) called 'coherence'. This appears to be a composite notion, corresponding, on the one hand, to a distinction between being inside ('coherent') and outside ('incoherent'), and on the other, to the distinction between being in physical con-

tact ('coherent') and not being in physical contact ('incoherent'). Hjelmslev, as I understand him, claims that these two oppositions are in reality two aspects of a single opposition, and if this is indeed so, it would form a useful basis for the distinction between locative and instrumental-governing prepositions. However, I am not certain how such an opposition could be defined as unitary.

Other prepositions may be accounted for by positing positional nouns, which may or may not be expressed in any given expression, and which may or may not exist as an entity separate from its use with a certain preposition (the adverbial prepositions are respectively: locative, allative and ablative on the table below):

| | | |
|---|---|---|
| v ("in") | vnutri/vnutr'/iznutri | *nutr'' |
| na ("on") | naverxu/naverx/sverxu | verx ("top") |
| | | poverxnost' ("surface") |
| za ("behind") | pozadi/nazad/szadi | zad ("rear") |
| pod ("under") | vnizu/vniz/snizu | niz ("bottom") |
| nad ("over") | as for na | |
| pered ("in front of") | vperedi/vpered/speredi | pered ("front") |

Although these positional nouns are an integral part of the preposition/adverb in conventional orthography, this is not necessarily proof of their lack of independent status. Evidence of their dependence might be seen in the fact that most of them do not admit of choice of parameter in the locative preposition with which they co-occur - *nutr', for instance, cannot combine with na or po. But this is not of itself evidence of their dependent status, as there are clearly independent nouns, similar, for instance, to *nutr' in meaning, which behave similarly in this respect; e.g. seredina ("middle"), glubina ("depth"). The fact that there is little opposition of prepositional parameters with these nouns can be taken as evidence that they are in fact the elements which condition the choice of these para-

meters.

Furthermore, these nouns decline for the case opposition locative-accusative, denoting respectively static location and motion. This makes them somewhat parallel to the locational uses of the noun *dom* ("house"), which, over and above its normal six cases has two special locational cases; thus:

(4) On sidel vnizu.    "He was sitting down below."
(5) On sošel vniz.     "He went down below."
(6) On sidel doma.     "He was sitting at home."
(7) On ušel domoj.     "He went home."

This opposition, of course, also applies to other nouns, including other positional nouns, with prepositions:

(8) On sidel v seredine komnaty.    "He was sitting in the middle of the room."
(9) On ušel v seredinu komnaty.     "He went to the centre of the room."

Furthermore, they are followed by the genitive case, as one would expect if they were genuine nouns rather than parts of a prepositional construction:

(1o) On žil vnutri goroda. (G)   "He lived inside the town."
(11) Ivan šel vperedi vsex. (G)  "Ivan walked in front of everyone."

by analogy with:

(12) On žil na severe strany. (G)   "He lived in the north of the country."

This use of spatial nouns is quite widespread in the languages of the world, as for instance in the following examples from Japanese (13) and Twi (14)[2]:

(13) i. hon no ue ni    "on the book" (lit."book of on at")
     ii. hon no naka ni  "in the book" (lit. "book of in at")
(14) i. ɛda pon no so    "it-lies table the top"
     ii. ɛwɔ mpa no ase   "they-at bed the under"

This analysis of prepositions and their related preposition

/adverbs gives further support to the separation of locative-governing prepositions from the others, and suggests that the former are in some sense primary. For positional nouns can co-occur only with locative-governing prepositions (and their ablative counterparts on the same parameter). If it is the case that other prepositions are derived from a preposition + a positional noun, then prepositions which govern a case other than the locative must be derived from a construction which includes a locative-governing preposition. In support of this, it is interesting that the ablative prepositions which correspond to locative-governing prepositions are simple in form while those which correspond to instrumental-governing prepositions are complex:

*v/iz* ("in/out of"), *na/s* ("on/from");

*pod/iz-pod* ("under/from under");

*za/iz-za* ("behind/from behind").

Relationships of the type shown above are of course not easy to demonstrate on the complete range of Russian prepositions, but I feel that it is at least in principle possible to give similar explanations for many other prepositions with less obvious explanations; e.g. *pri/v prisutstvii* ("in the presence of"), *o/v oblasti* ("about"/"in the sphere of"). However, the point at issue is not that all prepositions come under a scheme such as this one, but that there are interrelations between the most common locative prepositions which are not immediately obvious and which demand an explanation.

Many static locatives have directional-inchoative equivalents: of course all of them could be expressed by periphrasis, but some do this by a simple morphological change. Many prepositions governing the locative or the instrumental do this by changing the case to the accusative. Some simply change the preposition; e.g. *u* becomes *do*. Similarly, ablative equivalents are formed by changing the preposition and substituting the genitive case. Thus, *v, na, za* and *u* become respectively *iz, s, iz-za* and *ot,* e.g.

(15)   a. On byl v komnate. (L)   "He was in the room."
       b. On vošel v komnatu. (A) "He went into the room."

    c. On vyšel iz komnaty. (G)    "He came out of the room."

(16)    a. On stojal u vxoda. (G)    "He was standing by the entrance."

    b. On ušel ot vxoda. (G)    "He went away from the entrance."

    c. On došel do vxoda. (G)    "He reached the entrance."

The notions introduced so far with respect to a spatial field of reference are essentially very simple. Yet a problem immediately arises when an attempt is made to represent them in an explicit framework of the type proposed in ch. 1. Given that framework, locative and allative predications will be represented as in figs. 1 and 2 respectively:
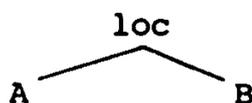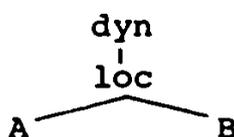
Fig. 1[3]

$$loc$$
$$A \qquad B$$

$$dyn$$
$$loc$$
$$A \qquad B$$

Fig. 2

However, if the ablative is represented as in fig. 3, what interpretation are we to give to fig. 4, or alternatively, how are we to exclude it?

Fig. 3

$$abl$$
$$A \qquad B$$

$$dyn$$
$$abl$$
$$A \qquad B$$
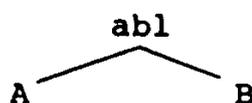
Fig. 4

It is intuitively obvious that the ablative icludes the idea of motion, and it would seem therefore that it is in no sense a primitive relation. The simplest way to avoid this difficulty is to adopt a proposal similar to that argued on purely semantic grounds by Gruber (197o), where the ablative is the motional correlate of absence, which itself is defined as the locative of a negative element - i.e. absence and ablative would be represented by respectively figs. 5 and 6.

Fig. 5

$$neg[4]$$
$$loc$$
$$A \qquad B$$

$$dyn$$
$$neg$$
$$loc$$
$$A \qquad B$$

Fig. 6

Such an analysis gains further (weak) support from the fact

that both ablative prepositions and negative elements are closely
associated with the genitive (cf. § 4.3.):

(17)  a. On vyšel iz-pod stola. (G) "He came out from under
                                        the table."
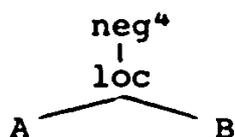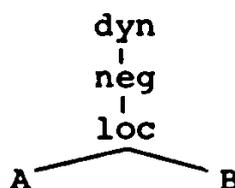
      b. On sošel so stola. (G) "He came off the table."

(18)  a. U nego net deneg. (G)  "He has no money."

      b. On nikogo ne videl. (G)  "He didn't see anyone."

This might not be a particularly serious argument in a standard
type of analysis attempting merely to establish a taxonomy of
case uses (this applies even to many transformational studies);
however, in any analysis attempting to produce a single criterion
for case introduction, as this one is, such a coincidence as this
one must be significant, although naturally it does not follow
that the connexion between ablative and negative *must* be as
direct as that I have suggested here.

A further set of spatial expressions are 'prolatives' -
e.g. Russian *čerez* ("through"), *po* ("along"), *mimo* ("past"), etc.
These too would appear to admit of an analysis in terms of nouns
of position; in such an analysis, *čerez* would be on the same
parameter as *v* ("in"), *po* as *na* ("on"), and *mimo* would corres-
pond to all of the 'more complex' prepositions - *nad* ("over"),
*pod* ("under"), *pered* ("in front"), *za* ("behind"), *u* ("near"),
etc. A fuller description would qualify this in several respects
but it is broadly true. Anderson (1971a p. 17o) analyses prola-
tive prepositions as realisations of the complex case structure
$\begin{bmatrix} \text{loc} \\ \text{abl} \end{bmatrix}$. This is justified in that the preposition does not merely
indicate the initial or final point of the motion ('source' or
'goal' in other terminology), but rather both. However, given
the theoretical framework suggested above, such an analysis is
impossible, as the notation I have suggested does not allow for
complex case structures of this type. This is not necessarily
to be interpreted as a fault of the framework, as it is possible
to question the validity of Anderson's analysis, which provides
very limited information about this construction. It fails to
account for the fact that this construction cannot be used to
represent a situation in which motion occurs up to a certain

point, and is then retraced;
e.g.

(19) John walked past the pub.
means that John walked some way, and en route, was near the pub.
It cannot mean that he walked to a point near the pub and then
went back again.

This particular objection is avoided by Bennett (1972),
who creates another case - Path - to deal exclusively with such
phenomena. However, this solution is extremely redundant, as
Bennett ends up with three cases which combine motion and loca-
tion (Source, Goal and Path); this misses the generalisation
captured by Anderson that any prolative (Path) element has a
Source and Goal within it. Clearly a theory would be preferred
which incorporated all of these generalisations. A possible can-
didate for such an analysis would be one in which a prolative
expression was represented by an underlying coordinated sentence;
thus a sentence like:

(2o) He walked along the street.
might have a structure which one might gloss as:
(21) He left one point on the street and went to another
point on the street.
If an analysis of this general type proves acceptable, it will
be a more general theory than either Anderson's or Bennett's,
and compatible with the general theory proposed in this thesis
as an added advantage. However, I do not intend to examine it
in detail at this point.

This brief survey of the purely spatial roles of preposi-
tions and cases is intended more as a tentative orientation for
use in dealing with less obvious locative forms than as an analy-
sis in itself. It is interesting to note that the concept of
'concrete' location is conditioned by the 'marked' member of the
relation, so that the other slot may be filled by any other sort
of element, including sentential complements and abstract nouns:

(22) Oni vstretilis' v Moskve.   "They met in Moscow."
(23) U obez'jan očen' nizkij uroven' prestupnosti (lit.).
     "At monkeys (is) a very low level of criminality."

It is interesting that the representation given to a sentence
like (22) will allow two possible inchoative representations to
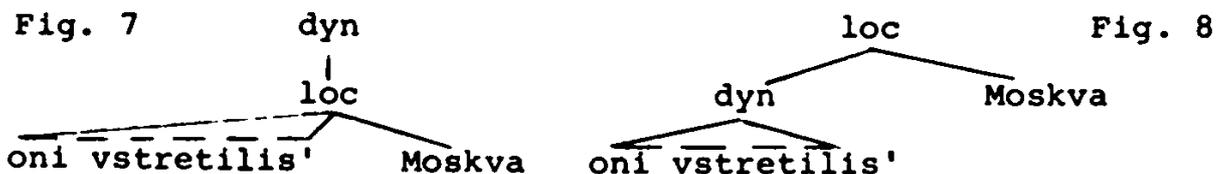be assigned to it:

Fig. 7      dyn             loc      Fig. 8



Fig. 7 may be glossed as 'It came to pass that it was in Moscow
that they met'. The representation of fig. 8 is the most natu-
ral interpretation of (24):

    (24) Oni načali vstrečat'sja v Moskve. (L)
      "They began to meet in Moscow."

But an addition and stress on *Moskva* makes fig. 7 possible:

    (25) Potom oni načali vstrečat'sja i v Moskve. (L)
      "They then began to meet in Moscow too."

It is noticeable that there is no possible sentence of this type
with *Moskve* in the accusative, so it would seem that the creation
of a single element from the inchoative and the verb in the lower
predication precedes the assignment of case forms.


2.2.

    It is appropriate at this point to introduce the notion of
'converseness', which will be of some relevance in later chapters.
Although the relators proposed in this model, are of a much more
abstract nature, this notion is otherwise essentially identical
to the notion introduced by Mel'čuk and Žolkovskij under the
same name (cf. Mel'čuk 197o p. 199), and not unrelated to that of
Lyons (1968 p. 467). With reference to the concrete locative
relation this notion may be intuitively understood as follows:
given an element in a spatial relation to another element, the
situation may be described in at least two ways: "Element A is
in relation R to element B." : "Element B is in relation Q to
element A." R and Q are what I call converseness each other.
For example, (26) and (27) describe the same situation:[5]

    (26) Lampa visit nad stolom. "The light hangs above the
                           table."

(27) Stol stoit pod lampoj. "The table stands under the
light."

Other similar pairs of prepositions might be *na* (on), *pod* (under),
*pered* (in front), *za* (behind), *v* (in), *vokrug* (around). Many the-
oretically possible converse pairs will have only one realisation
because one of the elements is assumed to be bigger or more sig-
nificant than the other, and only when the elements are of
roughly equal status (whatever that may mean in explicit terms),
may pairs like (26) and (27) be found. Under this condition, a
preposition may be its own converse - e.g. *u* (near), *okolo* (near),
etc. This is rather like the situation exemplified by Jakobson
with reference to the preposition *s* (with):

(28) Latvija sosedit s Éstoniej. "Latvia is next to
Estonia."

(29) Éstonia sosedit s Latviej. "Estonia is next to
Latvia."

(Cf.Jakobson 1936, p. 6o). The choice of one of these is presu-
mably determined by thematic structure (in the sense of Halliday
1967).

It is useful to note that if the converseness notion is a
significant structural principle, as I shall be claiming it is,
then the proposals as to the form of a grammar, made in § 1.3.,
form a natural framework for the formalisation of this principle,
much more so than any other type of case grammar proposed. Con-
sider figs. 9 and 1o, equivalent representations in Anderson's
and my own formalisations: -

Fig. 9
```
              V
        _____/ \____
     nom.         loc.
      |            |
      X            Y
```

```
          Loc
        __/ \__
     X         Y
```
Fig. 1o
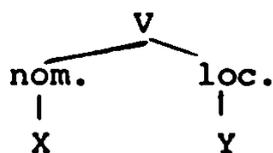
In fig. 9, there is no inseparable link between the element X and
the locative; consequently, some fairly complex engineering
would need to be ensured if the notion of its converse were
required; but in fig. 1o, X and Y are both closely linked to
the locative element, and the notion of converseness can natur-
ally be derived from such a structure. In fact, in some sense,
X and Y in fig. 1o *are* both locatives, and the only way in which

this can be undone is to raise them away from the locative pre-
dication altogether. Of course, until I have managed to show
that such a model could deal with the complexities of nouns of
position, it remains an open question whether even this model
contains a satisfactory representation of converseness. It is
therefore of great theoretical significance to determine whether
or not converseness is a notion which is necessary to adequately
account for some aspects of grammatical form.

One aspect of 'concrete' location which does not appear to
any great extent in this study is time expressions. Clearly, a
temporal noun in 'marked' position (cf. §1.4.2.) of a locative
relation will be the defining element of a temporal construction
It may be worth noting that such a configuration has been plau-
sibly suggested as the source also of tenses (Anderson 1973a).
However, I do not go into this matter at all here, as the super-
ficial case structures used in temporal expressions give the
impression of being even more arbitrary than those in other
parts of the grammar. For instance, the locative-accusative
opposition in spatial expressions denotes static location or
motion, while in temporal expressions, locative and accusative
are in complementary distribution in many constructions:

(3o) Gosti stali rasxodit'sja v polnoč'. (A)  "The guests
     started leaving at midnight."
(31) Na drugoj den' (A) ja prišel k nemu.  "The next day I
     came to him."
(32) V ètom godu (L) on ženilsja. "That year he married."
(33) Čto vy čitali na ètoj nedele? (L) "What did you read
     that week?"

Some of these expressions are almost idiomatic.

2.3.

Undoubtedly the most complex locative realisations are
those where the marked element is an abstract noun. However,
this complexity is to some extent, although obviously not alto-
gether, illusory; for whereas one can be fairly sure that a
superficial locative construction involving a concrete noun

derives from a simple underlying locative, superficial locative
constructions involving abstract nouns may be found to derive
from combinations of underlying sentences. Evidence for the
complexity of abstract locational structures may be seen in the
phenomenon of non-omissibility characteristic of some of them;
e.g.

> (34) Ivan byl v sostojanii rasstrojstva. "Ivan was in a
> state of confusion."
> (35) Ivan byl v rasstrojstve. "Ivan was in confusion."
> (36)*Ivan byl v sostojanii. "Ivan was in a state."
> (37) Ona somnevaetsja v ego sposobnostjax. "She has-doubts
> in his capabilities."
> (38) Ona somnevaetsja v nem. "She has-doubts in him."
> (39)*Ona somnevaetsja v sposobnostjax. "She has-doubts in
> capabilities."

One might compare these sentences with a sentence such as:

> (4o) On živet v dome svoego otca. "He lives in his father's
> house."

This is a fairly straightforward locative construction, with a
relative clause added on to the end of the 'subject' element;
i.e. this sentence can be glossed:

> (41) On živet v dome$_i$ : u ego otca dom$_i$. "He lives in a
> house$_i$ : that house$_i$ is his father's."

Such an analysis cannot be applied to (34) or (37), as one would
then expect the genitive derived from the reduced relative clause
to be deletable as in (4o).

> (42) On živet v dome. "He lives in a house."

Such facts will not be explicable in any analysis which equates
the underlying locative relations with the apparent superficial
locative relations. However, the fact remains that the locative
must come from somewhere; one area in which the superficial
facts are in apparent controdiction is in the sphere of equative
sentences, and these are the next set of sentences to be consi-
dered.

.

**2.4.**

One type of equative sentence which I shall omit from con-
sideration immediately is that containing two definite noun
phrases:

    (43) Ėtot čelovek - moj brat Ivan.   "That man is my brother
                                         Ivan."

    (44) Ivan - tot čelovek, o kotorom ja govoril včera.

        "Ivan is the man I talked about yesterday."

These are characterised by the fact that both terms in them are
'particular⸖ terms (cf. Lyons 1968, p. 337), and such terms nor-
mally occur only in subject position in equative sentences. To
the best of my knowledge, nobody has yet proposed a very convin-
cing underlying form for this class of sentences; neither can I.

**2.4.1.**

Consider first the data brought forward in Zolotova 1964.
She shows that there is a class of 'pivot' words (e.g. *delo*
("fact"), *zadača* ("problem"), *vina* ("fault"), *značenie* ("signifi-
cance"), *sut'* ("essence")) which may combine with a phrase or
clause 'explaining' the pivot word. These two elements may be
linked in one of a number of ways; they may both be in the nom-
inative, connected by a (possibly null) copula: the pivot may
be in the nominative while the other element is expressed by *v*
+ locative case: or the pivot may be in the instrumental case
and the other element in the nominative (this time with an obli-
gatory copula).

    (45) a.  Zadača (N) byla v povyšenii (L) proizvoditel'nosti
           truda.

        b.  Zadačej (I) bylo povyšenie (N) proizvoditel'nosti
           truda.

        c.  Zadača (N) bylo povyšenie (N) proizvoditel'nosti
           truda.

           "The problem was the raising of the productivity
           of labour."

    (46) a.  Osnova (N) našej svjazi byla v duxovnoj rodstven-
           nosti (L).

b.  Osnovoj (I) našej svjazi byla duxovnaja rodstven-
    nost' (N).

c.  Osnova (N) našej svjazi byla duxovnaja rodstven-
    nost' (N).
    "The basis of our relationship was spiritual
    similarity."

Word order in a Russian copulative sentence is no evidence for
choosing one or other noun as subject of that sentence. A cri-
terion which seems to me to be generally implicit in the choice
of one or other element as subject in traditional grammar is
that of replacability by the instrumental. In past or future
tense (i.e. when the copula is realised as a form of the verb
*byt'* (be)), one element of an equative sentence may optionally
be converted into an instrumental case (e.g.(45b), (46b)). The
other element in that sentence may then be considered the sub-
ject. We are therefore left with the conclusion that in a res-
tricted set of sentences, the subject is a deep locative phrase.[6]

2.4.2.

       There is a certain amount of evidence that this situation
holds for a much less restricted set of equative sentences; it
appears to be the case quite frequently that when a simple adjec-
tive of quality receives some qualification, it may be more eas-
ily expressed as a noun phrase, in which case, what would have
been its subject becomes a locative of some sort:

(47) a.  On umnyj.  "He is clever."
     b.  U nego bol'šoj um.(lit) "At him (is) great intel-
         ligence."
(48) a.  Ona krasiva.  "She (is) beautiful."
     b.  U nee svoeobraznaja krasota.  "At her (is) distinc-
         tive beauty."
(49) a.  On talantlivyj.  "He is talented."
     b.  V nem mnogo talanta.  "In him (is) much talent."
(5o) a.  On sposoben delat' èto.  "He is capable of doing
         that."
     b.  V nem sposobnost' delat' èto.  "In him (is) capa-

bility of doing that."

Similarly, in constructions which can be analysed as equative sentences subordinated to the verb *videt'*, or one similar to it in certain respects,[7] the subject of the equative is converted into a locative, while the other element is made the object of the main verb:

(51) Oni videli v social-demokratax (L) zamaskirovannyx kommunistov. "They saw hidden communists in the social democrats."

(52) On vidit v romane (L) 'zaveršenie tradicii Markiza de Sada'. "He sees in the novel the culmination of the tradition of the Marquis de Sade."

(53) Trudno bylo zapodozrit' v ètom tixom soldate (L) prestupnika. "It was difficult to suspect a criminal in this quiet soldier."

(54) On usmatrival glavnuju opasnost' v pozitivizme (L). "He perceived the main danger in positivism."

This class of sentences overlaps in part with the class of locative equatives with 'pivot' words:

(55) On vidit sut' romana v dialektike (L) vymysla i real'nosti. "He sees the essence of the novel in the dialectic of fiction and reality."

One justification for claiming that the embedded sentence is an equative one is that if the main verb were replaced by the verb *dumat'* ("think"), the meaning would be little changed, but the sentences would have to contain a full subordinate clause introduced by *čto* ("that"), and this clause would be equative; e.g.

(52') On dumaet, čto roman - zaveršenie tradicii Markiza de Sada.

(55') On dumaet, čto sut' romana - dialektika vymysla i real'nosti.

Possible further evidence comes from equative sentences where the predicative element is a past participle: certain of these, used adjectivally (e.g. *rasprostranen* "widespread", *izvesten* "well known", *ranen* "wounded", *razvit* "developed") may be made inchoative by the use of the locative inchoative pro-verb *polu-*

čat' ("receive"):

    (56) On polučil rasprostranenie/izvestnost'/ranenie/
        razvitie.

        "He (it) received currency/fame/a wound/development.

2.4.3.

    However, there are other sentences which appear to point
to the predicative member of the equative sentence being a loca-
tive. Among these are:

A.    Sentences with *sostojanie* ("state") or a hyponym of it:

    (57) a. On byl v sostojanii rasstrojstva.  "He was in a
           state of confusion."

        b. On byl v rasstrojstve.  "He was in confusion."

    (58) On prišel v jarost'.  "He came into fury." (i.e.
        became furious)

    (59) Ona v vostorge ot poezdki.  "She is in ecstasy over
        the journey."

But we should be wary of analysing these as straightforward pre-
dicative locatives, both because of the argument brought up in
§ 2.3. and because of sentences like the following:

    (60) On byl v tom bodrom i dejatel'nom sostojanii (L),
        kotoroe ona osobenno ljubila v nem (L).  "He was in
        that cheerful and energetic state she especially
        loved in him."

This sentence taken at face value would suggest that he is in a
state, and the state also in him; without some further qualifi-
cation this seems dubious.

B.    Sentences with hyponyms of *dolžnost'* ("job"). These are
    more common with the inchoative form:

    (61) On byl (služil) v sekretarjax (L).  "He was (served
        as) a secretary."

    (62) Pereveli ego iz načal'nikov (G) v zamestiteli (A)
        načal'nika.  "They transferred him from chief to
        deputy chief."

C.    Sentences with *prevraščat'sja* ("change"):

    (63) Avtomobil' prevraščaetsja iz universal'nogo trans-

porta (G) v častičnyj (A). "The car is turning from
(being) a universal means of transport to a private."

(64) Ėkologija prevraščaetsja v razdel (A) social'noj
nauki."

"Ecology is turning into a branch of social science."

An adequate treatment of such sentences would be facilitated if
such sentences could be analysed as having a subordinate equative
sentence of the type *avtomobil' byl v universal'nom transporte*
(L)  ("The car was in universal transport").

D.   Other miscellaneous examples support this:

(65) On privel v primer (A) vladel'ca (A) avtomobilja.
"He brought the car driver up as an example."

(66) Emu dali v nagradu (A) medal' (A). "They gave him a
medal as a reward."

These are inchoative locative constructions, which would corres-
pond to a non-inchoative:

(67)*Vladelec avtomobilja byl v primere.  "The car owner
was in example."

(68)*Medal' byl v nagrade.  "The medal was in a reward."

## 2.4.4.

Various solutions appear to be indicated here; the *sosto-
janie* class (A) might be analysable in terms of the proposal put
forward by John Anderson (1972), to deal with the English pro-
gressive. The underlying structure for both sentences in (51)
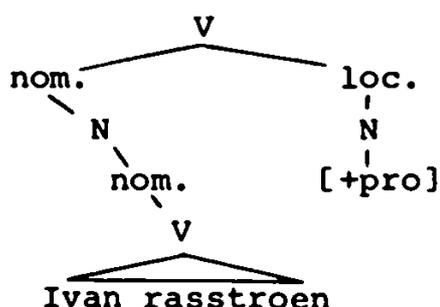would then (using Anderson's formalism) be that shown in fig.
11.:



Fig. 11

An independently motivated transformation would subjoin the lower
nom and the sentence it dominates to the empty pro-noun; the
empty N left under the higher nom would then function as a

'quasi-predicator' (empty node destined to receive one of the
lower arguments), which would later have *Ivan* attached to it.
The pro-noun dominating the remains of the lower sentence may
or may not be realised as *sostojanie*. The problem would still
remain as to what is the structure of the lower sentence in its
underlying form - perhaps the most plausible suggestion is that
this has *Ivan* in the locative, as one finds in other equative
sentences.

The B-type locatives are a relatively restricted set, deno-
ting class-inclusion; one would probably analyse them straight-
forwardly in these terms, with an optional pro-noun 'class'.
Although such an explanation is not possible for the examples
of C and D, it is noticeable that they are all inanimate nouns.
It might therefore be possible to state tentatively that equa-
tive sentences in which a noun is given a qualitative (intensive)
characterisation, have a locative subject, while those that are
given a characterisation in terms of some external correspondence
(extensive), have a locative predicate. (Subject and predicate
here used in superficial sense). Locatives which do not appear
to conform to this principle may be assumed to be brought in from
outside - e.g. from some such area as aspect or tense (e.g. (55),
(56) above). If the proposal is accepted that these locative
nodes are superordinate to the main predication (Anderson 1973a)
then this is no basis for making any claims about the presence
or absence of locative elements within the main predication.


2.4.5.

The claim that sentences with 'pivot' words are locative
in structure, which appears to be an incontrovertible fact, sug-
gests a natural proposal for verbs which take sentential comple-
ments. The point here is that nouns with roots identical to
those of complement-taking verbs are quite prominent among the
class of pivot-words suggested by Zolotova -

    e.g. *želanie* ("wish") - *ja želaju* S ("I wish S")
          *namerenie* ("intention") - *ja nameren* S ("I intend S")
          *vozmožnost'* ("possibility") - *ja mogu* S ("I can S")

-60-

*stremlenie* ("striving") - *ja stremljus'* S ("I strive
S") etc.

This set of data would appear to provide a useful argument for
hanging a case node on complement structures, and furthermore,
it is perhaps intuitively obvious that a complement structure is
in an equative relation relative to the verb that dominates it
(e.g. "I wish to go home" - "My wish is that I should go home").
Presumably one could either formalise this by a conventional
relative clause structure, (fig. 12) or by a slightly less redun-
dant formalism (fig. 13).

```
Fig. 12          loc                         loc              Fig. 13
            ╱‾‾‾‾‾‾╲                    ╱‾‾‾‾‾‾╲
       želanie      ja            želanie       ja
          |                           \
         loc                          loc
       ╱‾‾╲                            \
   želanie   S                          S
```
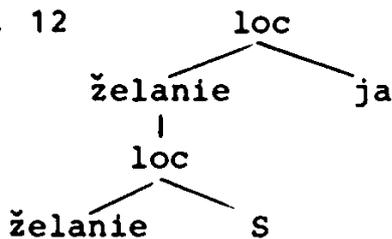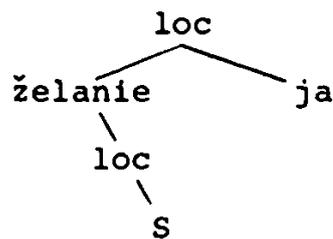
Although fig. 13 is a rather novel structure, it seems to repre-
sent fairly well the relationships involved, as long as there
is no trouble about mixing up which element of the locative
phrases is which. A further possibility is that fig. 13 is
derived from fig. 12 (cf. § 5 for discussion of this).


2.5.

   Human nouns as marked term of a locative predication chara-
cteristically define a relation of possession. This must, however
be qualified in at least two ways; if one considers sentences
of the type:

   (69) Lampa visit nad Ivanom.  "The light hangs over Ivan."

it is clear that they are directly relatable to sentences like
(26) - in other words, they are a question of simple, concrete
location. One might get over this difficulty by claiming that
all human nouns must be accompanied by a noun of position in
underlying structure when the location is purely concrete. The
second qualification is that human nouns are a slightly indeter-
minate class, and may at one time or another include nouns deno-
ting institutions, towns, countries, and all nouns which may
represent a collectivity of people. Both of these qualifications

would no doubt follow automatically in any well-worked-out theory
of grammar. For instance, in the following sets of sentences,
the (a) sentences contain a noun in a position exclusive to ani-
mate nouns, while the same noun in the (b) sentences is inani-
mate:

> (7o) a. Institut gotovit reformu. "The institut is pre-
> paring a reform."
> b. V institute gotovitsja reforma. "A reform is
> being prepared in the institute."
> (71) a. Sever ždal pomošč'. "The north was waiting for
> help."
> b. Na severe ožidalas' pomošč'. "Help was expected in
> the north."

This said, it is a fairly simple fact that the characteris-
tically human locative is *u* + genitive case in the meaning of
possession. With inanimate nouns, this can also denote posses-
sion, but in that instance, it can only be inalienable possession.
Possession in the general sense can also include possession of
abstract properties, something which may lie at the basis of a
certain subset of equative sentences (cf. §2.4.2.); examples of
possessive locatives are:

> (72) U nego kniga. "He has a book."
> (73) U menja prezrenie k sel'skoj žizni. "I have contempt
> for village life."
> (74) Ona sidela u sebja v komnate. "She sat in her room."

The locative nature of possesive relations has been observed
over a wide variety of languages (cf. Lyons 1968 §8.4.). The pre-
position *u* is used as a spatial preposition as well as one of
possession, but its particular spatial meaning is not necessarily
relevant to the specific meaning it has as a possessive, because
with human nouns as such there is little prepositional contrast.
I.e. if one disregards the purely concrete use of animate nouns
there is no opposition of locative parameters with them.

The 'converse' of the possessive relation is expressed by
*s* + instrumental case:

> (75) On prišel s knigoj. "He came with a book."

(76) On smotrel na menja s prezreniem.   "He looked at me
     with contempt."

It is interesting that *s* + instrumental case appears to be a con-
verse of itself in other circumstances (viz. sentences (28) and
(29)), which one can define in highly impressionistic terms, as
instances where the two nouns are of fairly similar status:
     (77)   a. On prišel s Ivanom.   "He came with Ivan."
            b. Ivan prišel s nim.    "Ivan came with him."
An interesting example of this kind is:
     (78)   My s Ivanom prišli. (lit.) "We with Ivan came."
This may have the meaning: "I came with Ivan", where Ivan is mani-
festly included in the plural pronoun *my*. This might suggest
that even when it is a converse of itself, *s* is related to a
locative of possession or class-inclusion.

     The motional equivalent of the preposition *u* in its pos-
sessive use differs from that of other prepositions in that it
is not a preposition at all but a simple case - the dative.
     (79) Emu (D) dali knigu.   "They gave him a book."
However, the situation is a little more complex than this; an
animate noun as marked term is very likely to be subjectivised:
     (8o) On polučil knigu.   "He received a book."

Furthermore, one must distinguish alienable and inalienable pos-
session, and this is reflected in the behaviour of possessive
locatives when the object possessed is affected by an inherently
dynamic (in the technical sense introduced in § 1.4.3.) verb.
Consider the following pairs of sentences:
     (81)   a.   Ona visela u nego (G) na šee (L).   "She hung
                 around his neck."
            b.   Ona brosilas' emu (D) na šeju (A).⁸ "She flung
                 herself on his neck."
     (82)   a.   Vera gasnet u nego (G) v duše (L).   "Faith is
                 dying in his soul."
            b.   Pokoj l'etsja emu (D) v dušu (A).   "Peace floods
                 into his soul."
     (83)   a.   Ona sidela u nego (G) v komnate (L).   "She was
                 sitting in his room."

   b. Ona vbežala k nemu (D) v komnatu (A). "She ran
    into his room."
 (84) a. On byl u sebja (G) doma. "He was at (his own)
    home."
   b. On zvonil k sebe (D) domoj. "He rang to his home."
 (85) a. Ona sidela u nego (G) v mašine (L). "She was
    sitting in his car."
   b.*Ona sela emu (D) v mašinu (A). "She sat down in
    his car."
   c. Ona sela k nemu (D) v mašinu (A). "She got into
    his car."

From these examples it can be seen that the static sentences with
u + genitive case (the (a) sentences), have two possible motional
variants depending on the character of the possession. When this
is inalienable, the possessive noun generally goes into the dat-
ive ((81) and (82)), and when it is alienable, it always goes in-
to the prepositional form k + dative case. (82b) shows that this
applies not only to physical motion; in fact, this covers any-
thing dominated by the abstract element 'dyn' introduced here.

 (86) Ona brila emu (D) borodu (A). "She shaved his beard."
 (87) Ėta situacija otravljaet emu (D) žizn' (A). "This
   situation is poisoning his life."
 (88) Remen' režet emu (D) pleČo (A). "The strap cut into
   his shoulder."

All of these examples involve causative verbs[9], which automati-
cally contain the element 'dyn' as an integral component of their
structure.


## 2.6.

   Underlying the whole of this discussion so far there has
been an unstated assumption which it is perhaps advisable to
bring forward as an explicit condition on the analysis. The basis
for claiming the status of locatives for non-concrete relations
(e.g. equatives, possessives, etc.) rests primarily on the mor-
phological form of the elements which express these relations
superficially. Secondarily, we can bring forward a notion

of economy of relations, which depends on the possibility of for-
mulating rules of great generality; if locative is used purely
as a name for a relation which is used with concrete, locational
nouns, and if there is any process generalisable between these
relations and those holding with other noun-classes, then the
restriction of the concept 'locative' to relations involving
locational nouns is redundant and will miss generalisations.
Such generalisations might be, for instance, the co-occurrence
of the node 'loc' with other abstract nodes in the underlying
structure. Thus it is possible to say that loc is not directly
dependent on erg in any of its realisations. Other generalisa-
tions might involve the most economical description of meaning
relations such as converses. For instance, if:

> (89) U nego kniga.  "He has a book."    and
> (9o) On v nesčast'e.  "He is in misfortune."

are both locatives, then:

> (91) On prišel s knigoj.  "He came with a book."    and
> (92) S nim nesčast'e.  "With him (is) a misfortune." (lit.)

may be uniformly described as their converse. Any putative 'loc-
ative' relation which did not fall into a general pattern and
required a lot of ad hoc restrictions would be a very dubious
construct. Such is the basis of any justification for the use of
the term 'locative' for  non-concrete relations. It will be amply
clear from the preceding and following analyses that such gener-
alisations, in my opinion, hold for a very wide class of rela-
tions indeed.

A third motivation for the postulation of abstract loca-
tives is the apparent parallelism of systems of meaning-relations
between concrete and abstract forms of expression. For instance,
it follows from a sentence describing motion, such as (93a), that
for some subsequent occasion, a sentence such as (93b) will be
appropriate:

> (93) a. John went to Moscow.
>
> b. John was in Moscow.

A similar implication may be made from inchoative sentences to
their corresponding static sentences:

(94) a. John got drunk.

b. John was drunk.

If further parallelisms of the same general type are discovered, then this will be powerful evidence in favour of the grammar incorporating some explicit link between concrete and abstract relations.

A further matter of some theoretical importance is the question of what it is about one or both of the elements in a locative relation that characterises that relation as equative, possessive, spatial, etc. It should be fairly obvious that the marked element is of crucial importance in determining what sort of relation is in question, but it is equally clear that this is not enough to differentiate all types of locative sentence, and that the other element is also of some importance in classifying locatives. One possible hypothesis is that it is the marked element, along with its type of connexion to the other element in the relation, which is crucial in this respect. For instance, a concrete noun as marked term of a locative will define an equative if the other element denotes an abstract quality, (e.g. (52) above) a possessive if the other noun is an inalienable part of the first, (e.g. (86)), and a concrete spatial relation otherwise (e.g. (1)). A collective noun may equally denote an equative of the quality type, otherwise it will be an equative of the class-inclusion type. This approach would surely be sufficient to characterise all possible locative relations.

2.7.

It is interesting to note the use of the dative of inalienable possession. As noted in passing above, the dative of coming into possession is not used very frequently with non-causative verbs (causative, of course, being *dat'* "to give", which does take the dative). The reason for this seems to be that the relation of possession is typically the relation of an animate to an inanimate noun, and, as animate nouns are strong in the hierarchy of raising suggested in § 1.4.4., the animate noun is therefore invariably subjectivised in the motional form of the possessive

relation (the fact that it is usually not made superficial sub-
ject in the non-motional possessive relation, as in most other
Indo-European languages, may be nothing more than a curious
idiosyncrasy of Russian grammar). However, at some (presumably
fairly late) point of the derivation, motional datives and
inalienable-possession datives will be embedded in the same con-
figuration; e.g. for:

(95) Ja dal emu (D) knigu (A).  "I gave him a book."
(96) Pyl' lezet emu (D) v glaza (A).  "Dust gets in his
     eyes."

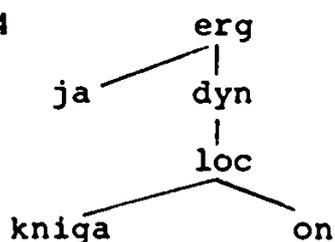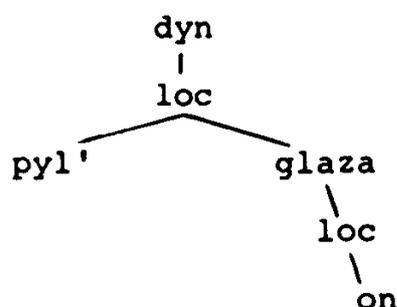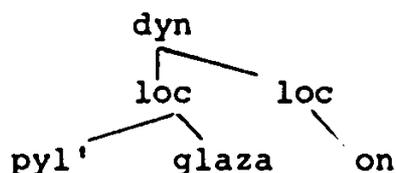there will be partial structures:



Fig. 14

Fig. 15 (underlying)

Fig. 16 (derived)

Dative will be introduced when an element at a fairly superficial
level (Shallow structure?) is directly dependent on a loc which
is itself directly dependent on a dyn. The structure in fig. 16
must be taken as rather tentative, as there has as yet been no
justification of any transformational type rules. However,
apart from the end at which the element is subjoined, this pro-
cess appears to be essentially identical to the extraposition
transformation. As it produces a satisfactory derived struc-
ture, I shall assume that that is correct until some considera-
tion is given to the problem of transformations. I have claimed
(§ 1.4.5.) that superficial cases are unitary elements at some
level of analysis; furthermore, Peškovskij claimed that the
dative was the only case with a single overall meaning (1956,
p. 299), although his evidence for this was rather weak.  I

have just proposed a set of conditions under which dative case
may now be introduced at a fairly superficial level. It may now
be asked whether this proposal can be extended to all uses of
the dative case in Russian.

There are many words similar to *dat'* in meaning, which also
govern a dative case, as well as accusative; e.g. *vručat'*,
("to hand"), *vozvraščat'* ("to return"), *predostavljat'* ("to give,
grant"), etc. These clearly fit into the desired pattern of
dative nouns. There is also a class of dative-governing verbs
which may be paraphrased by *dat'* + the corresponding deverbal
noun; these also fall under the same definition; e.g. *pomogat'*
- *dat' pomošč'* ("help"), *pozvoljat'* - *dat' pozvolenie* ("permit"),
*sovetovat'* - *dat' sovet* ("advise"), etc. Other verbs, which do
not have this option open to them may nevertheless have a similar
structure assigned to them by virtue of their clear similarities
in meaning with the verbs which do co-occur with 'auxiliary'
verbs of the type *dat'* ("give"), *okazat'* ("render"), *imet'*
("have") etc. Such verbs are: *mešat'* ("hinder" like "help", but
with a negative in it), *zapreščat'* ("forbid" - negative of "per-
mit"), etc.

Consider next the set of stative verbs in Russian analysed
by Miller (197o); this includes, for example, *ponimat'* ("under-
stand"), *znat'* ("know"), *pomnit'* ("remember"), *dumat'* ("think"),
*ljubit'* ("love") etc. Miller shows these to form a natural
class of verbs using both their grammatical behaviour and their
co-occurrence restrictions. Of interest here is the fact that
they all have paraphrases with a verbal or adjectival element and
the dative case of what is normally the subject of the verb;
e.g.:

    (97) Mne (D) pomnitsja ètot den'.  "To me is remembered
         that date."
    (98) Mne (D) dumaetsja, čto tak lučše.  "To me is thought
         that it is better thus."
    (99) Každomu (D) ponjatno, čto on bolen.  "To everyone is
         understood that he is ill."

These passive-type constructions sometimes have an inchoative

form, and, corresponding to that, a construction in which a verb
of motion is associated with the 'mental faculty' concerned:

    (1oo) a. Mne vspomnilos', čto on byl na koncerte.
          "I remembered that he had been at the concert."
       b. Mne (D) prišlo na pamjat' (A), čto on byl na
          koncerte. (lit.) "To-me came to memory, that
          he had-been at the-concert."
    (1o1) a. Mne (D) vzdumalos' pojti v gosti. "I (suddenly)
          thought of going and visiting someone."
       b. Mne (D) prišla v golovu (A) mysl' pojti v gosti.
          (lit.) "To-me came into the-head the-thought to
          visiting."

The (a) and (b) sentences are near-synonyms, both with datives,
but the (b) sentences show a clearer motivation for the dative
in them; quite clearly, these are datives of inalienable pos-
session, as the following sentences show:

    (1o2) Èto sobytie soxranjaetsja u nego (G) v pamjati (L).
       (lit.) "This occurrence is-retained at him in
       memory."
    (1o3) U menja (G) v golove (L) byla odna mysl'. (lit.)
       "At me in the-head was one thought."

These sentences contain the possessive preposition u.

    This analysis is made a little indeterminate by the fact
that there is another class of constructions, sharing basically
the same syntactic properties, but for which another analysis
is indicated, and the boundaries of these two constructions are
not at all clear. Consider:

    (1o4) a. Ja (N) xoču pit'. "I want to drink (am thirsty)."
       b. Mne (D) xočetsja pit'. (lit.) "To me is wanted
          to drink."
    (1o5) a. Mne (D) nado poslat' pis'mo. "To me (is) necessa-
          ry to send a letter."
       b. Ja (N) dolžen poslat' pis'mo. I ought to send
          a letter."

Also a number of constructions like this but which do not have
the two alternative realisations:

(1o6) Ja (N) nameren exat'. "I intend to go."

(1o7) Zdes' vam (D) nel'zja kurit'. "You can't smoke
here."

These have the characteristic that there are somewhat similar
constructions involving the noun derived from (or synonymous to)
the modal verb, along with the possessive *u*.

(1o8) U nego net oxoty k ėtomu. "He doesn't want to do
that." (lit.) "At him (is) no wish towards that."

(1o9) Ėto u menja dolg. "It's my duty."

(11o) Ja ne imeju namerenija vredit' vam. "I do not have
the intention of harming you."

(N.B. *Imet'* ("have") is used instead of *u* in a few constructions
with abstract nouns.)

However this explanation is also possible for some of the verbs
in the previously mentioned group:

(111) a. Ja (N) ponimaju teoriju (A). "I understand the
theory."

b. Mne (D) ponjatna teorija (N). "The theory is
understood to me."

c. U menja (G) ponimanie (N) teorii (G). "I have
understanding of the theory."[10]

(112) a. Ja (N) ljublju ee (A). "I love her."

b. Ona (N) mne (D) nravitsja. "She pleases me."

c. U menja (G) ljubov' (N) k nej (D). "I have love
for her."

Thus there is some doubt as to which analysis some of the verbs
in the 'stative' group can be subjected to. However, I hope it
is clear that, on one analysis or another, the dative can be
explained by a very general rule. It may seem a little odd that
the dative - a motional case - is used in these examples when
there is a non-motional case expression - *u* + genitive - being
used in near-synonymous sentences. However, if one considers
the form of the predicators involved, this seems less surprising.
The words *nado, dolžen, ponjatno, izvestno,* etc. belong to a
class of words which Soviet grammarians have long argued over -
the so-called 'category of state' (cf. Miller 1971b). Many of
this group have the ending *-no,* which is morphologically iden-

tical to the ending of the neuter short form of the past passive participle. Given the hypothesis that these are passive (which is supported by the obvious passivity of forms like *pomnitsja, xočetsja,* etc.) and also past, they are semantically perfective - e.g. *izvestno* means "it has become known". This would seem to be an explanation of the motional nature of the case forms with which they co-occur.

Similar arguments may be used to justify analyses of other uses of the dative, such as that with *vredit'* ("to harm"); one might compare:

(113) a. Progulka budet emu (D) vo vred (A). (lit.) "The
walk will be to-him in harm."

b. Kurenie vredit ego zdorov'ju (D). "Smoking harms
his health."

The dative in (113a) is clearly again a dative of inalienable possession, which would explain the other dative. It is interesting in this connexion that there is a similar antonymous expression: *byt' komu-nibud' (D) na pol'zu (A)* ("to be useful to someone"), also with a dative of inalienable possession. Assuming that there might be a superordinate term, of which *vred* and *pol'za* were hyponyms, an attractive representation might be devised for the so-called 'dativus (in)commodi' (cf. Klimonow et al. 197o). This locative of gain/harm might be superordinated to a whole sentence, to give final strings such as:

(114) On vbil ej (D) gvozd'(A) v stenu (A). "He banged
a nail into the wall for her."

(115) Mat' varila synu (D) ʰašu (A). "His mother cooked
kasha for her son."

The noun would then be deleted, as one might assume that *sosto-janie* is deleted in the constructions noted above (§ 2.4.4.).

Tɪ ịs has not, of course, approached anything like a complete aː;ɾ.lysis of the dative - I do not intend to give consideration tɾ every dative-governing verb, and I have not even provided explicɪ ː structures for those that I have analysed. However, I feel thːt what I have said is sufficiently explicit to serve as a basis ːor further research (cf. § 5.5. for further details).

# Footnotes to Chapter 2

1. There does, however, exist a noun *nutr* of a different
   inflexional class, which occurs only in the idiom:
   (i) Éto mne ne po nutru.  "That is not to my liking."
   It should also be mentioned that none of these 'positional
   nouns' in this paradigm accords with the regular pattern
   of inflexion.

2. I am indebted to prof. Y. Ikegami for the Japanese data:
   the Twi comes from Redden & Owusu (1963).

3. The question of which elements may occur in the A and B
   positions is treated in § 2.6.

4. A problem which arises in this representation is that
   there appears to be no possible difference in interpreta-
   tion between fig. 5 and a structure like:

   $$\begin{array}{c} \text{loc} \\ \diagup \diagdown \\ A \qquad\qquad \text{neg.} \\ \diagup \\ B \end{array} \qquad (\text{cf. § 1.4.3.})$$
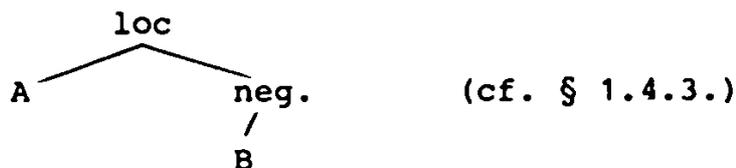
   This is perhaps a little worrying, and suggests that the
   decision to allow structures like this was unfortunate.
   However, nothing hangs crucially on this point in this
   study.

5. I disregard as irrelevant the possibility of the objects
   not standing or hanging respectively.

6. For this and for other examples, there is always the pos-
   sibility of saying that the two types of construction that
   I am trying to link could be generated by different under-
   lying structures; the onus, one might say, is on me to
   prove that these sentences are transformationally rela-
   ted. However, although it is clear that there must be
   some difference between these sentences (not necessarily
   a difference in 'cognitive meaning', whatever that is),
   the regularity of the alternations I am making a case for

seems to me to be adequate preliminary evidence for the transformational relatedness of these constructions.

7. All the verbs which may occur in this construction are verbs of perception: *videt'* ("see"), is by far the most frequent.

8. A distinction must be made between the dative of inalien- able possession and the so-called 'dativus commodi/ incommodi'. (cf. Klimonow et al. 197o and § 2.7. below) The latter cannot be the construction in (81) or (82) as it has the following syntactic features incompatible with them:

> (i) It is entirely optional, unlike the dative of inalienable possession:
> (81') *Ona brosilas' na šeju.
> (ii) It is used only with verbs of action where the subject acts intentionally; this excludes (82).
> (iii) The object may take a possessive determiner, unlike the object or motional complement with the dative of inalienable possession; thus we may distinguish:
> a.*Ona pričesala emu (D) ego volosy (A). "She combed his hair for him."
> b. Ona normirovala emu (D) ego rabotu (A). "She set his work for him."

Similarly:
> (81") *Ona brosilas' emu (D) na ego šeju (A). "She flung herself on his neck."

This is to be expected as the dative of inalienable pos- session is itself a possessive determiner of the object. Its ungrammaticality is therefore explicable in the same way as that of:

> c.*Ego (G) kniga Petra (G). "His book of Peter's."

9. By 'causative verbs' I mean simply verbs which denote an action leading directly to a change of state (including

creation or destruction) in the object. All of the verbs
in (86) to (88) fit this definition.

1o. (111c) and (112c) share a certain oddness characteristic
of many paraphrase sentences. This, however is not seri-
ous, and may be explained by the greater normality of
verbal expressions where these are available. Complicated
modifying elements added to such sentences render them
more natural owing to the lack of corresponding verbal
expressions:

e.g.  U menja očen' svoeobraznoe ponimanie teorii.
"I have (a) very idiosyncratic understanding (of the)
theory."

3.1.

It has already been shown (§2.1.) that it is possible, and structurally desirable, to derive spatial ablative from a combination of negative and locative rather than to posit an underlying 'abl' element. This however, is an analysis which is manifestly impossible for the superficially identical forms expressing a causative meaning, such as:

(1) On sdelal èto iz vežlivosti. "He did it out of politeness."

(2) On p'et ot skuki. "He drinks out of boredom."

Obviously there is no possible paraphrase or plausible explanation of these in terms of a gloss such as "He did it into non-boredom". The most plausible grouping of these is with the instrumental of agent or instrument, as an ergative case. Historically, these are very closely linked; in Old Russian, ot- ("from") + genitive was also used as an agent in the passive, while instrumental was used also for expressions of reason (cf. Popova 1969, p. 1oo; Bernštejn 1958, ch. 5. For modern Russian instrumental of reason see Finkel' 1958). For the time being, therefore, ablative prepositions may be regarded as complementary to the instrumental in the realisation of at least one underlying case.

Other uses of the instrumental have never been given a very convincing explanation as a whole, in spite of the number of works devoted to this task. Perhaps the only attempt at a really unified theory of the instrumental is that of Veyrenc (1971). He claims that the instrumental does not have a single meaning, but is characterised by the syntactic feature of embedding - i.e. a sentence with an instrumental always contains two underlying sentences, one of which is embedded in the other. He has some plausible things to say in this respect about double object verbs; e.g. one can say:

(3) Oni zasejali pole pšenicej (I). "They sowed the field with wheat."

but not:

(4)*Oni sejali pole pšenicej.

which would, were it possible, have the same meaning as (3), but
is not because the verb is imperfective and un-prefixed. Veyrenc
explains this by analysing (3) as two sentences:

> (5) a. Oni za ..... pole (A). "They 'za' (prefix) .....
>     the field."
>
> b. Oni sejali pšenicu (A). "They sowed wheat."

However, Veyrenc does not elaborate in sufficient detail on this
hypothesis for it to be adequately tested, and not all of his
arguments appear to lead in the same direction. It can therefore
still be said that the instrumental has not been given a satis-
factory explanation.

It is interesting in this connexion to consider the type of
sentence in which the instrumental or ablative preposition alter-
nates with the nominative or accusative; (for English parallels
cf. Fillmore 1968 p. 48):

> (6) a. Serdce (N) kipit gnevom (I). "(My) heart is seeth-
>     ing with anger."
>
> b. Gnev (N) kipit v serdce (L). "Anger is seething
>     in my heart."
>
> (7) a. Oni gruzili baržu (A) drovami (I). "They loaded
>     the barge with firewood."
>
> b. Oni gruzili drova (A) na baržu (A). "They loaded
>     firewood onto the barge."
>
> (8) a. Ona gotovila obed (A) iz diči (G). "She cooked a
>     dinner from game."
>
> b. Ona gotovila dič' na obed (A). "She cooked game
>     for dinner."

This class cf verbs is quite large, especially so when one inc-
ludes in it verbs which differ in prefix in the (a) and (b) uses
(e.g. sčistit' "clean (from)", očistit' "clean (of)", and also
completely suppletive pairs (e.g. dat' "give", snabdit' "supply").
The (a) and (b) forms in the above pairs of sentences are not
synonymous; the (a) forms have a meaning of exhaustiveness or
completeness not found in the (b) forms. This, it seems to me,
is not an isolated phenomenon; the expression of definiteness
in Russian is typically a function of word order in conjunction

with stress (Pospelov 197o):

    (9) a. Mal'čik prišel.  "The boy came."

        b. Prišel mal'čik.  "A boy came."

The sentences in (9) will be translated as shown, providing the normal sentence-final stress is present. This clearly has implications for the construction under consideration, in that the definiteness of the noun seems to correlate in some way with whether we are talking about the whole of the object or only a part of it. This discussion is inconclusive, but if an explanation is possible of the alternation in (6) - (8) in terms of 'information structure', as I have tried to show it may be, then the difference in meaning between the (a) and (b) sentences in the above examples may possibly have nothing to do with any difference of case or structure. Consequently, they will be alternate realisations of the same case structure. (For a different conclusion from the same sort of data cf. S. Anderson 1971).

It seems possible to characterise this class of sentences as those which contain a locative clause as the lowest sentence in their structure (for the primacy of the locative over the instrumental cf. § 2.1.). When the unmarked element is raised for objectivisation or subjectivisation, the (b)-type sentences are formed; when the marked element is raised, we get the (a)-type sentences. When the marked element is left behind, it is realised as a locative, the other element - as an instrumental, or an ablative preposition (the difference will be dealt with below §3.4.). This construction is clearly an example of 'converseness', as defined in § 2.2. Traditionally, at least some of the uses of the instrumental shown in this construction have been labelled 'instrumental of material' (Bernštejn 1958, ch. 3, also Mrazek 1964, Worth 1958), as in:

    (1o) Rabočie pokryli ulicu (A) asfal'tom (I).  "The workmen covered the road with asphalt."

    (11) Ona nabila podušku (A) puxom (I).  "She stuffed the pillow with down."

What other evidence is there for the analysis of the instrumental in terms of converseness of a locative? The data

brought in § 2.4.1. to account for equative sentences of the
type *delo v tom, čto* "The fact is (in) that..." seems to be a
convincing example of this analysis. However, there are problems
with this analysis, in that some equative sentences seem to have
a predicative locative, which may elsewhere be realised as an
instrumental (cf. § 2.4.3.). However, no final representation
has been attempted for these sentence-types yet; it is therefore
not possible to say whether they represent true counter-examples.
Even granted that they do not, the alternation of the instrumen-
tal and nominative in predicative position remains unexplained.

It is interesting to consider the direct lexicalisation of
the locative relation where deep and superficial subject coin-
cide. The verb *imet'* ("have") takes the accusative, but is
little used and usually occurs only with abstract nouns as
object; Nilov (193o) talks of "the verb *imet'*, the use of which
is not in the spirit of the language". This is perhaps rather
quaintly phrased, but it is undoubtedly true of standard Russian
usage.[1] Other lexicalisations of the locative relation do gov-
ern the instrumental, and are more frequently used.

> (12) Ivan obladaet xorošim golosom (I).  "Ivan has a good
>      voice."
> (13) Kapitalisty vladejut orudijami (I) proizvodstva.
>      "The capitalists control the means of production."
> (14) On videl damu s sobakoj (I).  "He saw a lady with a
>      dog."

These verbs are given in dictionaries of synonyms along with
*imet'*, and they typically denote the relation of possession,
whether alienable or not. It is difficult to see how they could
be analysed as anything other than the simple locative relations.
Given sufficient evidence for the converseness hypothesis, the
verb *imet'* could easily be marked as an idiosyncratic exception,
perhaps especially so as its main use is in V + N constructions
synonymous with the simple verb corresponding to the N; *imet'*
*vozmožnost'* ("have the possibility") - *moč'* ("to be able"),
*imet' namerenie* ("have the intention"), - *namerevat'sja* -
("intend"), etc.

Traditionally the 'instrumental of limit' is used to spe-
cify what part of the superficial subject is applicable to the
verb. The noun phrase in the instrumental must be in a relation
of being inalienably possessed as regards the subject. Mrazek
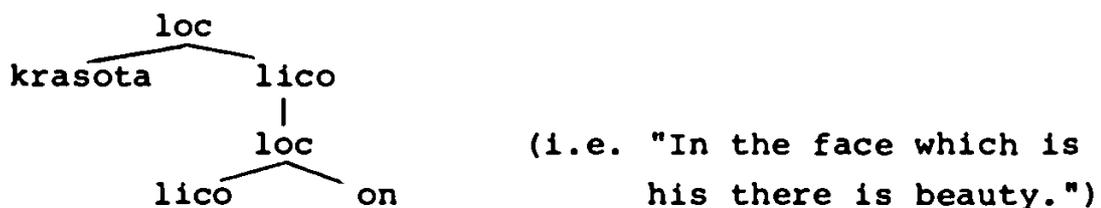(1964, ch. 5) provides the following examples:

(15) Oni otličajutsja drug ot druga vesom (I).  "They dif-
fer from each other in weight."

(16) On napominaet svoim obraščeniem (I) prikazčika.  "He
resembles a servant in his manner."

(17) On krasiv licom (I).  "He is handsome in the face."

These resemble the sentences considered by Fillmore (1968, p.23)
such as *Your speech impressed us with its brevity,* where a plau-
sible analysis suggests that the superficial subject is not even
a major constituent of the underlying matrix S. One might sug-
gest, for instance, that a sentence closer to the underlying
form of (17) is:

(18) Lico u nego krasivoe.  "His face is handsome."

The implications of this are obvious; this form of the instru-
mental can also be plausibly analysed as the converse of a loca-
tive, this time a possessive locative. The structure of (18)
will be something like fig. 1:

Fig. 1

```
              loc
        ┌──────┴───┐
    krasota      lico
                   │
                  loc            (i.e. "In the face which is
              ┌────┴───┐             his there is beauty.")
            lico      on
```

A fairly large number of verbs may govern the instrumental
case; of these, some may be analysed as passive, although they
are usually treated as separate verbs, and are more frequent
than their non-passive counterparts - e.g. *vosxiščat'sja* -
("admire"), *zanimat'sja* ("to be engaged (in)"), *interesovat'sja*
("be interested (in)"), etc.[2] The large mass of these verbs,
however, are inexplicable by any traditional syntactic process,
and must be considered fairly unmotivated, although they do
break down into classes. It seems to me, however, that an anal-

ysis in terms of converseness of locative can deal with a large
number of these verbs which are not obviously classifiable tog-
ether otherwise. This possibility is most marked in three
groups of verbs:

A.

The first can be passed over quickly as it is the class of
two-object verbs talked about above; more examples can be pro-
vided:

    (19) a. On nasypal zerno (A) v mešok (A). "He poured
           grain into the sack."
        b. On nasypal mešok (A) zernom (I). "He filled the
           sack with grain."
    (2o) a. On zatykaet vatu (A) v uši (A). "He stuffs cot-
           ton wool in his ears."
        b. On zatykaet uši (A) vatoj (I). "He stuffs his
           ears with cotton wool."

B.

Verbs denoting control or government normally take the
instrumental; a curious feature of these is that they may at
times be passivised normally:

    (21) a. Rabotnik rukovodit učreždeniem (I). "An
           employee runs the establishment."[3]
        b. Učreždenie rukovoditsja rabotnikom (I). "The
           establishment is run by an employee."
    (22) a. Milicioner upravljaet mašinoj (I). "The policeman
           drives the car."
        b. Mašina upravljaetsja milicionerom (I). "The car
           is driven by a policeman."

There is also a possible locative paraphrase which has the same
order of constituents as the passive (i.e. is a converse):

    (23) Učreždenie, pod rukovodstvom (I) novogo direktora
        (G) ...
        "The establishment, under the control of a new
        director ..."
    (24) Armija, pod komandoj (I) izvestnogo generala (G) ...

"The army, under the command of the famous general..."

There is also a curious near-synonymous expression with the double-prepositional construction *vo glave s* (lit. "in the head with") + instrumental:

>     (25) Učreždenie, vo glave s novym direktorom (I) ...
>          "The establishment, with a new director at its
>          head ..."

All this suggests that this expression is fairly complex, and that at least two locative phrases are involved; whatever the precise structures involved, it seems clear that however the locative is explained, the instrumentals may be explained as being the converse thereof.

C.

Mrazek (1964, §2.2.) analyses one class of verbs governing the instrumental as denoting "privedenie v dviženie" (bringing into motion). This seems to me to be a reasonable analysis of these verbs, and if one can analyse these verbs as being a causative dominating a locative whose subject is some hyponym of the noun dviženie ("motion"), the instrumental in the superficial realisation is explained as being a converse. Examples are:
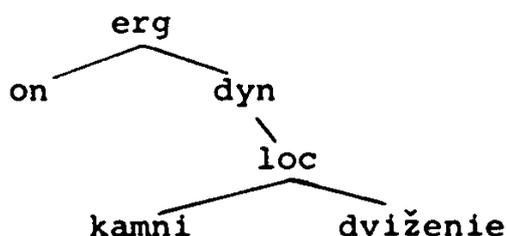
>     (26) On brosaetsja kamnjami (I). "He is throwing stones."
>     (27) On dejstvuet loktjami (I).  "He is elbowing" (lit.
>          acting with elbows)
>     (28) On kačal golovoj (I).  "He shook his head."

The structure of (26) would therefore be fig. 2:

Fig. 2

```
              erg
            ⟋       ⟍
        on            dyn
                         ⟍
                          loc
                        ⟋     ⟍
                  kamni        dviženie
```

(i.e. "He causes it to come about that stones are in motion.")

These three groupings of verbs will account for a very large num ber of instrumental-governing verbs with apparently unrelated semantic specifications.

It is possible to bring up a number of other isolated phen-

omena which may be explained by the converseness hypothesis; con-
sider, for example, the following pairs of sentences:

(29) a. On prines sebja v žertvu (A). "He brought himself
as (lit. *in*) sacrifice."
b. On žertvoval soboj (I). "He sacrificed himself
(instrum.)".
(3o) a. Dali emu v nagradu (A) medal' (A). "(They gave him
a medal as (lit. *in*) a reward."
b. Ego nagradili medal'ju (I). "(They) awarded him a
medal (instrum.)".
(31) a. Čto on skazal v otvet (A)? "What did he say in
reply?"
b. On otvetil dlinnoj reč'ju (I). "He replied with a
long speech."

This rather neat pattern of instrumental and locatives seems to
link up to some degree with the discussion of equative sentences
above (§2.4.), but the study of such phenomena as the predicative
instrumental is not sufficiently developed for anything very
definite to be said on this account. However, the evidence here
presented seems to me to allow little doubt that there are many
uses of the instrumental which are susceptible to a very general
explanantion in terms of converseness of locatives.


3.2.

Although several very plausible analyses have been sugges-
ted here for various constructions involving the overlapping
case expressions instrumental and ablative prepositions with
the genitive, it is nevertheless disturbing that for this con-
struction, there are three separate and apparently unrelated
analyses:
(i) Negated locative (ablative prepositions only)
(ii) Ergative (Causative? - instrumental (concrete nouns)
Ablative prepositions (abstract nouns))
(iii) Converse of locative (instrumental and ablative -
to be discussed)

It is interesting that two of these definitions are in terms of

locative, and it would be satisfying to define causative also in terms of locative. It is therefore interesting to note a certain similarity in the behaviour of abl and erg over and above those noted in Anderson 1971a §§11.2. - 11.3. (and above §1.2.4.). It was noted above (§2.1.) that the ablative must incorporate a dyn element, as it excludes domination by it, and that therefore it is the motional correlate of negative location. It has been shown (Miller 197o, and §1.4.3. above) that a locative cannot be directly dominated by an erg. This is shown in the fact that stative verbs do not have direct causative equivalents; also in the fact that locatives of state (§2.4.3.) have inchoative equivalents with the accusative; causatives of these also take the accusative; e.g.:

(32) a. General v otčajanii (L).  "The general is in despair."

b. General prišel v otčajanie (A).  "The general came into despair." (i.e. became despairing)

c. Poraženie privelo generala v otčajanie (A).  "The defeat brought the general to despair."

Thus (a), (b) and (c) here have increasingly complex structures, and in particular, (c) is built on top of (b) rather than on (a) However, there is no evidence that an erg cannot directly dominate another erg, as a hierarchy of causatives of indeterminate length is quite possible. One could of course, state these restrictions on dominance in the grammar and leave it at that; after all, that is the normal procedure of transformational grammarians. However, the fact that it may be directly dominated by an erg, in conjunction with the various facts about complementarity with ablative suggested by Anderson, indicate that erg too may incorporate a dyn element within it. I shall now go on to consider this possibility.

No attention was paid in §2.4.3. to the detailed structure of verbs like *prevrašcat'(sja)*, which were considered there in relation to the structure of the equative sentence:

(33) (=(63) ch.2): Avtomobil' prevraščaetsja iz universal'nogo transporta v časticnyj.  "The car is chan-

ging from (being) a universal means of transport to
a private one."

(34) Červjak prevratilsja v babočku (A).  "The worm turned
into a butterfly."

(35) Socializm prevratil utopiju (A) v nauku (A).
"Socialism has turned utopia into a science."

It was stated in chapter 2 that (33) might contain a predicative
locative; in fact, if it contained one, it would contain two,
connected in some way as shown in fig. 3:

Fig. 3
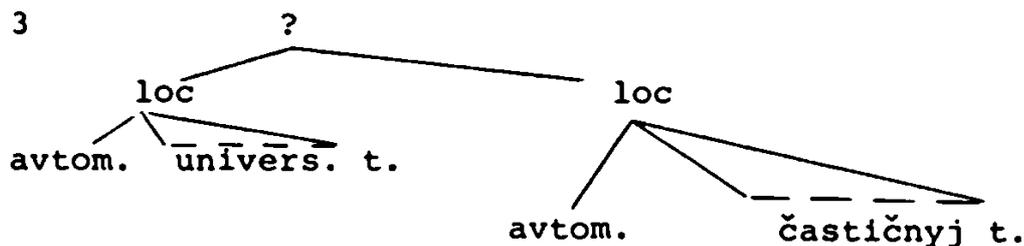


It seems likely that (34) must be analysed in terms of a variable,
for if the object in question had a name (if it was a prince in
a fairy story, for instance), a sentence like (36) would be pos-
sible:

(36) Aleksandr prevratilsja iz červjaka (G) v babočku (A).
"Aleksander turned from a worm into a butterfly."

In (35), utopia retains its identity, merely having the impli-
cation that it was not a science before socialism made it so.
all of these will, however, involve the node ?, which is used in
fig. 3. This node is clearly motional, and appears to define
the left-hand node as being ablative, and the right-hand node as
being allative, without apparently having a neutral argument as
does loc.

This structure brings to mind the interesting analysis of
causative constructions produced by V.P. Nedjalkov and G.G.
Sil'nickij (1969). They suggest that the causative construction
is composed of two 'microsituations' linked by a causative con-
stant; each microsituation consists of an object and a state of
that object. This has a remarkable similarity to the structure
represented in fig. 3. It is furthermore interesting that the
'antecedent situation' is associated with the instrumental and
with ablative prepositions, while the 'consequent situation' is

composed of locatives of various types:

    (37) a. My vernulis' iz-za doždja (G). "We returned
          because of the rain."

        b. My vernulis' iz-za bolezni (G) brata. "We returned
          because of (lit. out of) (my) brothers'
          illness."

        c. Ona vyšla zamuž iz pokornosti (G) k materi.
          "She married out of obedience to her mother."

        d. On pokrasnel ot styda (G). "He blushed from
          shame."

        e. Svoim krikom (I) on ispugal menja. "He scared
          me with his shout."

        f. Družnymi zabastovkami (I) rabočie zastavili
          xozjaev koncerna otstupit'. "With unanimous
          strikes, the workers forced the owners of the firm
          to give away."

    (38) a. Ty vinovat v ego uxode (L). (lit.) "You are
          guilty in his going-away."

        b. Ego ošibka privela k našemu poraženiju (D).
          "His mistake led to our defeat."

        c. Ego slova tolknuli ee na prestuplenie (A).
          "His words drove her to crime."

Although the analysis in the above-mentioned article is not for-
mulated as an empirical hypothesis but rather as an initial
framework for further analysis, the data contained in it seems
to offer some indication of how a purely linguistic justificatioɪ
of this hypothesis might be advanced. Let us assume that the
node in question is in fact the <u>?</u> node. Assuming that the alter-
nation of individual ablative or locative prepositions could be
given some principled explanation, probably on the basis of theiɪ
lexical environment, it seems likely that the other distinctions
can be accounted for on a purely syntactic basis. The distinc-
tion between (38) and (37) is automatically accounted for on
the basis of which side of the <u>?</u> node the case expressions
originate. The instrumental in (37 e-f) might possibly be
accounted for on the basis of its being 'dislocated' or 'topica-

lised' out of the antecedent situation.

Thus the ? relation appears to give a satisfactory representation both of causative constructions and of *prevraščat'sja* constructions. It must be noted, with regard to the latter, that they imply that the antecedent situation is no longer operative at the time of the consequent, while this implication does not exist for causative sentences. This, in fact, provides a basis for the differentiation of the two constructions, the one being realised when the two linked predications are compatible, the other when they are incompatible with each other. It will evidently be a considerable problem defining for these purposes what is meant by being incompatible, but this problem can safely be ignored in this study.

It has already been suggested that in sentences like:
(39) On uexal iz Moskvy v Leningrad.  "He went from Moscow to Leningrad."
the ablative is the motional form of a negated locative, and that the pair of prepositional phrases in it represent a progressive definition of the destination - i.e. the first prepositional phrase conveys the information that the destination is somewhere other than Moscow, while the second conveys the further, more precise, information, that it is Leningrad. This can be seen as rather like such phrases as *včera v tri časa* "yesterday at three o'clock", where the second time phrase conveys more precise information than the first. However, sentence (39) conveys more information than this; it also specifies that his location before going to Leningrad was Moscow. This information is conveyed if the ? relation is used to conjoin two locative phrases, as in fig. 4.

Fig. 4
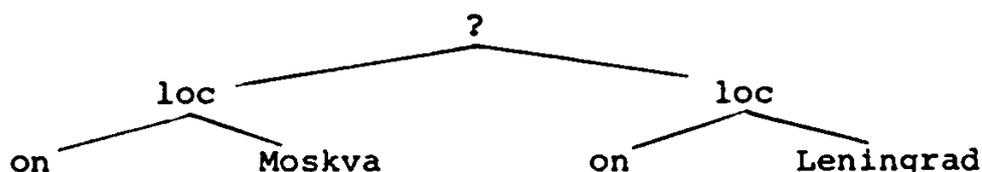


It is interesting that this analysis captures the generalisation stated by Anderson (1971a §8.2.) that all motional sentences contain an ablative, without having to postulate a separate (and

highly redundant) case, as was at first posited by Anderson. In
this sense, it is a preferable analysis; but where does it leave
the element 'dyn', which was postulated on fairly solid evidence
(§ 1.4.3.)? It seems to me that there are several advantages if
'dyn' is said to be a two-place relation rather than a one-place.
Firstly, we can abandon altogether the idea of one-place (intran-
sitive - § 1.4.3.) verbs in underlying structure if dyn becomes
two-place, and if we accept Anderson's suggestion (1973b) that
negative sentences are dominated by a predication which differs
from an existential only in its case structure.⁴ This two-place
dyn is the ? which was posited above; it is therefore not sur-
prising that the hypothetical ergative case we have now rejec-
ted appeared to incorporate dyn in its structure. Furthermore,
where the antecedent and consequent predications are explicit,
only an analysis in terms of a two-place relation is satisfactory.
It is clear that, at least in derived structure, dyn is often
likely to dominate single elements, but this is hardly surpris-
ing; structures with unrealised nodes are common throughout the
transformational literature - for instance in the short passive,
the 'deep subject' remains unrealised; it is only by some such
procedure that certain ambiguities can be represented in a gram-
mar:

    (4o) a. Biblioteka byla otkryta.  "The library was open-
           (ed)."

         b. Biblioteka byla otkryta bibliotekarem.  "The
           library was opened by the librarian."

and in English:

    (41) a. The lights were dipped.

         b. The lights were dipped by the oncoming driver.

In both of these pairs of examples, the short passive and the
adjective are identically realised, and only the presence of an
agent disambiguates them in favour of the passive. The fact
that dyn may have an empty argument is consequently in line
with tradition; the notional justification for it having this
extra argument is that one cannot go anywhere or become anything
or begin anything without having been elsewhere or having been

something else or having done something else respectively, even
if these prerequisites are not specified on each occasion that
they might be.

Returning to the characterisation of the instrumental case
and ablative prepositions, the problem appears to be reduced from
three to two groups by this reanalysis; on the one hand, the
leftmost argument of a dyn relation (i) and (ii) in §3.2. above),
on the other, the leftmost argument of a loc relation. It seems
very little effort to generalise this and state simply that ins-
trumental/ablative forms are characterised in Russian simply by
their position to the left of a relator. This definition, how-
ever, raises some doubts about the naturalness of such a general-
isation: what at first seemed to be an arbitrary decision (i.e.
that the left-right order of arguments of the two predicates loc
and dyn should be as I have described it above) now takes on the
status of a necessary constraint if the rule of instrumental/
ablative insertion is to be made to work. I think that the order
of arguments of the dyn predicate has a certain intuitive cor-
rectness in that the temporal order of events is reflected in
left-right ordering. This, of course, is not a particularly
cogent argument, but it does at least avoid any counterintuitive
proposals. The choice of either order for the loc predicate
seems to me much less obvious: an intuitive notion of 'logical
subject' will give confliction results when applied to locative
predications of varying sorts. On the other hand, the fact that
the rule for the insertion of instrumental/ablative can only be
made to work on the assumption that the order of arguments is as
I have said should count as some sort of evidence that this
order is 'correct' (whatever that might mean in this context).
In the absence of any evidence the other way, I shall then take
this to be established, although with the mental reservation
that the evidence for it is not very strong.

3.3.

In view of the fragmentary nature of the argument in this
chapter, some recapitulation of the argument would seem desir-

able, before we consider the problem of how to differentiate the
ablative and the instrumental from each other, given that so far
they have been given a definition which lumps them into one class
and given also that they are formally quite distinct from each
other. The instrumental case and the ablative prepositions app-
ear to be interrelated in terms of at least some of their pos-
sible uses, as well as (much more closely) historically. Three
more or less homogeneous groups may be discerned in a close ana-
lysis of these constructions:

   (i) Spatial ablative (this excludes the instrumental case):

(42) On ušel ot okna (G) k stolu (D). "He went from the
     window to the table."

(43) Ona vzjala knigu so stola (G). "She took the book
     from the table."

  (ii) Causative (including agent and instrument):

(44) Ja sdelal èto ot vozmuščenija (G). "I did it from
     indignation."

(45) On ubil sobaku nožom (I). "He killed the dog with a
     knife."

(46) Sobaka byla ubita im (I). "The dog was killed by
     him."

 (iii) Converse of locative:

(47) On tret grud' (A) maz'ju (I). "He rubs his chest
     with ointment."

(48) On organizuet obščestvo (A) iz molodyx ljudej (G).
     "He is organising a society of (from) young people."
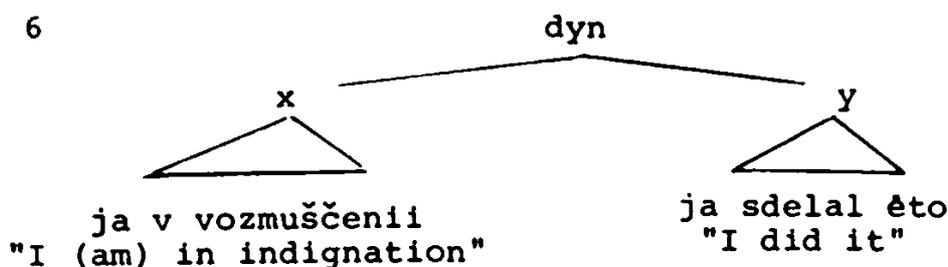
(49) Volnenie ovladelo im (I). "Emotion overcame him."

Given an analysis in which causation and motion are together rep-
resented by a relational element 'dyn' whose leftmost element is
defined in terms of some notion like 'source', the instrumental/
ablative group may collectively be defined as the leftmost node
of any relation, realised under certain conditions. Thus (42)
will have the underlying structure (greatly oversimplified, of
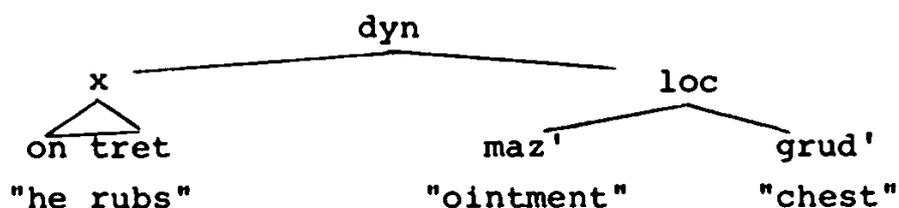course) in fig. 5:

Fig. 5

```
                        dyn
          loc                    loc
     on        okno      on            stol
```
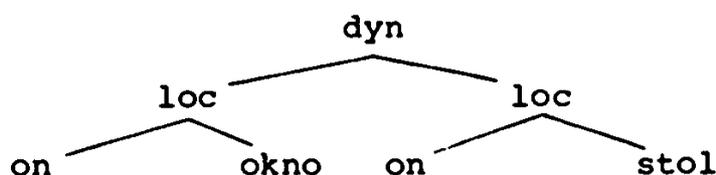
(44) will be represented as in fig. 6, remembering that no
analysis has as yet been carried out on its component elements:

Fig. 6

```
                        dyn
        x                          y
   ja v vozmuščenii          ja sdelal éto
 "I (am) in indignation"       "I did it"
```

(47) will be as in fig. 7 again taking into account the fact
that only part of it has been subjected to analysis:

Fig. 7

```
                    dyn
     x                         loc
  on tret            maz'            grud'
  "he rubs"        "ointment"        "chest"
```

Superficial subjects and objects will presumably be formed
by some sort of raising transformation (I shall discuss transfor-
mations in later chapters), leaving the unraised elements to be
realised configurationally as ablative, instrumental, locative,
etc. Given some independent justification of the transformatio-
nal operations involved, this appears to be a fairly satisfact-
ory procedure, at least insofar as it isolates the instrumental/
ablative from other possible realisations of cases. Problems
remain, however, in the differentiation of ablative and instru-
mental from each other. In its spatial use, ablative does not
intersect with the instrumental, which is used as a 'prolative'
(Anderson 1971a §11.1.). It is therefore interesting that other
prolatives in Russian - *po* + dative ("along") and *čerez* + accu-
sative ("through") (cf. §2.1. above) - also may be used as
expressions of causation or agency:

    (5o) a. On vozvraščalsja domoj lesom (I).  "He came home
           through the forest."

       b. On byl ubit tovariščem (I). "He was killed by a
          comrade."

(51) a. On idet po ulice (D). "he is walking along the
          street."

       b. On ne prišel po bolezni (D). "He didn't come
          through illness."

(52) a. My exali čerez Gruziju (A). "We were going
          through Georgia."

       b. Ob"edinenie okazyvaet pomošč' čerez svoix
          torgovyx partnerov (A). "The organisation offers
          help through its trading partners ."

It can hardly be a coincidence that virtually any form contain-
ing an ablative (for evidence that prolatives contain ablatives
see Anderson loc. cit.) has some sort of causative interpreta-
tion. The problem is to find any difference of a systematic
nature between ablatives and prolatives.


3.4.

     It is interesting that fig. 5 and 6, which represent sen-
tences which will contain ablative prepositions, differ from
fig. 7 in that the latter does not have a common element within
the two arguments of dyn (although the inalienable possession
of *grud'* "chest" might be marked by a second occurrence of *on*).
Here the interesting question arises of the difference between
the use of the instrumental and the use of the ablative in
converse-locative examples. Although fig. 7 is a reasonable
representation for those with the instrumental, it will not do
for those with the ablative; take a sentence like:

     (53) On svil bečevu (A) iz travy (G). "He wove a rope
          from grass."

This is almost synonymous to the sentence:

     (54) On sdelal bečevu iz travy. "He made a rope from
          grass."

The implication is that the rope was created, and this would
not be captured in a structure like fig. 5. Furthermore, one
can use this expression with *iz* within a noun phrase, to denote

the material with which something is made: thus *bečeva iz travy*
means simply "a grass rope", just as *dom iz kamnja* means "a
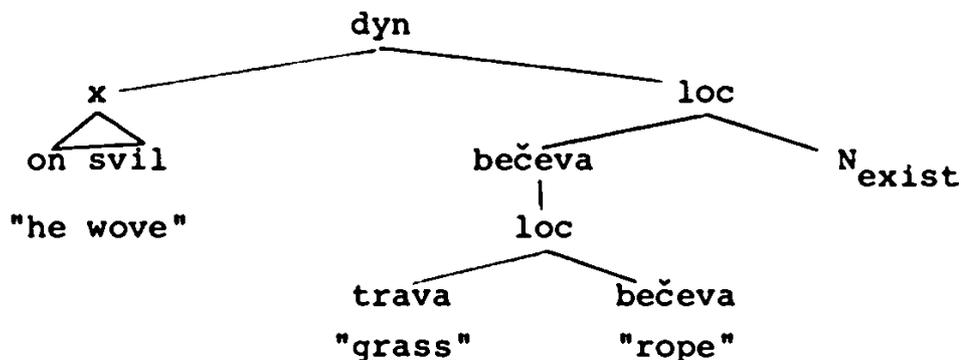stone house" and *ložki iz serebra* means "silver spoons".

(55) U nego bečeva iz travy. "He has a grass rope."
corresponding to (53), but one cannot say:

(56)\*U nego barža drovami (I). "He has a barge with
       firewood." or:
    \*U nego uši vatoj (I). "He has ears with cotton
       wool."

corresponding to (7) or (2o). (53) might therefore have a struc-
ture something like that in fig. 8:

Fig. 8[5]



It is likely that the converse type of sentence has a different
structure from this, unlike the pairs which take instrumental.

(57) On svil travu v bečevu. "He wove (the) grass into
       rope."

The ablatives considered up to now are those which are in direct
relation (i.e. in the same simple predication) with elements
identical to elements in some other part of the sentence struc-
ture. A tentative hypothesis, therefore, is that ablatives are
realised in the positions defined for instrumentals and abla-
tives when the element with which they are in direct relation
has been deleted under identity with some other element of the
sentence. As it stands, this hypothesis is obviously wrong,
taking into account such examples as:

(58) My vernulis' iz-za doždja (G). "We returned because
       of the rain."
(59) Iz-za šuma (G) ničego ne slyšno. "Because of the

noise, nothing is audible."

Both of these ablatives can be seen as nominalisations, although they do not seem to be at first glance. The only way in which they can receive a sensible interpretation is that they be nominalisations of some sort of existential predications; as such, they would become a single element, and thus be formally equivalent to a predication in which a node has been deleted. It seems, therefore, that there is some hope for the analysis I have suggested above for the ablative; however, the detailed working-out of such an analysis is not easy, and must depend on an explicit sequence of transformations in conjunction with detailed underlying structures for each type of sentence. None of this will be attempted now, but in § 5., I hope to make more explicit the nature of the transformational processes involved in the derivation of constructions of the type considered in this study.

## Footnotes to Chapter 3

1. R.D. Keil informs me that recent usage surveys show the use
   of *imet'* increasing even in such sonstructions as:

   (i) Ja imeju knigu.  "I have a book."

   I do not really know what to make of this fact in terms of
   the data I am discussing.

2. It is interesting that these verbs demand an animate object,
   which is made subject by the passive, and normally take an
   inanimate subject, made instrumental complement by the pas-
   sive. It seems likely that this could be as result of the
   tendency to subjectivise animate nouns.

3. Apparently the instrumental in (21a) is frequently replaced
   by an accusative in the everyday speech of today, although
   the norm is still the instrumental in the literary language.
   I am indebted to R.D. Keil for this information.

4. This suggestion will not be developed here, as it presents
   certain difficulties whose solution might involve changing
   certain aspects of the model, without affecting the analysis
   of cases. Throughout this thesis, neg will be considered
   an operator dominating a single relation.

5. The loc directly dominated by *bečeva* is simply the equivalent
   in dependency terms of the standard NP S analysis of relative
   clauses in transformational grammar.

4.1.

The nominative case in Russian appears at first sight to
be the most straightforward of the cases to describe, and this
may in fact be so. It was stated above (§ 1.4.4.) that the sub-
ject of a sentence might be formed simply by raising a noun
above all dominating elements in a sentence, making it in effect
the dominating element; this would accord with the traditional
definition of the nominative case as the case of an independent
noun; e.g. "Der N ist die merkmallose Form für die Nennfunktion
der Rede." (Jakobson 1936, p. 59) "The meaning of the nominative
case is the absence of any relation or simple naming." (Švedova
197o, p. 329)  Apart from the nominative in subject position
and in isolation, this analysis is also supported by the use of
the nominative in dislocated elements, especially in colloquial
speech (Lapteva 1966, Popov 1964):

> (1) Ona gde tarelka (N)?  "It is where, the plate?"
> (2) Maša i ja (N), my s nej eli rybu.  "Masha and I, we
>     ate fish."
> (3) Aviacija (N) - v nej (L) kak v zerkale (L) otražaetsja
>     trud našego naroda.  "Aviation - in it as in a mirror
>     is reflected the work of our people."

Dislocated elements can also be in oblique cases, but this is
not a counterargument against this analysis, insofar as the dis-
located elements and their copies inside the sentence must be
in the same case if the dislocated element is not nominative:

> (4) Ix (G) mnogo, ětix ograničenij (G), v žizni rebenka.
>     "There are many of them, (of) these restrictions, in
>     the life of a child."

The only construction of the nominative which might be likely to
cause much trouble in any analysis of the nominative is where
it appears in predicative position in equative sentences; I
have already confessed (§§2.4.o. and 3.1.) that I am unable to
account for the alternation of nominative and instrumental in
predicative position in equative sentences. However, although
the motivation for this alternation is obscure, the mechanism

which produces it can be given a fairly plausible explanation
in terms of the account I have proposed so far. Jakobson
already provides some clue for this when he shows that nouns in
apposition and predicate nominals are identical in the relation
they bear to the element they determine - using more recent
terminology it seems basically correct to say that predication
asserts a relation while apposition presupposes the same rela-
tion. To use Jakobson's example (1936, p. 59):

(5) Onegin - dobryj moj prijatel' (N). "Onegin is my
    good friend."

(6) Onegin, dobryj moj prijatel' (N), rodilsja na bregax
    Nevy. "Onegin, my good friend, was born on the banks
    of the Neva."

One might add, to make the construction even clearer:

(7) On dal podarok Oneginu (D), dobromu moemu prijatelju
    (D). "He gave a present to Onegin, my good friend."

where noun and appositive element are both in the dative case.
Clearly, when apposition is at work, the principle governing
the assignment of case to the appositive element is concord
rather than any primary case-marking rule. There is every jus-
tification therefore for claiming that the nominative in a pre-
dicate nominal is also arrived at by a process of concord. Thus
one can say that when the predicate nominal is in the nominative,
concord is responsible for it, but when it is in the instrumen-
tal, it is arrived at by standard case-introduction.¹ The moti-
vation for a choice one way or the other is unclear, but the
mechanism is clear. The reason that this cannot be tested on
other cases than nominative is that the 'second accusative' and
'second dative' are virtually dead now, having been replaced by
the instrumental, which is introduced by the normal case-intro-
duction mechanism. For example, in the 19th century one could
find sentences of the type:

(8) On zastal svoju ženu (A) odetuju (A). "He found his
    wife dressed."

This would usually be, in modern Russian (cf. Kovinina 197o):

(9) On zastal svoju ženu (A) odetoj (I).

The second dative was often used in Old Russian:

(1o) Tak dobro i ljubezno mne (D) .... nebom prikrytu (D)
byti. "It is so good and nice for me to be covered
by the sky."
(Avvakum - 17th century)

(cf. Borkovskij 1968:2, pp. 137-145). The only traces remaining
of this construction are with *odin* ("alone") and *sam* ("my/your/
him/her-self", etc.) in infinitive constructions (cf. Comrie
1974 for a detailed analysis):

(11) Teper' emu (D) predstoit zaščiščat'sja samomu (D).
"Now he is faced with defending himself."

(12) Xotelos' šagat' po l'du odnomu (D). "I felt like
walking over the ice alone."

The mechanism of nominative-introduction is therefore
fairly trivial, the only problems being those of finding out why
certain elements become subjects and others do not, what criteria
are relevant in raising elements. But the questions which have
remained unanswered in this section are questions which are
still not adequately treated in any way in the existing litera-
ture. They are not problems in describing the nominative case,
but much wider issues, which demand careful study.

4.2.

The accustaive case poses more of a problem; it is not
significant merely to say of it, as many Russian grammarians
seem to do (e.g. Staniševa 1966) that it is simply the case of
the direct object of a transitive verb, as this is an example of
a common sort of circular argument; no adequate definition of
direct object in Russian has to my knowledge been proposed, that
does not simply say that it is the strongly-governed element in
the accusative case after a transitive verb. 'Objects' in the
instrumental, dative or genitive or with a preposition are exclu-
ded from the class of direct objects simply because they are not
accusative; e.g.: -

"The basic and typical function of the accusative
case is the expression of the direct object of tran-
sitive verbs" (Vinogradov 1952-4 vol 1, p. 125).

"Some verbs express actions which pass directly
onto another object, this object being denoted by
the accusative case without preposition. .....
These verbs are called transitive." (ibid., p. 413)

Nor is it possible to write off the non-accusative complements
as very exceptional; as has already been seen, there are large
classes of verbs with regular semantic characteristics which
govern complements in cases other than the accusative. A further
argument against this definition of the accusative is that it
does not account for its use with prepositions, which is extre-
mely regular.

It is on the basis of these prepositional constructions
that it might most easily be possible to construct a definition
of the accusative case on semantic grounds. It has already been
shown (§ 2.1.) that certain locative and instrumental-governing
prepositions govern the accusative case when motion to the object
is involved rather than location in it. It is clear that the
preposition itself cannot correspond to motion, as it is common
to both the static and the motional forms of location. The pre-
position expresses location; whether it is motional or not is
expressed by the presence or absence of the accusative case.
If so, one would expect this to be reflected in the other uses
of the accusative, and it is this hypothesis which will be tes-
ted here. It has been established that the element which under-
lies motion also underlies changes of state and causation - any-
thing that could possibly be called 'dynamic'. It is not abso-
lutely clear how this element is incorporated into all verbs,
and therefore it is not easy to prove that the accusative is
indeed conditioned by this element, but I shall try to demons-
trate that circumstantial evidence is in favour of this analysis
even when I am unable to provide explicit structures in the
analysis of certain verbs.

Given the analysis of causatives propounded in chapter 3, it is clear that the predication which contains the eventual superficial object is the non-subject element of a dyn predication. The analysis of double-object verbs given above (§ 3.1.) shows that there is a syntactic process which can apply to either of the elements in this predication, which selects an element and makes it directly dependent on dyn. I have claimed that this process is essentially just that of raising. Causative verbs in Russian are overwhelmingly accusative-governing; this includes verbs of change of mental state:

> (13) Menja (A) trevožit otsutstvie pisem. "I am worried
>      by the lack of letters."
> (14) Vse èto besit anglijskix konservatorov (A). "All
>      of that infuriates the English conservatives."

verbs of change of position:

> (15) Oni položili ranenogo (A) na nosilki. "They placed
>      the wounded man on a stretcher."
> (16) On vedet arestovannogo (A) v tjur'mu. "He is taking
>      the arrested man to jail."

verbs of change of quality:

> (17) Tabak sušit gorlo (A). "Tobacco dries up the throat."
> (18) On belil steny (A). "He was whitewashing the
>      walls."

verbs of creation:

> (19) On stroil sebe novyj dom (A). "He built himself a
>      new house."
> (2o) On pišet pis'mo (A). "He is writing a letter."

verbs of destruction:

> (21) Snesli stary dom (A). "(They) demolished the old
>      house."
> (22) Sovetskaja vlast' uničtožila bezraboticu (A).
>      "Soviet power has abolished unemployment."

(An exception to this pattern of accusative government is: -

*dosadit'* ("to annoy"), which governs the dative. It is the cau-
sative of *dosadovat'* ("to be annoyed")).[2]

Although I have no statistical evidence to prove it, I am
fairly sure that this group of verbs accounts for the vast maj-
ority of accusative-governing verbs, and that, conversely,
verbs which do not govern the accusative are overwhelmingly
non-causative. The inchoative nature of sub-predications of
causative verbs is fairly common knowledge; it was also an
integral part of the analysis of causatives in Lakoff 197o, and
it is difficult to see how any lexical-decompositionist account
of causative verbs could avoid this conclusion.

Of course, this definition would also apply to noncau-
sative inchoative verbs, and these are generally accusative-
governing; e.g. *polučat'* (receive), *priobretat'* (acquire), *pri-
nimat'* (take), etc. An exception would be a verb like *ovladet'*
(take possession of) which governs the instrumental. (It is
interesting that both *dosadit'* and *ovladet'*, while exceptions
to the accusative, otherwise conform to the rules already pro-
vided; if *dosadit'* governed the instrumental or *ovladet'* the
dative, then we would be in trouble.) It is not entirely clear
how far it is possible to take this analysis; it is obviously
possible with *vspomnit'* (remember), as (8) is a near-synonym of
(9):

> (23) Ja vspomnil êto (A).  "I remembered that."
> (24) Êto prišlo mne (D) na pamjat' (A).  "That came to
>      my memory."

(24) might have the structure:

Fig. 1
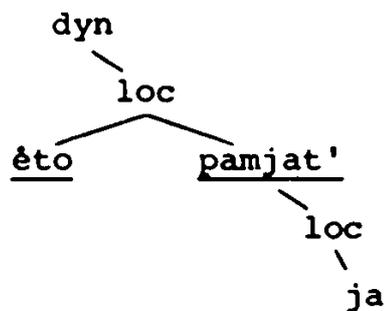


The superficial subject of (23) is chosen from the lowest, pos-

sessive, predication.

What is not nearly so clear is whether this analysis can be extended to all verbs involving mental faculties; e.g. *ponimat'* (understand) and *znat' (know)*. The problem with these verbs is that they are not inchoative verbs, but I have suggested above that they contain a dyn element of 'perfectivity', (§2.7.). It is not at all obvious to me how a dyn used in a perfective sense could be differentiated from a dyn used in an inchoative sense - perhaps there is some other element added to the perfective version; for instance I would have to give the (inchoative) sentence:

(25) Ja èto (A) ponjal.   "I came to understand it."

the structure:

Fig. 2



(For the complement structure cf. §2.4.5.)
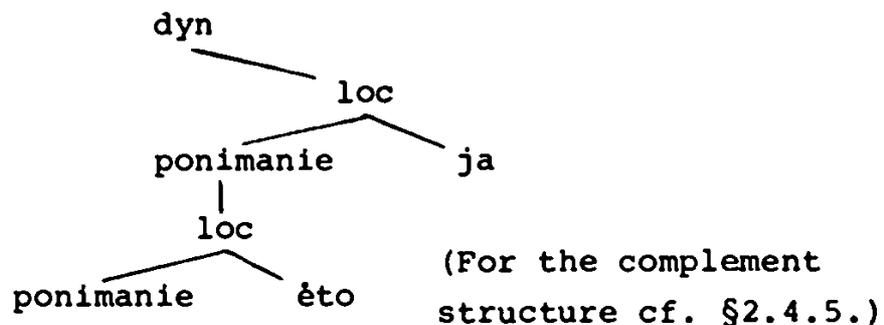
The structure of the 'perfective passive' variant of this would have to include this structure, although it is virtually synonymous with the non-inchoative, non-passive, non-perfective sentence, which is represented by fig. 2 without the dyn. This perfective sentence is:

(26) Èto mne (D) ponjatno.   "It is understood to me."

I do not wish to get involved in an analysis of aspect. Suffice it to say that this hypothesis about the motional nature of the accusative is confirmed in this instance if the perfective incorporates fig. 2 as part of its structure. This seems to me most likely; however this may be, the accusative in these verbs seems to be accountable for by the presence of dyn in some structure. There appears to be some syntactic justification for this, as the 'category of state' element (cf. Miller 1972), has no passive or use with the instrumental, as distinct from other verbs:[3]

(27)*Èto ponjatno vsemi (I). "That is understood by everyone."

(28) On ljubim vsemi (I). "He is loved by everyone."

(29) Vsemi (I) vspomnilos⁚ ee penie. "By everyone was
       remembered her singing."

A problem of a rather different kind is posed by a verb
like *videt'* ("see"), the problem being that the accusative
could be accounted for in one of at least two mutually incompa-
tible fashions: there seem to be no very clear criteria for
choosing between them. The first approach is based on an arti-
cle by Gruber (1967) on the English verb 'see'. Gruber shows
fairly convincingly that the direct object of 'see' in English
is motional, a reduced form of 'see to'. This is shown by the
possibility of motional objects with prepositions other than
'to'. When 'to' occurs in deep structures after 'see', it is
deleted, giving the superficial form with no preposition. The
difficulty with this analysis in Russian is that these motional
complements are never possible with *videt'*:

(3o) a. *On videl v komnatu.  "He saw into the room."
     b. *On videl pod stol.   "He saw under the table."

The evidence for this structure in Russian is therefore weak.
Some motional complements are possible with the impersonal pre-
dicator related to *videt'*:-

(31) Otsjuda vidno do morja. (lit.) "From here is visi-
       ble up to the sea."  (i.e. you can see to the sea
       from here)

The verb *smotret'* ("look") does take motional complements and a
simple accusative object, but this does not really reveal any-
thing about the structure of *videt'*:

(32) a. On smotrel v okno.  "He looked through  (lit.
       'into') the window."
     b. On smotrel fil'm (A).  "He watched the film."

Further evidence might be sought in a phrase like:

(33) Komnata s vidom na more (A).  "A room with a view
       to the sea."

but this would not be significant, as *komnata* cannot in fact be
a subject of *videt'*, although similar nouns can be subjects of
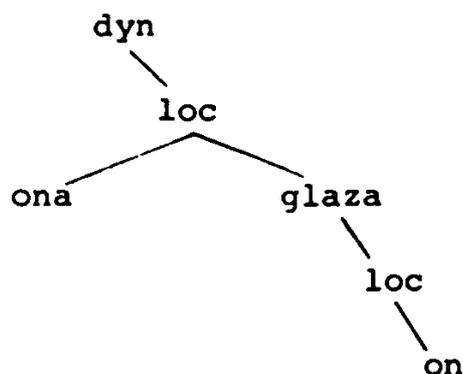*smotret'* in a similar meaning:

> (34) a. Okna smotrjat vo dvor (A). "The windows look out
> onto a courtyard."
>
> b.*Okna vidjat vo dvor (A). "The windows see into a
> courtyard."

The other hypothesis I have in mind is similar to that I
have suggested for *vspomnit'* ("remember"); it appears to be
supported by sentences containing the dative of inalienable
possession like:

> (35) Ona brosilas' emu (D) v glaza (A). (lit.) "It
> threw itself into his eyes." (i.e. it suddenly became
> visible to him)

This sentence would presumably have the structure:

Fig. 3

```
              dyn
                 \
                  loc
                 /    \
            ona        glaza
                            \
                             loc
                                \
                                 on
```

It may be that the noun of sight is not only *glaza* ("eyes"), as
a rather similar construction appears to be indicated with the
noun *vid* ("view"), as in the sentence:

> (36) On sporil s nim na vidu (L) u vsex sotrudnikov (G)
> laboratorii. "He argued with him in the view of all
> the laboratory workers."

An argument against the deep-structure motionality of the object
of *videt'* is provided also by locative sentences of the type
discussed above (§ 2.4.2.):

> (37) V ètom (L) ja ne vižu ničego ploxogo. "I don't see
> anything wrong in that."

If the object of *videt'* were motional, one might expect the acc-
usative case after *v* ("in") istead of the locative. Of course,
the dative in passives of *videt'* also supports the motional nat-
ure of the subject:

>   (38) Mne (D) vidjatsja sero-zelenye mundiry.  "I see the
>        grey-greem uniforms."

Evidence of a rather different, morphological kind may be found
in the fact that *videt'* is a hyponym of *vosprinimat'* ("perceive");
the root of this verb is *prinimat'* ("take"), which is semantically
a verb of motion to the subject or coming into possession.

It appears clear that the second analysis rests on the
stronger evidence, yet it still seems unfortunate to assign a
structure to the Russian verb different from that of the English
verb. One solution might be to differentiate two different
verbs within *videt'*, one with motion to the subject and one with
motion to the object, but even this would pose severe problems;
if (39a) and (39b) represent the two different versions, what
can (39c) possibly consist of as it contains both a dative and
an accusative?

>   (39) a. Mne (D) vidna derevnja (N).  "A village is visible
>           to me."
>        b. Ja (N) vižu derevnju (A).  "I (can) see a village."
>        c. Mne (D) vidno derevnju (A) "=(a)"

However, either of the hypotheses discussed here will suffice to
produce a derived structure with the object dominated by dyn
confirming the hypothesis of the accusative as the case of mot-
ion.

A fairly large number of other verbs also take the accusa-
tive and there is evidence that most of these are motional in
some sense of the word. There is a class of verbs whose nomin-
alisations use *k* + dative, an explicitly motional form, where
the verb itself uses accusative (the nouns are all hyponyms of
*otnošenie* ("relation"); e.g. *ljubit'* ("love"), *uvažat'* ("res-
pect"), *nenavidet'* ("hate") and the non-verbal predicator *žal'*
("sorry (for)), which is one of the few non-verbal elements in

Russian capable of governing the accusative. One might suggest
that these verbs simply involve projection of an emotion from
the subject to the object, but this would be sonsistent with the
stative character of these verbs and their association (or, with
*ljubit'* ("love") the association of its suppletive pair *nravit'-
sja*) with the dative case:

(4o) a. Ja (N) ljublju ètu p'esu (A).  "I like that
play."

b. Èta p'esa (N) mne (D) nravitsja.  "That play
pleases me."

(41)   Mne (D) žal' vašu sestru (A).  "I am sorry for
your sister."

However, I am totally ignorant of the possible structure of these
verbs. A verb such as *čitat'* ("read") is difficult to analyse;
obviously non-stative, but equally obviously non-causative, there
is no general pattern of structure that it seems to fit into.
Semantically, it seems to bear about the same relation to written
language as *slušat'* ("listen to") does to spoken language. It
is interesting that a synonym of *čitat'* *bystro* ("read quickly")
is *probegat'* ("run through"), which is quite clearly motional.
*Pit'* ("drink") and *est'* ("eat") are analysable as *prinimat'* *v
sebja* ("to take into oneself"), and as such also have a rela-
tively plausible analysis as motional. Not all of these and sim-
ilar analyses are totally convincing, but they are intended only
to suggest that an analysis in terms of motion might be on the
right track.

A class of verbs remain which seem incompatible with an
analysis in terms of motion - e.g. such verbs as *imet'* ("have"),
*ispytyvat'* ("experience"), *vesit'* ("weigh"). Perhaps the best
way to deal with such verbs is simply to list them as exceptions.
This seems a distressingly ad hoc way of dealing with difficult
cases, but, as Lakoff (197o) has shown, it is more harmful for a
linguistic theory to create new formal classes solely for the
purpose of accounting for a few exceptions, than to mark a small
number of items in the lexicon as exceptions to a given rule.

The rule for the accusative as a case of motion is very general, given the abstract way in which we have treated the idea of motion. Eventually, given an elaboration of this theory of the general type to be attempted in § 5., I would hope there might be a rule converting anything dominated uniquely by dyn into an accusative case. Given the indeterminacy inevitable in any account of this nature which does not give an explicit structure for every individual verb in the lexicon, the notion of 'transitive verbs', traditionally used in the definition of the accusative, has been considerably sharpened, while the number of exceptions to this rule is not obviously high. It is more adequate than any other approach of a similar type.

4.3.1.

The genitive case is generally said to be the adnominal case par excellence; e.g. "Wir können den adnominalen Gebrauch des G-s als die typische Äusserung dieses Kasus bezeichnen." (Jakobson 1936, p. 66); "They (N + N constructions with the genitive) express an extraordinarily wide range of meanings, being marked by an exceptional semantic capacity and the ability to express the most varied relations between words." (Galkina-Fedoruk 1958, p. 63) This obviously contains a certain amount of truth, but it is not sufficient for an explicit and unified theory of the genitive, as it must be qualified in at least three respects. Firstly, other cases, with or without prepositions, are quite common with nouns, although not as common as the genitive. Secondly, the genitive is also frequently found in combination with verbs, quantifiers and adjectives. Thirdly, such an approach makes a faulty predicition insofar as it can be made explicit; it claims that, given a noun in combination with another noun not excluded from co-occurrence with the first, this noun will be able to appear in the genitive. This claim can quickly be shown to be incorrect; for there are very few constructions of adnominal genitive which can be reversed - which is the opposite of what the theory would predict; furthermore, there are none which can be reversed while preserving the

same meaning. For example, reversal of the (a) phrases in the following examples leads to the ungrammatical (b) phrases:

(42) a. Kusok xleba (G.)  "A piece of bread."
     b. *Xleb kuska (G).
(43) a. Zvuk poezda (G).  "The noise of a train."
     b. *Poezd zvuka (G).
(44) a. Čtenie knigi (G).  "Reading of a book."
     b. *Kniga čtenija (G).

On the other hand, the reversal of the following (a) phrases leads to grammatical but semantically completely different (b) phrases:

(45) a. Zamečatel'naja krasota devuski (G). "The girl's remarkable beauty."
     b. Devuška zamečatel'noj krasoty (G).  "A girl of remarkable beauty."
(46) a. Sosed otca (G).  "(My) father's neighbour."
     b. Otec soseda (G).  "(My) neighbour's father."
(47) a. Rukovoditel' laboratorii (G).  "The director of the laboratory."
     b. Laboratorija rukovoditelja (G).  "The director's laboratory."

Thus even if it were to be accepted that all meanings could be conveyed by the genitive, it would have to be discovered which element of all relations was susceptible to becoming a noun in the genitive. It would therefore appear that any definition of the genitive which talks in terms of an infinity of meanings or of simple adnominal modification must be wrong. For if any theory was found which was capable of generalising the infinity of relations and choosing a single element from each which was liable to be put in the genitive, this would be fully equivalent to finding a feature common to all relations with the genitive. This is all that I am trying to do, and, whichever way the problem of defining these constructions is approached, it is a necessary precondition for an adequate theory of the genitive (or any other case for that matter).

To begin an analysis of the genitive, it is instructive to consider the so-called 'derived nominals', which take a genitive adjunct corresponding to either the subject or the object of the appropriate verb. The rules governing the choice of one or other element as genitive appear to be quite complex, but the facts are very roughly as follows: subjects of intransitive verbs, and verbs with neither accusative nor genitive complements can generally become genitive adjuncts; objects of causative verbs and of some other genitive or accusative governing verbs can become genitive adjuncts.[4] In addition, there is a special class of nominalisations, which I shall (clumsily) call 'thing'-nominalisations, which denote either the subject or the object of the verb; some accusative governing verbs have objective thing-nominalisations, while some instrumental-governing verbs have subjective thing-nominalisations. E.g.

a. *subjective genitive:* vozniknovenie žizni. "The emergence of life."
   vlijanie otca. "(His) father's influence."
b. *objective genitive:* ubijstvo prezidenta. "The killing of the president."
   bojazn' temnoty. "Fear of the dark."
c. *objective thing-genitive:* ego izobretenie. "His invention."
   soobščenie TASSa. "A communication of TASS."
d. *subjective thing-genitive:* rukovodstvo organizacii. "The leadership of the organisation."
   pravlenie sojuza pisatelej. "The administration of the union of writers."

However, a system of rules based on such a classification would emerge with a large number of exceptions to each of the groups as postulated above. This would be what one would expect if the genitive was not in fact dependent on the superficial government of the verb, but on the underlying (or at least 'remote') structure of the sentences containing these verbs. In order to show this, it will be necessary to show briefly some of the implications of this theory in relation to nominalisations

to see what light it can throw on the question. Chomsky (197o),
like many other people who have investigated nominalisations,
starts from the assumption that all abstract nouns are derived
from verbs and adjectives. He then goes on to voice doubts
about this framework, based on the irregularity of derived nomin·
als as opposed to gerunds in English; for instance, in the
following examples, the gerunds (b) are possible in relation to
the basic sentence (a), but the derived nominals (c) are not:

    (48) a. John is certain to win the prize.

        b. John's being certain to win the prize.

        c.*John's certainty to win the prize.

    (49) a. John amused the children with his stories.

        b. John's amusing the children with his stories.

        c.*John's amusement of the children with his
           stories.

Conversely there are some environments in which the derived nom-
inals are possible, sometimes to the exclusion of the gerund:

    (5o) a. John's certainty that Bill will win the
           prize.

        b. John's being certain that Bill will win the
           prize.    /

    (51) a. John's amusement at the children's antics.

        b.*John's amusing at the children's antics.

On the basis of these doubts, Chomsky goes on to suggest a
change in the theory such that verbs and their 'derived nomin-
als' will be separately generated in the base, but that in the
lexicon, they will share the same syntactic features, except
for those of noun and verb. This is the 'lexicalist' appròach
as opposed to the 'transformationalist' approach.

    A limitation of Chomsky's approach is that it only consi-
ders two possible variants - either nouns are derived from verbs
or neither is derived from the other. But a suggestion which is
already implicit in parts of this thesis, (e.g. §2.4.5.) is that
some  superficial verbs are derived from underlying elements
which may be superficially realised as abstract nouns. Thus, if

*be amused* is derived from *have amusement,* and *amuse* from *give amusement* (i.e. "cause to have amusement"), then the syntactic data brought forward by Chomsky can be easily accounted for. This applies to a large number of examples he suggests, e.g. *interest, certainty, laughter, marriage, belief, doubt,* etc., (Chomsky, 197o, p. 189). None of these are obviously examples of complex structures, and are therefore not obviously nominalisations. Chomsky's theory is therefore not the only one which can provide an adequate account of the data, and must be further justified in order to be accepted as a preferable alternative to the transformationalist hypothesis. If the suggestion I have just made can also account for the behaviour of genitive adjuncts with such abstract nouns, then this will be strong evidence in its favour. A related observation is that Russian does not in any event have a direct correspondence to the English gerund, so nominalisations in Russian can be treated in a much more unified fashion than the English ones.

All this, of course, is not to deny that there are derived nominals at all. It appears that some of these are identical in form to the basic non-derived nominal. (The morphological derivedness or not not of these forms seems to me irrelevant.) For instance, *davit'* ("press") may be periphrastically expressed as *okazyvat' davlenie* ("exert pressure"); as these two expressions are synonymous, it seems to me impossible that the nominal could (semantico-syntactically) be derived from the verb. However, an expression such as *davlenie atmosfery na zemlju* ("the pressure of the atmosphere on the earth") must be a nominalisation derived from:

> (52) Atmosfera davit na zemlju. "The atmosphere presses on the earth."

Evidence for this is that one cannot treat it as basic; e.g.

> (53)*Oni okazali davlenie atmosfery na zemlju. "They exerted the pressure of the atmosphere on the earth."

The same may be said of a noun such as *razdraženie* ("irritation"). The following two sentences are synonymous:

(54) a. On prišel v sostojanie (A) razdraženija.
"He came into a state of irritation.

b. On razdražilsja.   "He became irritated."

In this use, *razdraženie* is non-derived; but it also has a use as a standard nominalisation, with a corresponding sentence:

(55) a. Razdraženie nerva (G) vnešnim vozdejstviem (I).
"Irritation of a nerve by external stimulation."

b. Nerv razdražilsja vnešnim vozdejstviem (I).
"The nerve was irritated by external stimulation."

Although the surface morphology is against this at first sight, it does not really make much difference when there are in any case no categorial elements at the deepest level. The problem is of course complicated in that I have not specified at which stage of a derivation lexical insertion is accomplished. But I cannot envisage there being any difficulty in deriving some nouns independently of verbs. For there is no obvious derivative status for what are generally called 'derived nouns'; the basic root could equally well be called non-categorial as verbal. This will suffice for this study.

A number of questions still need to be solved in the treatment of nominalisations; especially necessary is a solution to the question of the structure necessary to make a predication into a nominalisation. Consider an example of a sentence where one sort of nominalisation is possible:

(56) On želaet slavy (G).   "He desires fame."

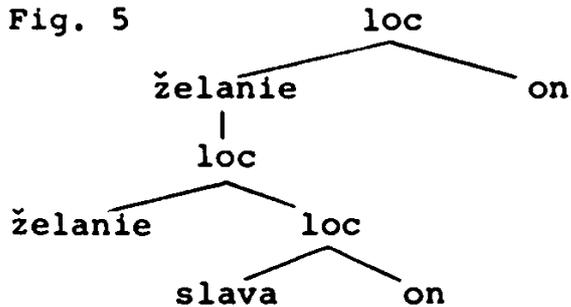(56) might have a structure as in fig. 4 (see over).

It is more likely that *slava* ("fame") would not occur in this structure, but in a separate predication, (as in fig. 5) which would then reduce to fig. 4 by a process such as Equi-NP-deletion.

Fig. 4

```
                    loc
              želanie      on
                 |
                loc
         želanie      slava
```
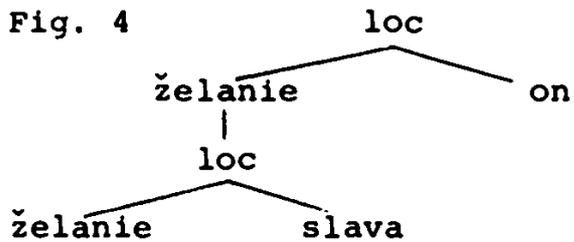
(i.e. "He has a desire
which is in (of)
fame").

Fig. 5

```
                    loc
              želanie      on
                 |
                loc
         želanie      loc
                  slava      on
```
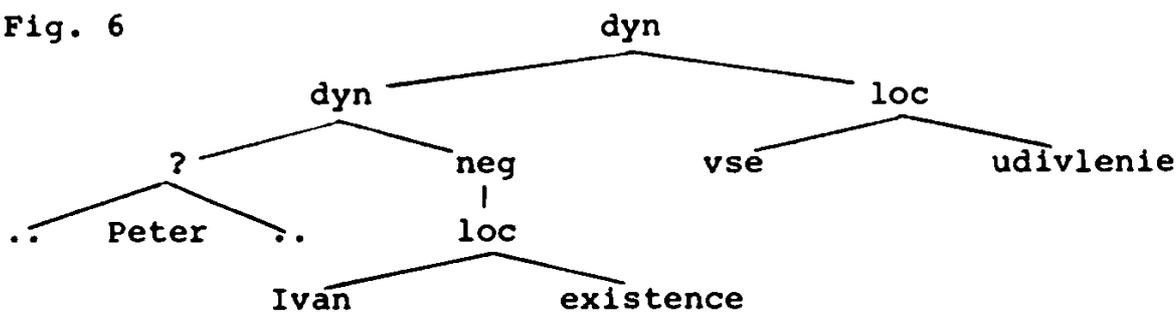
(i.e. "He has a desire
which is (consists) in
that he has fame").

I shall not consider this possibility in detail, as this
does not seem likely to have much effect on the rules for case.
Fig. 4 has two N + N constructions associated with it; they
are *želanie slavy* ("a desire for fame") and *ego želanie* ("his
desire" - i.e. that which he desires). This latter phrase,
being a thing-nominalisation might be considered a conflation
of the whole structure below and including the top occurrence
of *želanie*. The first phrase cited would not under this analy-
sis be a nominasation at all, as the non-genitive noun is not
a realisation of a complex structure. In this example, at
least, nominalisation is the lexicalisation of a complete struc-
tue, with a noun at the head, surely intuitively a natural
thing for a nominalisation to be. But this is not so obvious
when we consider an action nominalisation; consider a sentence
such as:

(57) Ubijstvo Ivana (G) Petrom (I) udivilo vsex.
     "Peter's murder of Ivan surprised everyone."

which might have a structure as in fig. 6:-

Fig. 6

```
                              dyn
          dyn                            loc
     ?            neg           vse          udivlenie
  ..  Peter  >.    |
                  loc
             Ivan      existence
```

Here there is no underlying element at the head of the nominali-
sation but a simple causative sentence. in fact (58) is an alt-
ernative to the nominalisation for this structure:

(58) (to) čto Petr ubil Ivana ...   "(the fact) that
         Peter killed Ivan ..."

What conditions the choice of a nominalisation rather than a
complement I do not know, but taking that for granted, it is
clear that the noun *ubijstvo* ("murder") is a lexicalisation of
the sub-tree in fig. 7:

Fig. 7

```
              dyn
                 neg
                  |
                 loc
                     existence
```
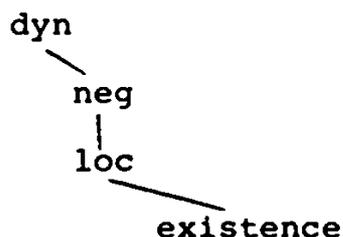
I shall assume that when this sub-tree is lexicalised, that is
the condition for a nominalisation.

The situation of genitives is now somewhat clarified; its
connexion with subjects and objects would appear to suggest that
raising may be involved also in the choice of genitive. In
order to see precisely what this entails, I shall consider an
explicit (but no doubt wrong in details) procedure for raising
elements and creating subjects and objects:

1. Given a 2-place predication, raise one of the
   arguments as right daughter of the element
   immediately dominating that predication. This
   process will go from bottom to top; if two
   such predications are dominated by a single
   element, it will go from right to left.

2. To form a subject, raise the rightmost daughter
    in the topmost predication so that it governs
    the topmost element.

(N.B. The choice of which element to choose in (1) will be con-
sidered shortly.) Operation (1) must be optional (i.e. subject
to certain unknown (to me) conditions), due to the possibility
of long passives. The second operation must also be optional
because of impersonal sentences, which have no subject; how-
ever it would seem that this needs to be modified as (2) is
obligatory if there are more than two non-relational elements
dominated by the topmost relation.

Assuming these processes, it is now possible to define
the genitive (at least partially) as the rightmost member of
any relation. The condition on the optionality of operation (2)
accounts for the fact that causative verbs do not generally have
subjective genitive. Furthermore, given structures for stative
verbs as in fig. 4., one can state that they do not have 'objec-
tive' genitives, as no object-forming process must be applied
to make the genitive possible. This therefore makes a noun
such as *ljubov'* ("love"), which has only subjective genitive,
perfectly regular in terms of other stative verbs. The condi-
tion on optionality of transformation (2) also accounts for the
fact that when a predication with both members present is nomi-
nalised the leftmost element must be put in the instrumental.
This is because, if the leftmost noun were raised, it would
create a structure in which genitivisation was possible only
after subjectivisation has taken place. But as the structure is
a nominalisation, subjectivisation is impossible, (as nominalis-
ations do not have subjects: cf. §5.3.) and therefore the struc-
ture containing three non-relational elements (nominalised verb,
object and subject) would be uninterpretable.

Let us consider also the 'thing-nominalisations'; fig. 8
is an approximate structure for:

(59) Izobretenie penicillina (G) Flemingom (I).   "The
    discovery of penicillin by Fleming."

Fig. 8

```
                        dyn
        ?                        loc
   ..Fleming..       penicillin    existence
```
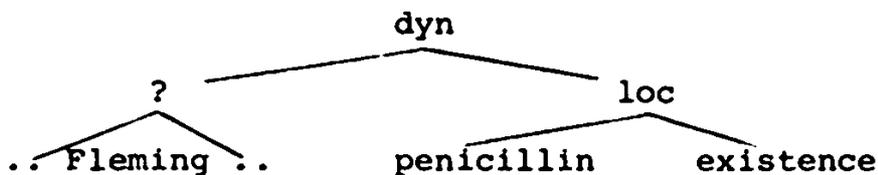
(59) is derived from this structure perfectly regularly as an objective genitive; however, the thing-nominalisation is:

(6o) (Penicillin - ) izobretenie Fleminga (G).
"(Penicillin is) a discovery of Fleming."

The nominalisation in this sentence is probably identical to fig. 8 except that *penicillin* is replaced by an indefinite element or dummy. If this element is not raised, operation (1) will not apply to the rightmost predication; on the 'left-cycle' *Fleming* will be raised as right daughter of dyn, and will therefore be put into the genitive case. Therefore, although this analysis does not explain why certain verbs have thing-nominalisations and others do not, it does explain how the procedure works.

Subjective 'thing-nominalisations' are a little more complex, and very much rarer; they occur mainly with instrumental-governing verbs of control. It is interesting that these verbs have nominalisations which are the exact converse of those of a normal causative verb. It is an interesting hypothesis that these verbs might in fact be best classified as passives, as their syntactic behaviour - i.e. nominalisation and government - corresponds to a pattern characteristic of passive verbs. It is not easy to see the notional sense in such a proposal, and it is possible that an easier explanation can be found. It was shown above (§3.1.) that these verbs can be analysed as a fairly complex strucutre of locatives which were not made explicit. It is equally possible that this structure, whatever it turns out to be, can account for the curious behaviour of these verbs with respect to nominalisations.

4.3.2.

This analysis of the genitive has been arrived at, and so

far only tested, on the basis of nominalisations. There are many
other uses of the genitive; if these turn out to be compatible
with the analysis just proposed, this will be strong confirmation
of it. One type of genitive which is accounted for by this rule
has already been dealt with because it is generally counted as
a nominalisation - an analysis which I have contested; it is
the genitive in *želanie slavy* ("a desire for fame"), which I
claim has the structure shown in fig. 4. This works for a num-
ber of such genitives - *bojazn' temnoty* ("fear of the darkness"),
*znanie teorii* ("knowledge of the theory"). Another type of
genitive fairly clearly covered by the theory is the genitive
of possession, which alternates with overtly spatial construc-
tions (cf. §2.5.). It has been shown to be non-subject of its
predication, and therefore to be the rightmost element in pre-
dications where it appears. Another genitive use which alter-
nates in certain contexts with overtly locative expressions is
the genitive of time; it is used only with dates, while hours,
months, years, etc. are expressed in expressions with locative
prepositions.

A particularly clear exemplification of the purely formal
nature of the condition on genitivisation (i.e. formal as oppo-
sed to semantically determinate) is the comparative genitive:

(61) Sobaki umnee košek (G).  "Dogs are cleverer than
cats."
(62) Ščeki blednee obyknovennogo (G).  "(Your) cheeks are
paler than usual."

In such constructions the final element of the comparison is
put in the genitive as long as it is a part of speech capable of
taking the correct morphological form (otherwise a variant using
the word *čem* + nominative is used). Where the genitive can be
used, the role the element has played in the compared sentence
does not seem to make much difference; in (61), the genitive
element was subject of the compared clause, in (62), it was an
adverbial determiner. But with deletion of the redundant struc-
ture, a single element is left to the right of the main sentence
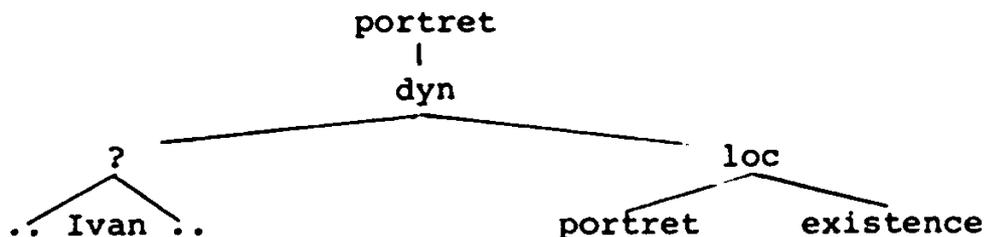and this is genitivised by our general rule.

A genitive construction about which I know very little, and shall therefore say very little, is that which occurs with quantifiers; it may, however, be the case that this is related fairly closely to the genitive which is found with the negative, a construction to which I shall give fairly close attention. But first it is interesting to see how the analysis I have just proposed deals with examples of complement ambiguity with the genitive; I shall take the example *portret Ivana* ("Ivan's portrait"). The first sense in which it can be interpreted is as a possessive genitive "the portrait which Ivan has"; this poses no difficulties for this analysis. Its structure would be something like:

Fig. 9

```
              portret
                 |
                loc
             ___/  \___
         portret      Ivan
```
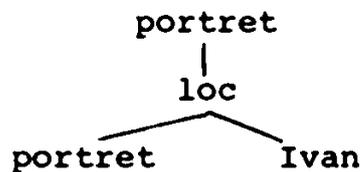
The genitive is on the right even in this structure. The second is as an objective genitive - *portret* is defined in dictionaries in terms of *izobraženie* ("representation"), and its objective genitive can be extended to *portret*, its hyponym, to make the above example a perfectly straightforward example of the objective genitive. The third sense is 'factitive' - i.e. "the portrait which Ivan painted"; this will have a structure as in fig. 1o:

Fig. 1o

```
                    portret
                       |
                      dyn
           _____/      _____
         ?                          loc
       /   \                      /    \
   .. Ivan ..               portret    existence
```

This structure accounts for several possibilities; if there is a complete relative clause, it may either be passive or active; if not, one might emerge with *portret, napisannyj Ivanom* "the portrait painted by Ivan". This phrase results from the raising of *portret* before it is deleted under identity; however, if *portret* is not raised, *Ivan* is then raised, is not deleted as i

is not identical to anything else in the structure, and is therefore made genitive. I cannot at present account for the fact that the verbal sub-structure left stranded by this operation is also deleted; it may be connected with the extremely abstract nature of the 'existence' element.

4.3.3.

Evidence has been presented to show that, in all genitive constructions which I understand well enough to analyse at least in part, the genitive is formed when it is the rightmost member of a predication. However, a serious problem still remains; in all of the environments in which the genitive can be formed, it is also possible to form another case, although not the same one in all environments. Thus the genitive in nominalisations alternates with the accusative in the basic constructions; the genitive in possessives alternates with  u + genitive; the genitive in quantifier constructions alternates with ablative constructions, etc. The nature of these alternations also differs; genitive in nominalisations and accusative in basic verbal constructions are both obligatory; but the alternation with u + genitive is optional - i.e. it is not conditioned by purely syntactic matters (at least as the field of syntax is defined at present by most grammarians). It would obviously be desirable to find a general condition which would apply to all such alternations such that if that condition were fulfilled, genitive would be chosen in all of the alternations, and not otherwise. A particularly problematic and much-discussed alternation has been that of genitive and accusative after negated transitive verbs; it might be fruitful to consider this alternation from this fresh point of view.

The problem is quite simple to state; when a verb which normally governs the accusative is negated, an alternation is possible between accusative and genitive;[5] there are certain conditions under which one case is much more likely than the other, but in general the picture is confused - it has even been flatly stated that the problem is impossible to solve (Korn

1967, p. 496). To give an indication of the variety of criteria accepted by many investigators as relevant to this problem, here is a list of some of the commoner ones:

A. Factors contributing towards accusative choice.

1. Negation is conveyed indirectly via a non-negated infinitive:

> (63) Politiki ne v silax ponjat' patriotizm (A) sovet-
> skix ljudej. "The politicians are unable to under-
> stand the patriotism of Soviet people."

> (64) On byl ne v silax otvesti sijajuščix glaz (G) ot
> svoego kapitana.  "He was unable to take his shining
> eyes off his captain."

(Cf. Restan 196o, Ravic 1971, Davison 1967, Borras and Christian 1971, Korn 1967, Sajkiev 1955).

2. The sentence is imperative or interrogative:

> (65) Ne rešajte étot vopros (A) sami.  "Don't decide that
> question yourselves."

> (66) Černil (G) ne oprokin'te.  "Don't upset the ink-
> well."

(Cf. Borras and Christian 1971, Ravic 1971, Restan 196o, Sajkiev 1955).

3. The accusative is followed by a predicative instrumental (or perhaps just followed by any nominal complement):

> (67) On ne sčital Rossiju (A) opasnym sopernikom.
> "He did not consider Russia a dangerous rival."

(Cf. Borras and Christian 1971, Davison 1967, Ravic 1971, Restan 196o).

4. The verb is perfective:

> (68) My ne narušim étot mir (A).  "We will not destroy
> this peace."

> (69) Ona byla ne v silax sderžat' rydanija (G).  "She
> was unable to hold back her sobbing."

(Cf. Magner 1955, Ravic 1971, Restan 196o).

5. The noun is an animate noun of the -a declension:

> (7o) Ja ne ljublju Mašu (A). "I don't like Masha."
>
> (71) Nikakoj Maši (G) ja ne znaju. "I don't know any
>    Masha."

(Cf. Borras and Christian 1971, Davison 1967, Ravic 1971, Restan
196o, Sajkiev 1955).

6. Verb and object are inverted:

> (72) Sestru (A) on ne vstretil na ulice. "His sister he
>    did not meet on the street."
>
> (73) Griški (G) ona počti ne videla. "She hardly saw
>    Grishka."

(Cf. Borras & Christian 1971, Magner 1955, Uglitsky 1956).

B. Factors contributing towards genitive choice:

1. Used after gerunds and participles:

> (74) ... ne sčitaja čuguna (G). "... not counting the
>    cast iron."
>
> (75) Ne ponižaja golos (A), on zagovoril po-latyni.
>    "Without lowering his voice he started speaking
>    in Latin."

(Cf. Borras & Christian 1971, Davison 1967, Ravic 1971, Restan
196o, Uglitsky 1956).

2. Used with *ne imet'* ("not to have") (and perhaps more gener-
   ally with verbs denying the existence of the object):

> (76) On nikogda ne imel deneg (G). "He has never had
>    any money."
>
> (77) Ix pozicija ne imeet rešajuščee značenie (A) dlja
>    bezopasnosti SŠA. "Their position does not have a
>    decisive significance for the security of the
>    USA."

(Cf. Borras & Christian 1971, Davison 1967, Ravic 1971, Restan
196o).

3. Used when the negation is reinforced by an intensifier:

(78) On ne xotel čitat' nikakix knig (G). "He didn't
     want to read any books."

(Cf. Borras & Christian 1971, Davison 1967, Korn 1967, Magner
1955, Ravic 1971, Restan 196o).

4. The noun is abstract:

(79) On ne cenil krasoty (G). "He did not value
     beauty."

(8o) Nel'zja ne priznat' ego pravotu (A). "One cannot
     but admit his correctness."

(Cf. Borras & Christian 1971, Dahl 1969, Ravic 1971).


     This is only a selection of the commoner criteria proposed,
taking no account of the inherent plausibility of these or others
Even with this small number of factors, it is quite clear that
an exhaustive analysis of these would be quite prohibitively
complex, as one would have to consider the relative intensity
with which a particular criterion was to apply, and the choice
would be made more complex by the fact that many of these cri-
teria could easily occur together; what, for instance could one
say about an abstract noun reinforced by an intensifier inverted
in front of a perfective verb which was followed by a predica-
tive instrumental? One of the faults of nearly all of the stu-
dies carried out on this problem is that they have approached it
from a purely statistical viewpoint; this has meant that there
has been little searching for an underlying unity between the
superficial variety of all the criteria proposed. This is safe
enough when there is some overwhelming statistical support for
any criterion, but of the criteria I have repeated above, only
A3, B2 and B3 have this sort of statistical support. Roughly
4o criteria have been proposed altogether in the literature
quoted, and quite obviously, if some combinations of these were
proposed, the field might become much less confused; one would
find, for instance, that a number of accusative criteria would
look much more convincing if examples with intensive negation
were excluded - i.e. criteria could and should be placed in a

hierarchy of importance in order to produce much more determinate
analyses. But two doubtful points would remain even if such an
operation were carried out on the criteria produced so far.
Firstly, there appears to be a contextual influence on the choice
of case in that sentences in isolation seem to have a choice
whereas in context there is usually a single choice; this would
also explain why so many analyses have been so fruitless, in
that they have not considered units higher than the sentence.
Secondly, there appears to be a certain amount of redundancy in
some of the criteria; for example, word order and emphasis are
closely interrelated (cf. Halliday 1967, Isačenko 1967) - this
might suggest some affinity between A6 and B3 above.

The most likely candidate for choice of contextual criter-
ion is the theme/rheme, given/new distinction familiar in Prague
school work (e.g. Firbas 1966) and continued and developed in
several places (e.g. Halliday 1967). I have at present no means
of investigating the structure of intonation in Russian with
respect to this construction, so I shall have to approximate to
an adequate solution by using contextual clues to decide what
is to be accounted given or new, and by assuming that in the
absence of direct evidence to the contrary, focus is on the end
of each clause. The indeterminacy that such an analysis is
bound to suffer from in some degree is shown by the special
meaning that 'given' and 'new' are given in this theory:

> "What is focal is 'new' information; not in the
> sense that it cannot have been previously mentioned,
> although it is often the case that it has not been,
> but in the sense that the speaker presents it as not
> being recoverable from the preceding discourse."
>
> (Halliday 1967, p. 2o4).

However, a close enough approximation can be obtained purely on
the basis of context to give quite a high degree of plausibility
to a theory.

Direct objects which are given are generally put in the
genitive after a negated verb, as long as they are not inverted:

(81) Ona sprosila ego, skol'ko emu let, no on  
počemu-to ne ponjal voprosa (G). "She asked  
him how old he was, but for some reason he  
didn't understand the question."

(82) Čoxov burknul v otvet čto-to neponjatnoe, ne  
očen' dovol'nyj obraščeniem k nemu na 'ty' ...  
No Vorobejcev kak budto i ne zametil xmurogo  
vyraženija (G) lica Čoxova.  
"Choxov barked something incomprehensible in  
reply, not very pleased with being addressed  
familiarly. ... But Vorobejcev didn't even seem  
to notice the sullen expression on Choxov's  
face."

(83) On snova vzjal ee ruku i, pocelovav, ostavil  
v svoej. Sofja Pavlovna ruki (G) ne otnjala  
no suxo skazala ... "He took her hand again,  
and, kissing it, left it in his. Sofja did  
not take it away, but said dryly..."

Restan (1960) and Davison (1967) mention the fact that *èto*  
is nearly always in the genitive, whether it is used as an ad-  
jective or a noun. An analysis in terms of givenness would  
assign the genitive to *èto* in nearly all cases:

(84) Oni byli stjažateljami, no ne skryvali ètogo (G).  
"They were acquisitive, but did not hide this."

(85) Ja ne napisal ètogo pis'ma (G). "I didn't write  
that letter."

Preposed objects which are also new are generally in the  
accusative; according to the standard theory of functional sen-  
tence perspective, new elements come at the end in the unmarked  
form of sentences, so these accusatives are the marked form.

(86) a. Vzryv (A) on ne mog ne slyšat'. "The explosion  
he couldn't help hearing."

b. On ne mog ne slyšat' vzryva (G). "He couldn't  
help hearing the explosion."

(87) a. Cennost' (A) ego nel'zja ne otmetit'. "Its

value one cannot but mention."

    b. Nel'zja ne otmetit' ego cennosti (G). "One cannot but mention its value."

(88) Očki (A) on ne nosit. "Spectacles he doesn't wear."

(89) Sestru (A) on ne vstretil na ulice. "His sister he didn't meet on the street."

These two positions - normal position and given, and pre-posed position and new - are fairly clear cases. The rules do not say anything about preposed given objects or postposed new ones. According to the data I have examined, a large number of these examples can be handled simply by the concrete-abstract distinction frequently mentioned in the literature.

(9o) Ja ne ljublju lingvističeskie knigi (A). "I don't like linguistics books."

(91) Ivan ne ponimaet svoju sestru (A). Ivan doesn't understand his sister."

(92) Ja dve nedeli ne pisal vam pis'mo (A). "I haven't written you a letter for two weeks."

(93) On ne možet terpet' licemerija (G). "He can't stand hypocrisy."

(94) On ne cenil krasoty (G). "He didn't value beauty."

(95) Kakoj-to čelovek byl ubit kem-to na ètom meste; no ubijstva (G) nikto ne videl. "Some man was killed by someone on that spot; but the killing nobody saw."

(96) Ona ulybnulas' emu, no ulybki (G) on ne zametil. "She smiled to him, but he didn't notice the smile."

(97) Kalitin vremja ot vremeni pisal stat'i i posylal ix v redakcii; no stat'i (A) ne pečatali. "Kalitin occasionally wrote articles and sent them to journals; but the articles were not printed."

(98) On nikogda ne rabotaet v biblioteke; èto

zdanie (A) on očen' ne ljubit.  "He never works
in the library; he very much doesn't like this
building."

The genitive with emphatic negative is one of the most
regular of all phenomena connected with negated verbs; if the
accusative is associated, as in the case of 'new' elements, with
a higher level of stress than the genitive, which is associated
with 'given' elements, it might be expected that the heavily-
stressed nominal phrases used in intensive negation would be
associated with the accusative; and this expectation would be
entirely false. However, this apparent contradiction is not at
all serious; in an intensively negated NP, the nominal head is
nearly always given; the negation is the element that is con-
trastive, and therefore new, and it is this that accounts for
the very heavy stress on the NP. Thus in (99):

(99) Nikakix knig on vam ne dast.  "He won't give you
     any books."

there must have been some mention (or action equivalent thereto)
of the fact that the addressee wants some books from him. The
whole sentence, minus negation, is therefore given, and only the
negation is contrastive.

Only some of the criteria relevant to the choice of case
have been considered here; a whole host of problems arises with
various facts connected with presuppositions - for example *imet'*
and *polučat'* ("have" and "receive") always take the genitive
when negated, and this may be connected with a presupposition of
non-existence. Interrogative, imperative and conditional sen-
tences also cause problems with presuppositions.[6] However, it
would not be profitable in this context to delve too deeply into
these areas; the important thing is that three important condi-
tioners have been found for the choice in indicative sentences -
word-order, given/new and abstract/concrete. Such facts also
appear to be relevant in the choice of a raising operation;
when a concrete and an abstract noun are put together in an
underlying predication, the unmarked choice of the element to be

raised is the concrete one, because concrete elements do not
generally make up verbs, while abstract elements do. The nomina-
tive and accusative, as the normal cases of subject and object in
Russian are therefore typically concrete; it has been shown,
however, that the genitive object-noun is typically abstract.
The nominative noun is also typically given, as in unmarked form
it is placed at the beginning of the sentence - the typical posi-
tion for maxiamlly given elements. The accusative, as I have
been at pains to show, is generally new, while the genitive is
given.

The following pattern emerges:

| | | |
|---|---|---|
| Nominative | +Given | +Concrete |
| Accusative | -Given | +Concrete |
| Genitive | +Given | -Concrete |

| -Given | -Concrete | Preposed | Accusative |
|---|---|---|---|
| | | Postposed | Genitive |

This is not a surprising pattern; a typical SVO sentence
structure and a typical given - new information structure fit
together so as to make the subject typically given and the
object typically new; deviations from this pattern in terms of
case are in a general way parallel to deviations in terms of
information structure. Preposed concrete given nouns can be
either subject or object, and are therefore put in the accusa-
tive, which has a close affinity to the nominative in terms of
morphological structure; when they are abstract, they are in
the genitive (as long as they are also given) because preposed
nouns are typically concrete. Postposed given nouns are geni-
tive because what is given is usually preposed. But what effect
does the negative element have on this choice in purely formal
terms - why does the addition of the neg element require this
choice to be made? Consider the path of derivation of a nega-
tive sentence; subject-raising will occur, raising the subject
above all other elements; then the rule of neg-lowering (cf.
R. Lakoff 1968, p. 11o) occurs, moving the neg element to the

front of the subjectless predication; note that this again creates a structure which has two non-relational elements dominated by a single predication - and consequently the subjectivisation transformation is again applicable; but it cannot apply as there is already an element in the subject slot. The element which cannot be raised is therefore liable to the rules of genitivisation according to the conditions shown above.

A similar process might apply in the example of nominalisations. A nominalisation is a subjectless, non-finite verb, which is used as an element in some other set of relations. The element which on the surface is in the genitive would have been subject of a form of that verb had it been capable of taking one; i.e. here too, an element which would have become subject by the operation of subject-raising is prevented from doing so by extrinsic factors (probably the fact that the nominalisation ·is dominated by something else). It is interesting as a sidelight that Ravic (1971) claims that negated impersonal verbs do not take genitive object:

(1oo) Sestru (A) ne tošnilo.  "(My) sister (it) didn't
      sicken."
(1o1) Ni odnu ulicu (A) ne zamelo snegom.  "Not one
      street (it) didn't block with snow."

Although it is not particularly clear how these verbs are generated an answer that works is that operation 2 (in §4.3.1.) is only optional for these verbs; consequently, the operation of subjectivisation is not blocked because of the structure dominating the  predication, but simply because the rule is optional. There is therefore no reason why the object noun should be made genitive, even when, as in (1o1), it is marked with emphatic negation.


4.3.4.

I have not yet investigated the use of prepositions and cases, so for the moment I shall ignore the question of the alternation of the genitive with prepositional constructions. Even

if a general principle for alternations is not worked out, the
fact that there is a rule which exhaustively covers the uses of
the genitive, insofar as they are understood, and that alterna-
tion after negated verbs and in nominalisations has been parti-
ally worked out, is cause for some optimism.

## Footnotes to Chapter 4

1. I have not yet specified the operation of case introduction in any detail, but whatever it is, this statement will be valid in relation to it.

2. It is not easy to decide precisely what is an exception to this because of a certain indeterminacy in the notion of causative. *Dosadit'* ("annoy"), may be said to be an exception because it has a corresponding non-causative verb, and because it denotes a change of state in the object. But *pomoč'* ("help"), is not an exception (although it governs the dative) because it has no non-causative equivalent in Russian (not even a passive). It can be analysed as *dat' pomošč'* ("give help") which also governs the dative. Unfortunately, *dosadit'* can also be analysed as *pričinjat' dosadu* ("cause annoyance"), which also governs the dative of the person annoyed. Perhaps this is the reason why a dative is possible, as most of the causative examples given above do not have such a ready paraphrase with the dative.

3. The verb *ponjat'* does, however, have a normal passive:
   I. sozdaetsja obraz ne ponjatogo svoim okruženiem i narodom Gitlera. "The impression is created of a Hitler not understood by his entourage or his people."
   II. pod zalogom im ponimaetsja sledujuščee. "By voice he understands (lit. by him is understood) the following."
   The syntactic evidence is therefore rather weak.

4. The use of the term 'become' here is for convenience, and does not mean that I think of the one construction as literally becoming the other. It could be rephrased much more clumsily as 'are correlated with a genitive NP when there is a derived nominal corresponding to the verb.'

5. In fact this alternation applies to any accusative complement, even an adverbial one of space or time; thus:

a. On sidel celyj čas (A). "He sat for a whole hour."

b. On ne sidel i času (G). "He didn't even sit for an
   hour."

c. On stupil šag (A). "He took a step."

d. On i šagu (G) ne stupil. "He didn't even take a
   step."

To my knowledge nobody has investigated whether this use of
the genitive follows the same regularities as its use with
strongly governed objects.

6. I have not investigated these constructions in detail, but
   some data from negative imperative sentences should be enough
   to give some idea of the complexity of the problem. When the
   imperative is of a purely general type, there seems to be
   more choice of case than in other constructions:

   a. Ne čitajte ètot roman (A). "Don't read that novel."

   b. Ne čitajte ètogo romana (A).          -"-

However, when more context is provided, this often makes one
case preferable. For instance in the type of command which
has a temporal qualification, the accusative is usual; one
might hypothesise that this is because there is the positive
presupposition that the negative command does not apply at
other times:

   c. Ne privodite sestru (A) segodnja večerom. "Don't
      bring your sister this evening."

   d. On ne zametil cvet (A) neba poka on ne leg na travu.
      "He didn't notice the colour of the sky until he lay
      on the grass."

   e. Ne pišite emu pis'mo (A) do sledujuščej nedeli.
      "Don't write him a letter before next week."

In addition, imperatives directed against actions already
committed generally take the accusative, presumably also
because there is the positive presupposition that they have,
indeed already been done:

   f. Ne čitaj ètot roman (A)! Skol'ko raz ja zaprešcal
      tebe čitat' takie knigi! "Don't read that book!
      How often have I forbidden you to read such books!"

    g. Kak vam ne stydno! Ne razvodite pessimizm (A)!
       "Aren't you ashamed of yourself! Don't spread
       pessimism!"

Although not mandatory, the clear implication of (f) and
(g) is that the thing condemned has already been done.

    It seems that some of these presuppositional tendencies
also apply to interrogative and conditional sentences.

5.1.

In the preceding three chapters, the cases of Russian have
each been examined in turn, and a tentative unified description
has been proposed for each of them. The descriptions proposed
rest very heavily on the theoretical basis laid out in Chapter
1, and they would be virtually impossible, taken as a group,
if any other theoretical framework had been proposed. Thus for
instance, none of the cases could have been described as they
have been had not the approach been a 'generative semantic',
more specifically a 'lexical decompositionist' account of Rus-
sian; the accusative, for example, is described in terms of
the feature of 'motion', which is sometimes only evident when a
verb is broken down into its basic semantic components (§4.2.).
The most idiosyncratic proposal made in this thesis - that a
mere two elements are required as relators in the whole grammar,
and that these two relational elements - location and motion -
are best represented as two-place predicators - is reasonably
well supported by the description of the cases; negatively,
it is shown that the only two cases with a direct correspondence
to an underlying relator correspond to location and motion res-
pectively, and therefore that there is no such direct evidence
for another relator: more positively, it is shown that instru-
mental and genitive, which are more formal (as opposed to seman-
tic) cases than the locative or accusative are definable in.
terms of their spatial position with respect to either of the
basic relators. Any further relator would therefore have to be
associated with a 'subject' in the instrumental and a 'non-
subject' in the genitive. Therefore the introduction of a third
relator would have to be consistent with the extremely restric-
tive conditions that have been imposed.[1] The fruitfulness of
the hypothesis that there are only two relators provides further
support for the claim that the grammar needs to be generative
semantic, as the descriptions of any verbal (and therefore rela-
tional) lexical item must of necessity be highly abstract if
they are to be couched solely in terms of motion and location.

This approach makes possible the unified descriptions of

cases, and the descriptions justify the theory insofar as they
are probably the least vague approach to Russian cases which
has managed to describe them all in terms of a single approach.
As was shown in chapter 1, past descriptions of Russian cases
have either been very general in import and extremely vague in
formulation (Jakobson) or highly specific in formulation and
totally insignificant form a theoretical point of view (most of
the Soviet approaches). This study has aimed to avoid both of
these pitfalls to as great an extent as possible, although as
I have already stressed, (§ 1.4.5.3.) a certain amount of inde-
terminacy is inevitable simply because of the incompleteness of
the analysis: I have not investigated all classes of verbs,
nor all types of sentences, and the omission is bound to tell or
the accuracy of the analysis. It is therefore clearly imprac-
ticable for me to attempt to produce a valid set of rules for
underlying structures. I shall concentrate instead on tying up
some loose ends as regards the type of transformational proces-
ses required in a model such as this, especially those which hav
already been referred to in some vague way in any of the prece-
ding chapters. I do not intend to devote much attention to the
formalism of transformations in a model such as this, nor to
such interesting problems as where lexical insertion takes plac
in a derivation; I hope that the lack of explicitness in such
questions will not materially affect the validity of the dis-
cussions to follow.

## 5.2.

Little discussion has been devoted in this study to the
shape of dependency trees in which syntactic structures are
represented: in general their relationship to the more familiar
constituent structure trees of transformational grammar is fair:
straightforward, and the same choices as to representation of
constructions must be made. For instance, sentential comple-
ments may be represented in constituent structure trees in eith
of the ways shown in fig. 1, and the dependency trees of fig. 2
show the same possibilities within the theory I have put forward

Fig. 1   a.             NP                    b.              NP
                       ⟋⟍                                    |
                     N      S                                S


Fig. 2   a.             E                     b.              R
                        |
                        R

(N.B.: E = 'element', R = 'relator')

I do not intend to go into the arguments for and against these
structures (but see Rosenbaum 1967, Kiparsky and Kiparsky 197o,
Lakoff 1968, Comrie 1971, § 2.2.); it suffices that the (b)
version, which has been used throughout this thesis where there
has been a complement structure, has evidence in favour of it
independently of its position within the framework I have put
forward. In fact this position gains additional support purely
within this theory, as the relative clause structure used
throughout this thesis has been that of (2a); it is interesting
that there does not appear to be a difference within these dep-
endency structures directly parallel to the difference between
the various proposals for the relative clause possible within
constituent structure models. There is therefore not much choice
but to accept this structure, unless, of course, one accepts an
analysis of relative clauses as conjoined to the main sentence
(e.g. as in Thompson 1971). For the purposes of this thesis,
the analyses used throughout for complementation and relativisa-
tion may be considered satisfactory.

It was suggested in § 2.4.5. that a sort of reduced rela-
tive could be used for some constructions. However, the further
suggestion that this reduced form of the relative might occur
purely in derived structure seems to me to be a much more desi-
rable possibility. It will be no problem at all to devise a
system of rules to derive the reduced form from the full rela-
tive form, and most of these rules will probably be needed any-
way. The general shape of the trees which are used in this
model is consequently extremely simple in general, although when

particular elements and relations are inserted in these trees, there will of course be many additional restrictions on the co-occurrence of elements; for instance, the relator dyn cannot dominate individual elements but must dominate complete predications. However, I have not yet established whether many such restrictions are necessary.

5.3.

Obviously the most important transformational process in the analysis of the cases is the raising transformation. None of the particular analyses of cases which have been advanced in this study could have been arrived at had there been a constraint excluding the raising transformation. Furthermore, a condition generally implicit in what has been said about the model is that no relation dominates more than one non-relational element at the point at which case introduction occurs. This is a condition which makes it inevitable that raising should be a transformation, as in a model such as this, there is no other way except deletion of removing an element from a predication, and it should be clear that deletion of every second element would make mincemeat of any underlying structure. A formulation of raising and subject-forming was given in § 4.3.1., and I reproduce it here:

1. Given a 2-place predication, raise one of the arguments as right daughter of the element immediately dominating that predication. This process will go from bottom to top; if two such predications are dominated by a single element, it will go from right to left.

2. To form a subject, raise the rightmost daughter in the topmost predication so that it governs the topmost element.

These formulations will need to be modified somewhat; for instance, it is not clear that it must be a 2-place predication that is in question in (1); for it is possible that a predica-

tion with only one realised argument may have this argument
raised; for example, the average unqualified instrumental of
agent which alternates with the nominative subject of a sentence
seems to be derived from an indefinite predication in which it
alone is realised as a specific element; consider:

(1) a. Ivan ubil Petra.   "Ivan killed Peter."
    b. Petr byl ubit Ivanom (I).   "Peter was killed by
       Ivan."

Both of these sentences will have the same underlying structure
which may be represented as something like fig. 3:

Fig. 3[2]
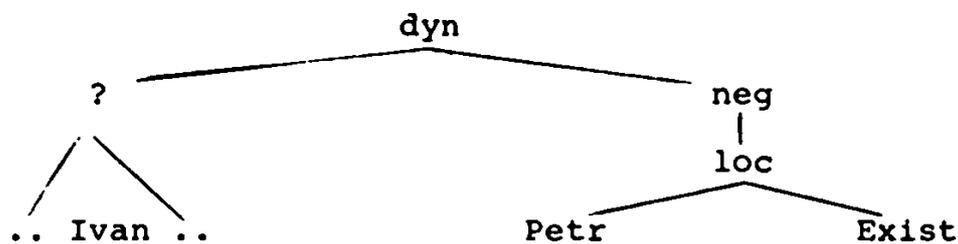


Rule 1 applied first to the loc and then to the neg predication,
will convert this to fig. 4, which could be converted to the
structure immediately underlying (1 b) by an application of
rule 2. If, however, rule 1 is reapplied to produce fig. 5,
then (1 a) will result:

Fig. 4
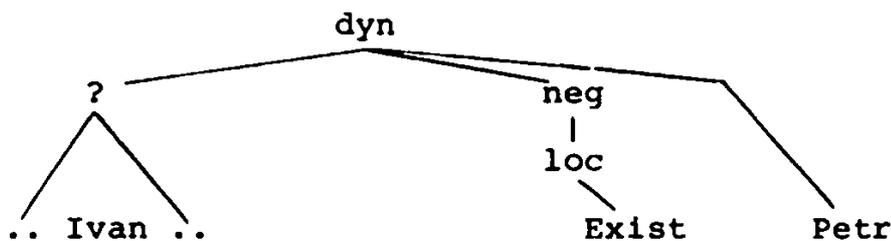


Fig. 5
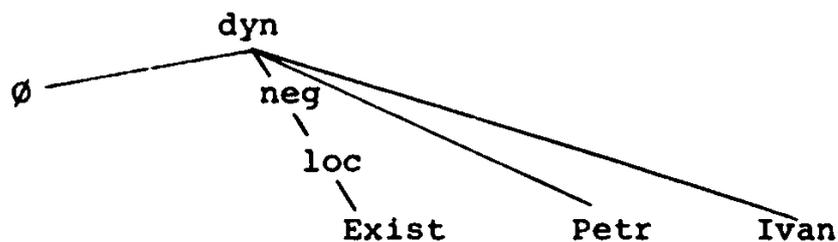


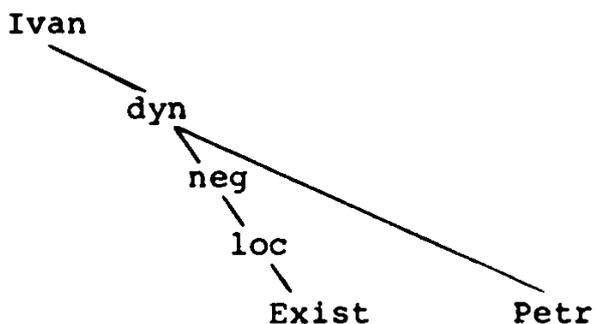When rule 2 has applied for figs. 4 & 5, figs. 6 & 7 result:

Fig. 6

```
                    Petr
                        \
                         dyn
                        /    \
              ?                    neg
             / \                    |
            /   \                   loc
           /     \                    \
        .. Ivan ..                     Exist
```

Fig. 7

```
              Ivan
                  \
                   dyn
                  /    \
               neg      \
                 \       \
                  loc     \
                    \      \
                   Exist    Petr
```
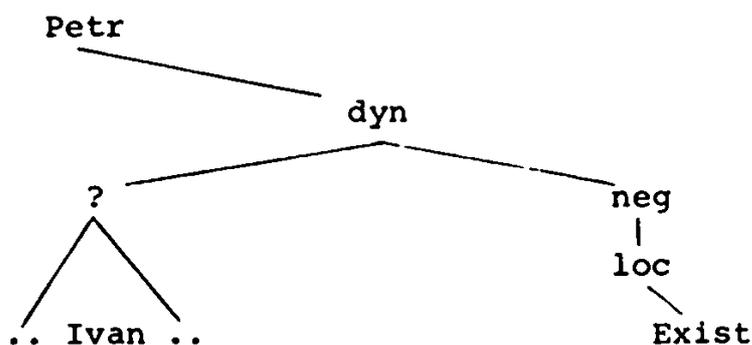
The nouns that are undominated are automatically put into the
nominative; in fig. 6, *Ivan* is put into the instrumental by
the rule on leftmost arguments of relations. In fig. 7, *Petr*
is put into the accusative as it is directly dominated by dyn.
I have not made explicit the procedure for lexicalising the var-
ious forms of the verb, but this is a purely technical manoeuvre
and should pose no more problems than in other theories.

These operations show the sense in the condition on right-
left operation of the raising rule, as it is precisely this con-
dition that predicts that elements from the left side of the dyn
predication in structures like that of fig. 3 cannot be put in
the accusative; they must either remain in their underlying
structure position, or else be subjectivised. If the noun in
the unspecified predication had been *pulja* ("bullet") instead of
*Ivan*, an impersonal sentence would have been possible - i.e. the
tree corresponding to fig. 4 could have skipped rule 2, and (2)
would have resulted:

(2) Petra ubilo pulej (I).  "Peter was killed by a
    bullet."

In this sentence the verb is a neuter third person form charac-
teristic of impersonal sentences (for conditions on these cf.

Galkina-Fedoruk 1958, Šaumjan 1965). Impersonal sentences of
this sort depend on conditions on both of the nouns and on the
verb. I am not sure how one would formalise these conditions
to prevent rule 2 operating (or a second occurrence of rule 1),
but at least the nature of the operation prevented is clear.
That this variety of sentences may be formed from an underlying
structure such as that in fig. 3 shows that the condition in
rule 1 is that the predication be 2-place is too restrictive,
and it can therefore be generalised to include any predication.

However, there is reason to think that rule 1 is not
adequate to account for all occurrences of argument promotion.
It was claimed in § 3.1. that (3 a) was derived from (3 b):

>   (3) a. On krasiv licom (I).  "He is handsome in the
>          face."
>       b. Lico u nego krasivoe.  "His face is handsome."

The structure for (3 b) might be as in fig. 8:

Fig. 8
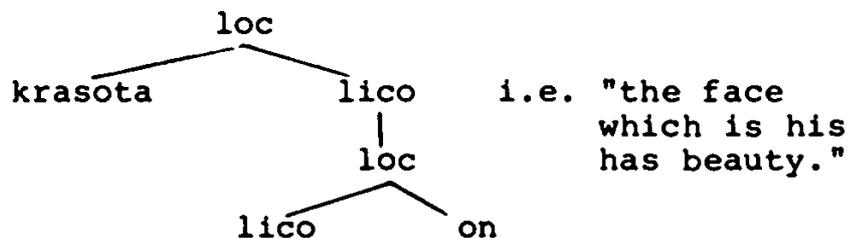


(For the use of the noun *krasota* ("beauty") cf. § 2.4.2.)

Rule 1 does not provide any way in which the animate noun in the
relative clause could be raised into a position from which it
could be made subject. *On* in fig. 8 could be raised so that it
was dependent on *lico* by a regular application of rule 1, but as
*lico* is not a predication, it cannot apply again to make *on* dep-
endent on the topmost loc, from which it could be made subject.
Two possible solutions make themselves evident; rule 1 could be
amended so that it refers not to predications but to any element
which dominates one or more elements: alternatively, an 'extra-
position' rule could be added for relative clauses, (cf. §2.7.)
extracting them from below their determined elements either in

full or reduced form. The full form would be what are superfi-
cially extraposed relative clauses, while the reduced form would
serve for subjectivisation of one of the elements within it.
This latter possibility seems by far the less desirable, as
relative extraposition is generally considered a late transfor-
mation (cf. Ross 1969), certainly much later than any raising
transformations. The first proposal, although it will need con-
straints to make it less powerful, seems much more appropriate.
It may be some evidence in support of this view that the order
in which such relative clauses must be raised is the same as
that in which simple elements must be raised - i.e. that stated
in rule 1. Consider, for instance, a sentence such as:

(4) Kusok ramy tknul ee ostrym koncom v visok.
    "A piece of the frame poked her with its sharp end
    in the temple."

This has two occurrences of inalienable possession - the nomina-
tive *kusok* ("piece") is the inalienable possessor of the instru-
mental *konec* ("end"), while the accusative *ee* ("her") is the
inalienable possessor of the accusative *visok* ("temple"),
occurring with the preposition *v* ("into"). A very approximate
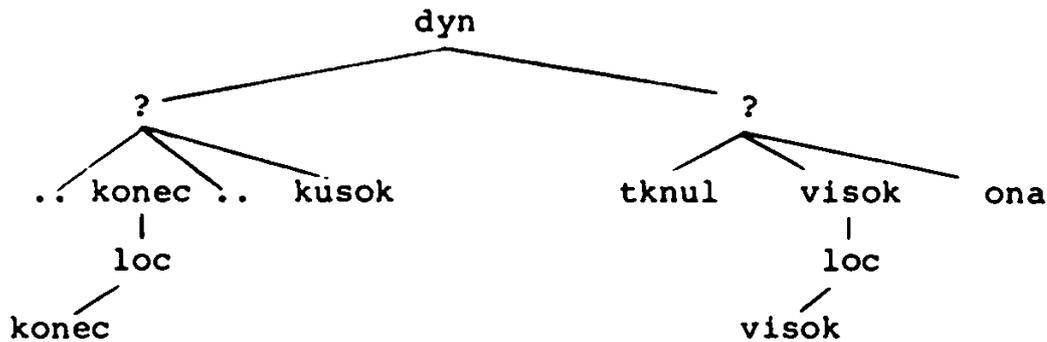structure for the underlying form of this sentence might be as
in fig. 9:

Fig. 9[3]
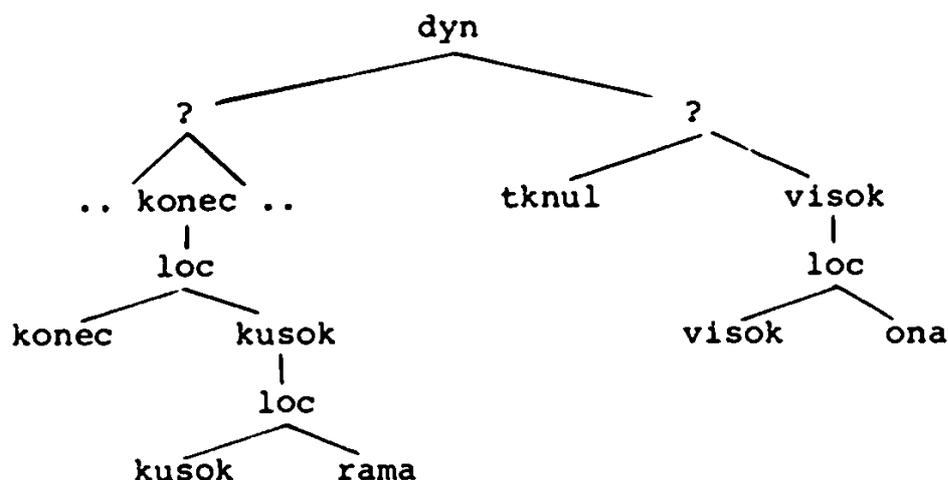


Two occurrences each of rule 1 would bring us to fig.
1o:

Fig. 1o



In order to get *ona* into its accusative: *ee*, and to retain *kusok*
as nominative, these two elements would have to be raised from
right to left, just as rule 1 states; with this done, and rule
2 also applied, and with deletion of redundant elements (a pro-
cess to be considered in § 5.4.), the final structure of this
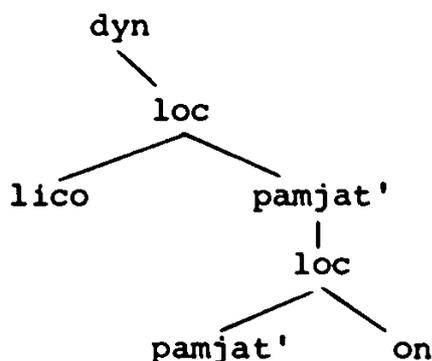should look something like fig. 11:

Fig. 11
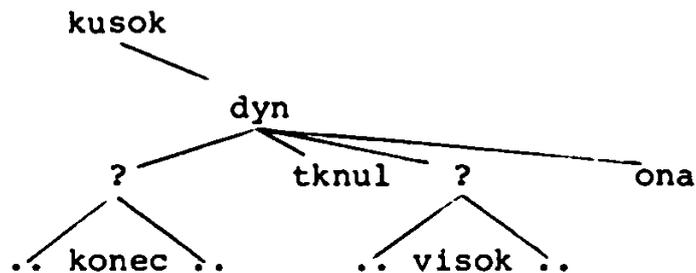


Two things go against this proposal; firstly the argument that
has just been brought forward concerns only the order in which
the rules apply rather than the nature of the rules themselves.
It would be very easy to make the ordering argument apply to
more than the one rule, and in fact it seems fairly unlikely
that such statements should occur with regard only to one rule;
when transformationalists talk about cyclic ordering of rules,
for instance, they talk about it in relation to whole classes of
rules, not individual rules. If, therefore, evidence were pro-
duced that the extraposition argument was able to produce correct
structures where the raising argument was not, this would be
fairly conclusive evidence in favour of the former. The second
thing is such evidence; it will be remembered that in § 2.7.,
evidence was presented to show the similarity in underlying stru-
cture of such sentences as:

> (5) a. On vspomnil ee lico.  "He remembered her face."
>
>     b. Emu (D) vspomnilos' ee lico.

c. Ee lico prišlo emu (D) na pamjat'.  "Her face came
   to his memory."

These could approximately be represented as:

Fig. 12

```
                              dyn
                                \
                                 loc
                         _____/ _____
                        /                   \
                      lico                 pamjat'
                                              |
                                             loc
                                         ____/ \____
                                        /           \
                                    pamjat'          on
```

Here we are especially concerned with (5 a); how is it that *on*
("he") can be raised to end up on the right of *lico*? Clearly
if it is raised to dependence on the higher loc by the modified
rule 1 there is still no guarantee that it will end up as sub-
ject. In fact, if the correct structure is to result, rule 1
will need to be modified to allow two applications of rule 1
to the same predication, and further specified to ensure that in
fig. 12, *lico* is the first element to be raised from the higher
loc, and *on* the next. This possibility is explicitly excluded
by the right-left condition on rule 1. However, if an order
were established in which rule 1 applied first, as many times as
necessary, then a rule applied which took elements out of rela-
tive clauses, then rule 2 applied, the correct structures could
be derived from structures such as fig. 12 and fig. 9. However,
it is probably not the whole relative predication which is
removed in this operation, which must therefore be different
from the later extraposition transformation. It is likely that
a predication subordinate to an element containing only a rela-
tor and the same element could be deleted on grounds of redun-
dancy, so it is likely that this is what happens in structures
such as these. With the modifications suggested above, rule 1,
and the new rule will look rather as follows:

1. a. Given a predication, raise one of the arguments
      as right daughter of the element immediately domina-
      ting that predication.
   b. Given a relative clause denoting inalienable

possession, raise the possessor element to be
right daughter of the topmost relator in the sen-
tence.

These processes to apply from bottom to top; if two such
predications are on the same level of depth, the rules
apply from right to left.

These rules will apply in order, (1 a) applying as many times
as necessary, followed by (1 b) applying as many times as nece-
ssary. For the moment both of these rules may be described as
optional. A problem which would arise in a more exhaustive
analysis is that (1 b) must be upward bounded, insofar as it
allows in its present form for any inalienable possessor at any
depth of embedding to be raised over any number of predications.
It is not easy to see how this could be formalised at the pre-
sent moment. It is also interesting that (1 b) applies only in
predications of inalienable possession; the status of this
phenomenon will be briefly considered in § 5.5.


5.4.

Interesting formal problems also arise with any attempt
at a definition of prepositions; in previous chapters cases have
been defined irrespective of their occurrence alone or with a
preposition. The very fact that one can talk unambiguously
about prepositions as a separate word class, that they have uni-
que formal characteristics, seems to suggest that there ought to
be some means of demonstrating which derived structures are
going to be realised with the aid of a preposition and which are
not. Of course, it would probably be possible to specify speci-
fic environments in which prepositions could be inserted in their
lexical entries, or in the lexical entries of other elements
which condition the choice, but this would not be a very satis-
factory procedure, as it would demand a vast amount of redupli-
cation of information, and would still not help us in any defi-
nition of prepositions as a class. There have been several
instances in this study where an alternation between a simple

case and a prepositional construction has been mentioned; it would be interesting if some features common to all of these alternations could be found.

The most extensive discussion of an alternation of this sort was in chapter 3, where it was suggested that a partial solution of the problem of differentiating the instrumental from ablative prepositions was to be found in the fact that constructions with ablative prepositions were dependent on some element in them being deleted under identity with another element. It was also shown in the same place that this solution was not adequate in a number of examples, but that even these indicated that deletion had some connexion with the problem. It was suggested that the deletion proposal did not account adequately for sentences like:

(6) My vernulis' iz-za doždja. "We returned because of rain."

(7) Iz-za šuma ničego ne slyšno. "Because of the noise, nothing is audible."

It was automatically assumed there that they would have the indeterminate antecedent predication found in many agentive sentences - i.e. they would have a structure as in fig. 13:

Fig. 13

```
                 dyn
          _____/_____
      ?  /                  \  x      (the structure of the "x"
        /\                   /\        predication is irrelevant
       /  \                 /  \       here)
     .. šum ..         ničego ne slyšno

   .. dožd' ..            my vernulis'
```

However, it was also suggested that these were nominalisations in some sort of existential predication - i.e. they can be paraphrased as: "The fact that there was rain/noise caused ....". This is as distinct from a truly indeterminate antecedent predication in a sentence such as:

(8) On byl ubit tovariščem. "He was killed by a comrade."

There is no paraphrase here in terms of "The fact that there was a comrade caused ..." or even "The fact that he had a comrade caused ...". It seems quite plausible in view of this that the antecedent predication in fig. 13 should really look like:

Fig. 14

loc

{sum}

{dožd'}
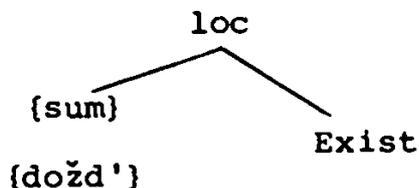
Exist

Existential nodes appear to be peculiarly evanescent; they are needed in underlying structure if structural regularities are to be preserved, yet they rarely turn up in superficial form. It seems not unreasonable to claim that this one will be deleted; the deletion argument is therefore not rejected on the evidence of such sentences. The question remains, however, to be answered, as to precisely why such a deletion feature can account for the introduction of prepositions.

A principle suggested by Emonds is interesting looked at in this context. Emonds' idea consists fundamentally in suggesting that, for a large and important subset of transformational rules, there should be a constraint on derived structure such that no derived structure should be possible which could not itself be generated by the phrase structure rules. The mechanism which Emonds uses to enforce this principle is to allow nodes to be inserted by the phrase structure rules which are not affected by lexical insertion. Then, for these crucial transformations, the following holds:

> "A structure-preserving movement rule is a transformation such that (i) the structural description specifies the location in trees of two nodes $B_1$ and $B_2$ bearing the *same* label X; and (ii) the structural change moves $B_2$ and all the material dominated by it into the position of $B_1$, deleting $B_1$."

> (Emonds, 197o)

A certain similarity to this proposal, although it is couched in a very different framework, may be found in Anderson's proposal (1972) that movement of nouns consists in attaching them

to empty nodes in higher predications ('quasi-predications').
The interest in this proposal from the point of view of prepo-
sitional construction lies in the fact that, at least in the
examples studied so far, the prepositional construction is found
in a structure in which a node has been made empty by deletion.
In fact what I am hypothesising is virtually the opposite of
Emond's hypothesis; not that nodes are created to receive ele-
ments, but that elements are created to fill nodes. Within the
model of this study there is no sense in creating empty nodes in
underlying structure. Anderson, for instance, uses his superor-
dinate case nodes as preposition-determing elements; if, as I
have claimed here, cases and prepositions are predictable on the
basis of the central predication of a sentence alone, they are
obviously not conditioned by any predications superordinate to
the main one.[4] Consequently, empty nodes can be created in this
model only by deletion; the hypothesis to be tested is whether
these nodes form a plausible source for prepositions.

The simplest case of such constructions is of course the
simple locational sentences such as (9), which will have a struc-
ture like that in fig. 15:

(9) On v parke.   "He is in the park."

Fig. 15
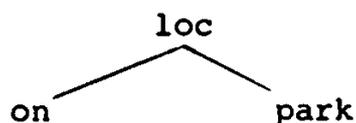


Rule 2 will convert this to fig. 16, which will have an empty
node for the introduction of a preposition:

Fig. 16[5]
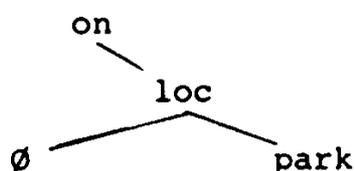


The same will of course apply mutatis mutandis to other locative
sentences - e.g. possessives:[6]

(1o) U menja kniga.   "I have a book."

However, the prepositional construction of possession is interes-
ting in that it alternates with the simple genitive in noun phra-
ses - e.g. (11 a) and (11 b) are synonymous:

  (11) a. Dom u otca (G).
     b. Dom otca (G). "(My) father's house."

If we accept that these are both derived from an underlying
structure as in fig. 17, how can these be differentiated?

Fig. 17
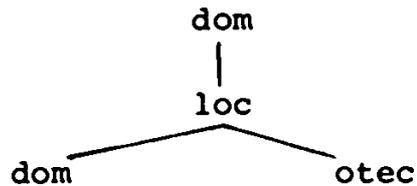


(11 a) could be formed simply by deleting the lower occurrence
of *dom* ("house") under identity; a preposition would then be
inserted in the space. The simple genitive could perhaps best
be formed by an application of rule 1a to fig. 17 giving fig. 18:

Fig. 18
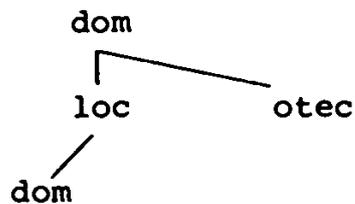


Again the lower occurrence of *dom* could be deleted, and it seems
reasonable to postulate that any relator left with no dependent
elements should be deleted; the structure of (11 b) will there-
fore be fig. 19:

Fig. 19



This solution is attractive for two reasons; it corresponds,
with only a slight modification, to the definition of the geni-
tive given in chapter 4, and it shows that the operation of rule
1a is justified on this type of structure insofar as it produces
only grammatical sentences.

   The parallel with the structure-preserving hypothesis may
be extended by the further observation that this analysis of

prepositions seems to apply only to locative predications. I can think of no preposition which could be inserted in dyn predications, and there is reason, within this hypothesis, to think that this is not accidental. An obvious point of formal differentiation between loc and dyn predications is that the arguments of a loc predication can be anything - while the arguments of a dyn predication can only be complete predications, at least at the level of underlying structure. Single elements dominated by a dyn must have been put there by a raising transformation. The argument from structure-preservation is that prepositions, being single elements, can only be inserted in positions where single elements belong - i.e. in a locative predication, but not in a dyn predication. It therefore seems a reasonable hypothesis that the preposition is inherently locative. This argument is strengthened by the fact that the locative case is the only case in Russian which cannot occur on its own, but must be accompanied by a preposition. As the only case derivable from an underlying locative predication which is not moved in the course of a derivation, the locative could be expected to be uniquely associated with prepositions, as it is, given the locative nature of prepositions in general.

Complications arise in this account of prepositions, however, if one considers sentences with double objects, of the type already considered in § 3.1.:

    (12) a. Oni gruzili drova na baržu.  "They loaded firewood onto the barge."
         b. Oni gruzili baržu drovami.  "They loaded the barge with firewood."

The underlying structure of both of these will be as in fig. 2o:

Fig. 2o
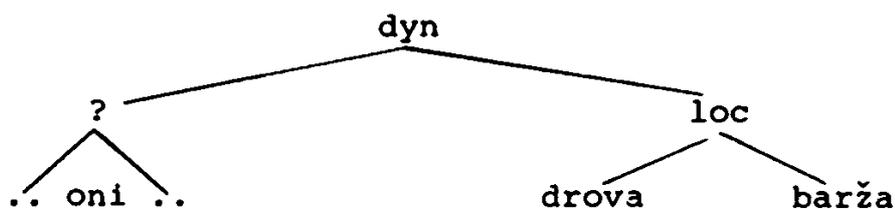


(12 a) is the expected result of the raising of *drova* ("firewood") and the insertion of a preposition in the resulting gap.

But (12 b), which should also have a preposition, has only the instrumental case on the one element that is left behind in the locative predication. These were the constructions with which the question of prepositional insertion really began in § 3.4.; it was claimed there that these constructions do not take a preposition because there is no deletion in them, while the somewhat similar sentences which take the ablative prepositions do involve deletion. There are many possible avenues of approach to this problem. An appealing one, although one that would lead to tremendous difficulties, would be to extend the 'quasi-structure-preserving' theory and claim that the instrumental case here is inserted in the vacant space, which, following on from the noun, must occur as a postposition (which is what a case really is to some degree) rather than the preposition which occurs when elements are left on the right. This, of course, faces the difficulty that all nouns in Russian have case whether or not they go along with a preposition. I suppose that one way of trying to get round this would be to say that cases such as the locative and accusative are in some sense 'unmarked' for occurrence with prepositions, while the instrumental is a much more independent case. The instrumental, it is true, does occur with prepositions but in general these are prepositions which, as mentioned in §2.1., are rather more complex in structure than the simplest of the locative prepositions. Although this suggestion is quite appealing, it is one that I shall not take any further because of the difficulties and contradictions it seems to impose on the general framework.

Testing any more complex prepositional constructions for correspondence to the predictions of this theory is a considerable problem in that detailed specifications have not yet been given of the structure of many of these constructions. The complexity of the structures can be shown by one example:

> (13) Ja govoril o tom, čto on glup. "I was talking about (the fact) that he is stupid."

This of course must be differentiated from the sentence:

> (14) Ja govoril, čto on glup. "I was saying that

he was stupid."

Verbs of speaking are verbs of creation - i.e. causing a spoken message to exist; the message noun (which will suffice for the moment for the necessary noun) will be complement-taking on the model of those in § 2.4.5. The structure of (14) will therefore be something like:

Fig. 21
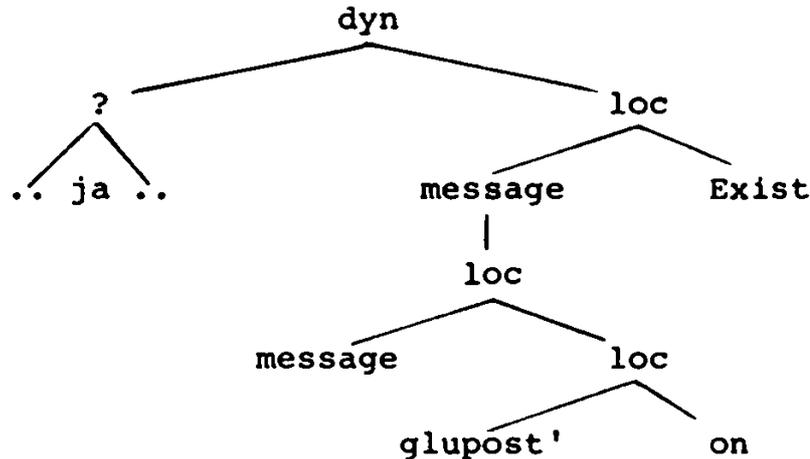


(i.e. "I created a message which consisted in it that he has stupidity.")

What will therefore be the structure of (13)? It must clearly have the same structure as fig. 21 down to the relative clause, which is the part that will differ; some clue to this is provided by sentences such as:

(15) Každoe predyduščee pokolenie govorit o sledu-
juščem, čto ono stalo xuže.   "Each preceding
generation says of the next one that it has
become worse."

In this sentence, the prepositional phrase with o, has been detached from the complement sentence in which it began life as subject; it will therefore have a structure identical to that of fig. 21, except for the lexical filling: the content of the message will be that the next generation has become worse. The mechanism for the separation of the subject from the rest of the sentence is presumably as follows: by rule 1a, the subject is raised to become dependent on the next loc up; on the next application of the rule, the predication, minus the separated element is raised until it becomes dependent on the topmost

relator, dyn. The final structure is therefore:

Fig. 22
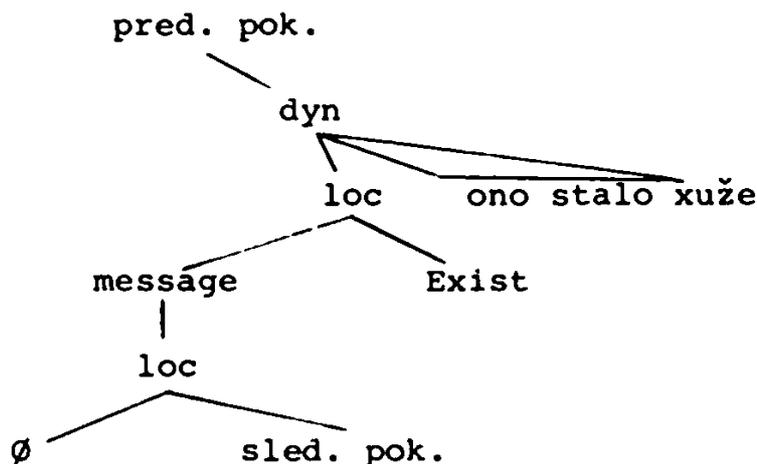


The structure for (13) will differ from this only in that the predication from which the element *čto on glup* is extracted is otherwise indeterminate; when this is extracted, the rest of the predication will therefore be deleted as it contains no lexical material. Under such an interpretation of this construction, there is complete regularity in the choice of a preposition in the extracted element.

If the suggestion made here about the source for prepositions is at all valid, it is clear that extensive research will need to be undertaken, both into the nature of the rules which could affect the choice of preposition or case, and into the structure of a large number of prepositional expressions not investigated here. A lot of very specific assumptions need to be made about rules and lexical entries for verbs before attempting to justify the introduction of prepositions after a verb like *govorit'* ("say"). If the same assumptions also need to be made in dealing with other verbs, and if they are supported by independent evidence, then it will be possible to say that the approach suggested in this section is valid.

5.5.1.

An obvious exception to the preposition introduction rule appears to be the dative case; it has been analysed (§2.7.) as a case of motion towards, used chiefly with animate nouns. As such it is directly parallel to other motional expressions, all

of which occur with a preposition; identical structures, according to this analysis, will underlie (16) and (17):

    (16) On poslal mne (D) knigu.   "He sent me a book."

    (17) On poslal pis'mo v Pariž.   "He sent a letter to Paris."

It is however interesting and curious that one of the most characteristic use of the dative, if the analysis in §2.7. is correct, is its use as a marker of inalienable possession, and that, furthermore, inalienable possession is subject to a special raising rule (1 b in § 5.3.) which might affect dative constructions of this sort. It is possible to allow for inalienable possessors in motional constructions to be without prepositions if this rule is revised to let them be raised to any higher predication rather than only the topmost one; if the rule is framed in this way, then one could convert fig. 12, underlying all the sentences in (5) into fig. 23, a step in the direction of (5 c):

Fig. 23
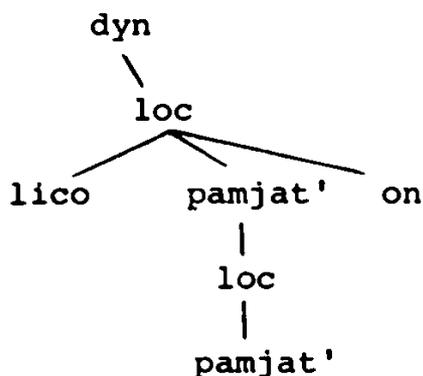


The raising of *lico* ("face") will allow for the prepositionalising of *pamjat'* ("memory"), but not that of *on*, although the latter is still dominated by loc and dyn so that it denotes motion. A problem with this analysis is that with alienable possession, the possessor can be the dative with the preposition *k:*

    (18) Oni priveli k sebe na predprijatie molodyx rabočyx.   "They attracted young workers to their enterprise."

    (19) Oni ni razu ne postučalis' ko mne v dver'. "They never once knocked at my door."

       b. On oskalil zuby.  "He showed his teeth."
         (grinned)

(23)  a. On ščurilsja.

       b. On ščuril glaza.  "He screwed up his eyes."

(24)  a. On ustavilsja na nee.

       b. On ustavil glaza na nee.  "He fixed his eyes on her."

Ignoring the problem of the overall structure of these sentences, they will presumably fit into a structural framework like fig. 24:

Fig. 24
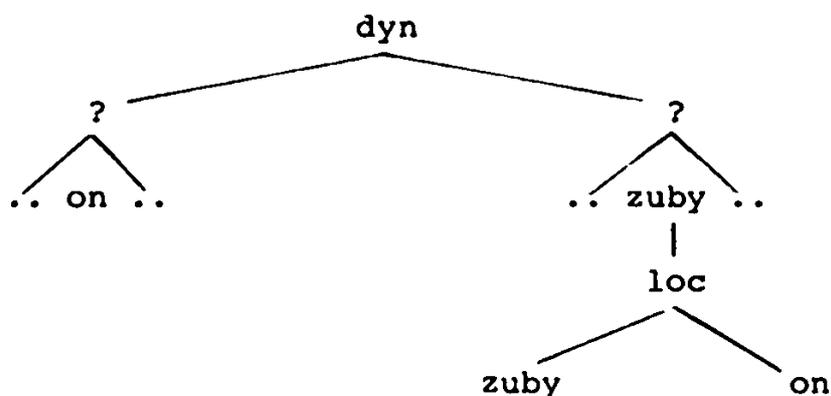


Given a procedure for deletion of the inalienably possessed *zuby* ("teeth"), reflexivisation will occur perfectly regularly due to the presence of a noun coreferential to the subject in object position.

    A rather similar procedure takes place with transitive verbs also involving inalienable possession; here again, the (a) and (b) sentences are synonymous:

(25)  a. On pričesal volosy rebenka.

       b. On pričesal rebenka.  "He combed the boy('s hair)."

(26)  a. Ivan breet Petru (D) borodu.  "Ivan is shaving Peter's beard."

       b. Ivan breet Petra.  "Ivan is shaving Peter."

The same arguments apply here as to deletion procedures to dispose of the inalienably possessed element.

Less similar constructions, however, also demand deletion of elements; mention has already been made (§2.5.) of constructions in which the people involved in a place or an institution are denoted by the name of that place or institution; e.g.:

(27) Sever ožidaet pomošči.  "The north is awaiting help."

This will have an underlying structure approximately like fig. 25:

Fig. 25[7]
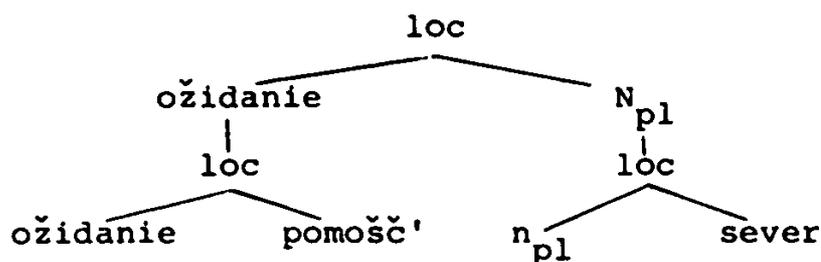


(i.e. "Those who are in the North have an expectation which consists in being helped.")
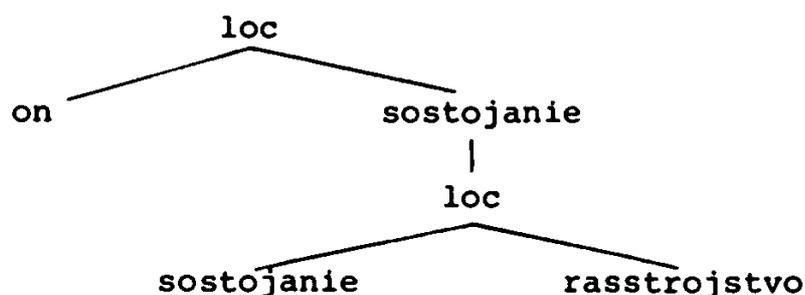
This construction demands a deletion procedure identical in form to that required in fig. 24 to produce a structure closer to the superficial form. The only difference is that there the deletion procedure is on an inalienably possessed element, while here it is on a pro-element. In both examples the element which must be deleted is effectively redundant.

This procedure also suggests reanalysis of certain other constructions which would then undergo this deletion process. In §2.4.4. it was suggested that the alternations of sentences as in (28) were accountable for on the basis of the analysis put forward by Anderson (1972):

(28) a. On v rasstrojstve.  "He was in disorder."
     b. On v sostojanii rasstrojstva.  "He is in a state of disorder."

Under this deletion proposal, it is, of course, possible to retain Anderson's analysis and still use the deletion process. However, it might be simpler to use a straightforward structure more directly reflecting the surface structure, which would also be susceptible to this process:

Fig. 26

```
                        loc
              on                  sostojanie
                                      |
                                     loc
                        sostojanie        rasstrojstvo
```
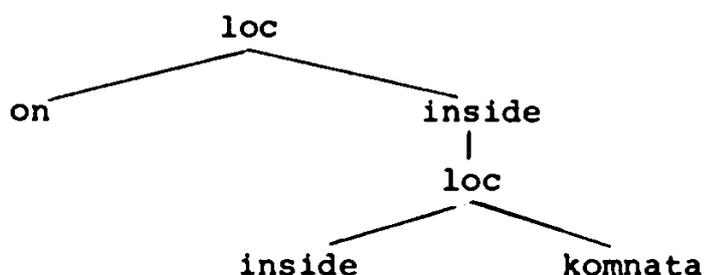
It will still be possible to look on *sostojanie* ("state") as a pro-element, so that the redundancy of the other examples is found in this construction also. *Sostojanie* is in any case the superordinate term of *rasstrojstvo* so its meaning is included in that of the latter.

It has been shown (§2.1.) that nouns which have no parameter opposition automatically choose a preposition to go with them; for instance, *v seredine* ("in the middle"), and *na veršine* ("on the summit"), cannot be glossed as "on the inside of the middle" or "on the top of the summit", although the prepositions themselves can be glossed in this way when they are used with non-parametric nouns. It would therefore seem natural to state that prepositions as such do not incorporate nouns of parameter in their own internal structure (as was suggested in §2.1.), but rather that they are conditioned by the noun that follows them. Under this interpretation, every superficial preposition + noun construction which alternates with another prepositional construction with the same noun will have as underlying structure a parameter-conditioning noun (inside, top, etc.) and the noun that appears on the surface; this will be expressed in a structure like fig. 27 for (29):

(29) On v komnate.  "He is in the room."

Fig. 27

```
                        loc
              on                  inside
                                      |
                                     loc
                        inside          komnata
```

The relation of a room to its inside is presumably one of inali-

enable possession; there will be a transformation in which the preposition is chosen in accord with its position in relation to the noun of parameter; the deletion process will subsequently apply to give the correct superficial structure for this sentence - similar to that of fig. 16. This is only a very minor part of the analysis of parameters, but this approach seems more plausible than that of §2.1. One of the arguments in its favour is that a similar approach seems to be needed to deal with some of the other constructions dealt with in this section on this deletion process. For instance, in a sentence like (26), the verb *brit'* might be analysed as a simple verb of destruction - i.e. its structure will be as in fig. 28:

Fig. 28
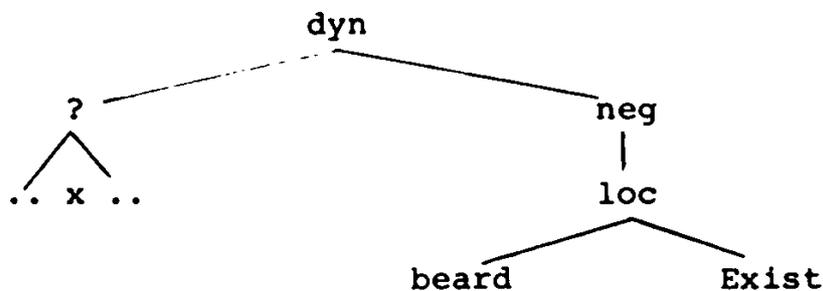


Any process of lexical insertion will state that a verb of destruction will be lexicalised as *brit'* ("shave") in the environment of *boroda* ("beard");[8] this is directly parallel to the type of lexical insertion rule saying that a locational preposition will be lexicalised as in *v* ("in") in the environment of the parameter noun *inside*. The analysis here of *brit'* is probably wrong, but the principle seems sound enough; most of the verbs in these examples presuppose the objects which are deleted - e.g. *oskalit'* can only have *zuby* ("teeth") as its object, *pričesat'* ("comb") can only have *volosy* ("hair") as its object (of course it can have people as well, but that is the point of the deletion process), *ožidat'* ("await") demands an animate subject. In most of these constructions, therefore, the deleted noun is redundant in that its semantic specification is partly covered by the possessor noun dependent on it, and partly in the 'selectional features' of the verb lexicalised in its presence.

5.5.3.

To return to the dative case, some of the constructions
already analysed there seem to be in need of a principle such as
the deletion rule just considered. Various dative constructions
are considered in § 2.7.; the analysis of the so-called 'dativus
commodi/incommodi' is claimed to involve a noun of gain/harm,
which is subsequently deleted; this would perhaps involve a
predication like that of fig. 29 superordinated over a sentence
x:

Fig. 29
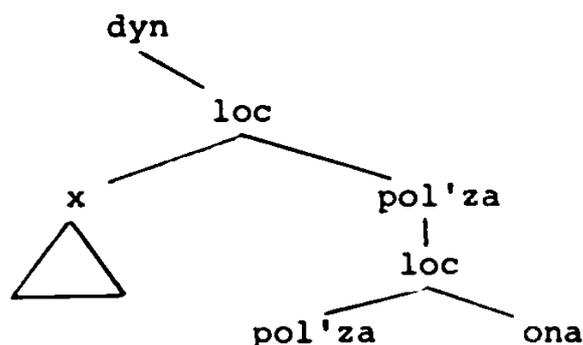


(I have used *pol'za* ("gain") although, as suggested in §2.7., it
will be a term neutral as to gain or harm.) Without deletion,
this structure would emerge as *"ej na pol'zu"* ("in her favour"),
but with the structure deleted, the simple dative would remain.
This appears to presuppose that case and preposition assignment
has already taken place, if the analysis of the dative of inali-
enable possession given in § 5.3.1. is correct. This poses cer-
tain problems, but without going into the whole question of lexi
cal insertion, which I am reluctant to embark on, it is perhaps
best to leave these undiscussed. Within the analyses of § 2.7.,
it is possible that this process will be needed also in a fuller
treatment of the constructions with motional complements of
*golova* ("head"), such as:

(3o) Emu v golovu prišla interesnaja mysl'.   "An
        interesting thought came into his head."

Such constructions will underlie verbs like *dumat'* ("think"),
etc. However, it is difficult to decide finally whether such
elements should be incorporated into the structure of the verb
itself, or whether they simply affect the choice of verb at lex-

icalisation, and are then deleted; there is little evidence one
way or the other, so an arbitrary decision may have to be made.

However, the existence of a deletion principle is sugges-
tive of a reanalysis for datives which have been analysed here
as not involving inalienable possession. The commonest of these
is the dative of coming into possession:

(31) On dal èto mne.  "He gave it to me."

A near paraphrase of (31) is:

(32) On dal èto mne v ruki.  (lit.)  "He gave it to
me into the hands."  i.e. "He gave it into my
hands."

(32) is obviously somewhat more specialised than (31) but the
sense is very similar. Clearly (32) is not of itself a source
for all sentences with *dat'*, but a similar inalienable possession
construction with a more generalised noun than *ruki* ("hands")
would seem to make a good source for *dat'* sentences, given the
fact that there exists a deletion procedure which could account
for the difference between the underlying form and the superfi-
cial. This would have the  interesting effect of making plaus-
ible the suggestion that dative case was not simply a case of
motional location, but rather a case of inalienable possession
of a motional complement, in all of its uses. This would be
desirable not only in that it makes the definition of the dative
so much more specific than previously, but also in that dative
would no longer be an exception to the preposition introduction
rules of § 5.4. It is consequently essential that there should
be a reconsideration of those uses of the dative previously
thought to be simple motional locatives.

Near-synonyms of *dat'* ("give") will naturally share its
structure; the verb *vručat'* ("to hand") in fact incorporates
the preposition *v* ("in(to)") and the root *ruč-*, a regular vari-
ant of *ruk-* ("hand"), along with the regular verbal ending *at'*.
The only other type of construction which was analysed as being
a dative of coming into possession was that in which *dat'* is
used as a pro-verb along with a verbal noun; even if no other

evidence could be found that these were not datives of inalien-
able possession as well, it would be a decision of dubious vali-
dity to state that these were evidence of the dative having a
meaning other than that of inalienable possession. For a single
small class of constructions is not sufficient to justify such
a decision. And indeed there seems to be little systematic basis
for reanalysing most of these constructions; for instance, one
can say:

>(33) a. Texnika ne pomogla čeloveku (D).
>        "Technology has not helped mankind."
>     b. Texnika ne dala pomošč' čeloveku (D).
>        "Technology has not given help to mankind."
>     c. Texnika ne prišla na pomošč' čeloveku (D).
>        "Technology has not come to the aid of
>        mankind."

(33 c) could serve as a source for (33 a), with its dative of
inalienable possession; but this pattern is not repeated over
other verbs with dative government and a possible paraphrase
with *dat'*. It might be suggested that the new analysis of *dat'*
could also be applied to its use in such abstract constructions;
if it could be glossed as 'cause to come into the possession of'
this would make *dat'* more amenable to solutions such as those I
have sketched. A useful consequence of the reanalysis of the
dative as the case of inalienable possession of motional ele-
ments, and the subsequent reanalysis of constructions with inani-
mate nouns 'standing for' animate nouns (as in (27)), is that
animate nouns no longer have to be seen as a special case with
regard to locational parameters; any animate noun with an indi-
cation of a spatial parameter will obviously be seen as concrete,
but there will be no construction in which animate nouns have to
be analysed as something 'non-spatial', as was suggested in
§ 2.5.


5.6.

   Mention has been made in this chapter both of a definition
for prepositions, and a method of formalising the choice of pre-

positional parameters. Although it is possible to look on both
of these as involving at least some progress towards a more com-
plete formalisation of the model, the problems of prepositional
parameters and the relations between prepositions still form one
of the largest of the unsolved areas among those discussed in
this work; questions of the following sort remain unanswered -
How many separate parameters must there be (or are they, perhaps,
unlimited?); are all parameters mutually exclusive, or might
there perhaps be some cross-classifications (Hjelmslev's (1935)
feature of 'coherence' might be a candidate for a parameter on a
different level from those such as 'in', 'top', etc.)? How can
converseness be represented in relation to parameters? These
questions are, of course, interrelated; if converseness is rep-
resented directly, with only one parameter noun for each conver-
seness pair, and if cross classification is allowed, then the
number of parameters necessary will be very small indeed. Such
evidence as is presented in §2.1. seems to suggest that the num-
ber of parameters is indeed very small, or at least, that there
is a hierarchy, with a very small number at the top. It is sug-
gested there that the basic opposition with locative preposi-
tions is that between *v* ("in") and *na* ("on") because all other
prepositions can be expressed in terms of these two, but neither
can be expressed in terms of the other, nor in terms of any
other, more basic, preposition.

On this basis, *pod* ("under") could be described as the con-
verse of *na* ("on"); how, then, could the relationship of (33)
and (34) be described?

(33) On - na stole (L).  "He (is) on (the) table."
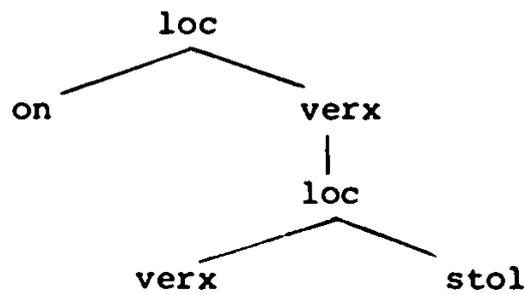(34) Pod nim (I) - stol.  "Under him (is the) table."

The structure of (33), which I have claimed is the most basic
construction, might be as in fig. 3o (see below). (33) can be
derived by subjectivisation of *on* ("he"), deletion of the embed-
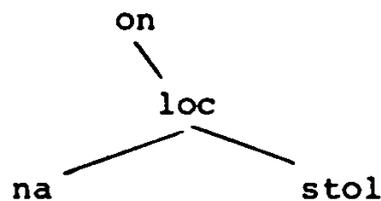ded *verx* ("top") and subsequent deletion of the

verx
|
loc

Fig. 3o

```
                    loc
                  /     \
               on        verx
                          |
                         loc
                        /    \
                    verx      stol
```
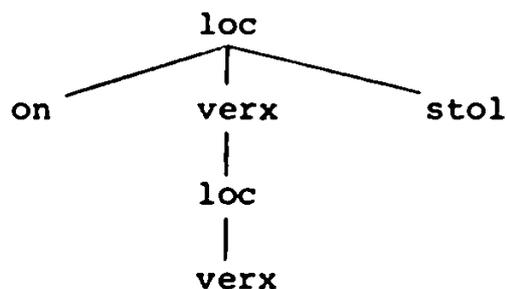
configuration, once the upper locational relation has been lexi-
calised as the preposition *na* ("on"); the final structure would
therefore be fig. 31:

Fig. 31

```
              on
                \
                 loc
                /    \
             na       stol
```

The locative case will be a consequence of domination by a simple
locative element. The derivation of (34) will involve *stol* -
("table") being chosen as the subject; the mechanism for this
will be rule 1b from §5.3., which raises an element from a rela-
tive clause to be dependent on the topmost element, as long as
the relative clause is one of inalienable possession; this
can be said of the relation of a table to its top. Fig. 3o will
therefore be transformed to fig. 32:

Fig. 32

```
                    loc
                  /  |   \
               on   verx   stol
                     |
                    loc
                     |
                    verx
```

At this stage we reach a technical difficulty; the structure
really intended as the final structure after fig. 32 is fig. 33:

Fig. 33

```
              stol
                 \
                  loc
                 /    \
              on       pod
```
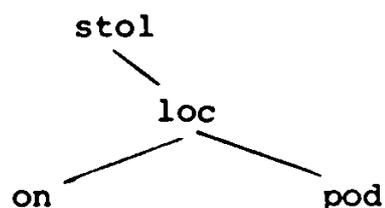
But this structure cannot under the present rules be generated

from fig. 32. A solution which can be adopted, and which, on
other grounds seems fairly likely,[9] is to say that rule 1b is a
copying transformation; if so, a copy of *stol* ("table") would
have remained at the bottom of the tree in fig. 32, the deletion
rule could then apply, and the required structure would result;
from the point of view of the preposition introduction mechanism
considered in §5.4. this is in fact a more desirable derivation,
as it means that there will be an element to be deleted (the
copy) in the place where the preposition is to be inserted. The
interesting thing about fig. 33 is that it predicts the case of
the noun with the preposition; this is the instrumental case,
and it is predicted because the noun is in the 'marked' position
of the locative relation. This, if it is confirmed by analysis
of other instrumental-governing prepositions, is interesting con-
firmation of the suggestion that converes are defined in terms
of a single parameter element. Two things further need to be
said in relation to fig. 33; the order of noun and preposition
is immaterial at this stage and can easily be adjusted by fairly
superficial rules: (although see §5.4. above for a contradictory
proposal); secondly, the choice of *pod* or *na* as the preposi-
tion in figs. 31 and 33 will presumably be made on the basis of
environment when the choice is made; which particular part of
the environment is something I cannot specify at the moment. Of
course, if the sentence to be generated is something such as:

> (35) On byl na poverxnosti stola.  "He (it) was on the
>      surface of the table."

there is no problem in its derivation from the underlying struc-
ture of fig. 3o. The structure that will emerge will be fig.
34:

Fig. 34
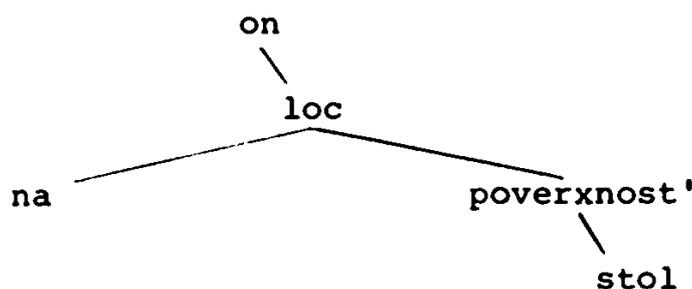
The choice of preposition is accomplished in the same way as in the derivation of (33); the difference here is that the deletion rule does not apply, and the procedure for adnominal genitive worked out in §5.4. will take place. One of these processes will be dependent on the application of the other, but it is not of great concern here which is which.

This has some plausibility when applied to the analysis of *na* and *pod*; it is less easily applied to the analysis of *nad* ("above"). Perhaps the most straightforward description of *nad* in terms already used in this work is to say that it is a 'non-coherent' version of *na*; however, this is to make assumptions about the form of the model which have not yet been given any serious discussion, and it would be interesting to see if any other form of explanation for *nad* is possible, taking into account the fact that it appears to have no nouns of parameter other than those which belong to *na*. One possible suggestion, for instance, is that *nad* should be the negative of *pod* - i.e. 'over' = 'not under'. This would account for the fact that *nad* governs the instrumental, but it would only give a very approximate semantic representation, for 'over' does not mean 'not under'; it might be represented as 'not under and not on the same level as', but that seems a little clumsy, especially when the information is already systematised that *pod* is the converse of *na*, and that *nad* and *na* are so similar, in particular in that *pod* is also the converse of *nad*; thus in abstract sentences, *pod* denotes the converse of both *na* and *nad*:

(36) a. On okazal vlijanie na detej.  "He had
           influence over (on) the children."
     b. Deti, pod ego vlijaniem ...  "The children
           under his influence ..."
(37) a. On prinjal komandu nad polkom.  "He took
           command over the regiment."
     b. Polk, pod ego komandoj ...  "The regiment,
           under his command ..."

The same is true of concrete constructions. It thus seems inevitable that *na* and *nad* should share a considerable amount of

their structure. The differentiation in terms of 'coherence'
seems valid also for abstract constructions; influence suggests
a quasi-causative link, while command over someone suggests a
less direct link in producing an event. (N.B. In Russian this
has no connexion with the word for "command" meaning "order" -
*prikazat'*). However, I can offer no solution to this at the
moment which would both provide a suitable representation for
the meaning of *nad* and be consistent with the model I have rep-
resented. Although it is possible that this could constitute
counterevidence for some of the suggestions I have made, it does
not do so at present because there is to my knowledge no theory
in which the various properties of prepositions have received
adequate formulation; the properties which require explanation
include the range of meanings - abstract and concrete - covered
by a particular preposition, its connexions with other preposi-
tions, its government of cases, and so on.

This discussion of prepositional parameters has left as
much uncertainty as there was when it started off, but it has
raised the question of whether the prepositional government of
cases can be predicted in terms of the case configurations them-
selves or whether case and prepositional constructions need to
be considered as a whole. This same problem, although couched
in very different terms here, is not a new one in lingustics;
the position that cases are independently definable is upheld,
for instance by Jakobson (1936), while the position that a pre-
position + case construction is to be considered in the same way
as a simple case construction is supported by Kuryłowicz (1949)
and Benveniste (1949), among others. Although Jakobson's posi-
tion is one that is very appealing intuitively, it is not easy
to find any explicit evidence for it.[10] This position worked
in the analysis of (33) and (34), but it has been shown not to
work with the preposition *nad* ("above"). Even in the analysis
of ordinary motional locative sentences, there are problems;
consider a possible derivation of (38):

(38) On vošel v bol'nicu (A).  "He went into hospital."

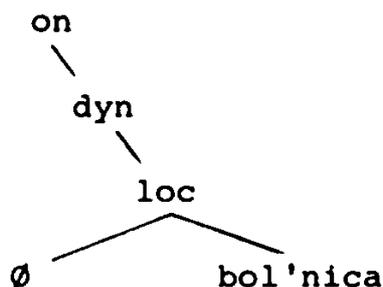(38) will have the underlying structure (ignoring representation

of parameter) of fig. 35:

Fig. 35
```
                              dyn
                                 \
                                  loc
                              on       bol'nica
```
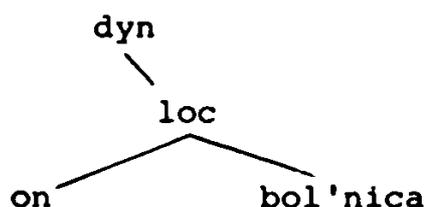
The animate noun will be raised as subject, and the resulting
structure will be:

Fig. 36
```
                              on
                                \
                                 dyn
                                    \
                                     loc
                                 ∅       bol'nica
```
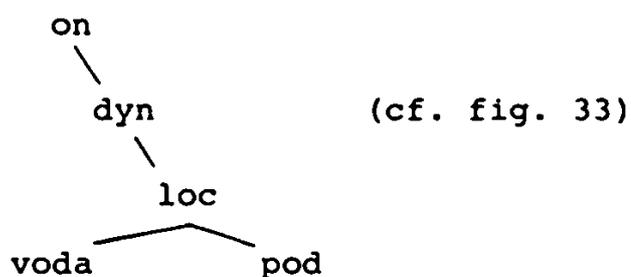
Although this structure is one into which a preposition may be
inserted, it is not, by present rules, one into which the accu-
sative case may be inserted, although it is the accusative case
which is desired. The only way of getting an accusative case
is to raise the noun *bol'nica* ("hospital") to a position under
the dyn element; no means has been suggested here of doing this,
and besides, if this were done, there would be no means of intro-
ducing a preposition.

There seems little to do, given the present hypothesis
about prepositions, but change the definition of the accusative
case, so that it can also apply in environments where it is not
directly dominated by a dyn element. This will apply not only
to prepositions such as *v* ("in(to)"), but also to more complex
prepositions such as *pod* ("under"). The final structure of a
sentence like (39) will, if the preceding discussion has any
basis to it, be as in fig. 37.

(39) On spustilsja pod vodu (A). "He lowered himself
below water."

Here also the case introduction mechanism will need to be sens-
itive to the dyn element which does not directly dominate the
case-marked element. This is not a particularly satisfactory

Fig. 37                      on

                            \

                    dyn           (cf. fig. 33)

                       \

                      loc

            voda        pod

state of affairs, but it is obviously dependent on so many vari-
ant factors that a fuller discussion of it would demand another
book. If the accusative poses problems such as these, the dat-
ive and (especially) the genitive with prepositions are at pre-
sent totally mysterious when it comes to specifying an explicit
environment for their introduction with prepositions. The pro-
blem is not that they do not seem to accord with their general
definitions, but that they offer so many possible choices of
motive for introduction that a unifying thread is difficult to
find. The genitive, for instance, is obviously connected with
negation; even if the ablative prepositions are discounted,
there are prepositions which are manifestly negative in import
which govern the genitive - e.g. *bez* ("without"), *krome* -
("except"). But this needs to be brought into the framework of
a purely formal case definition. The genitive has already posed
problems in that it seems to alternate with simple locative and
allative prepositions, as these involve nouns which are the
rightmost member of predications. Is it possible to say that
this explains the use of the genitive with *u* ("at") or *do* ("up
to"); even if it does this still leaves a necessity of explai-
ning the alternation.

    This rather inconclusive section has left wide open the
question of whether cases governed by prepositions are or are
not introduced by the same rules as cases governed by other
things, although any evidence against the position that they are
the same seems do derive more from the incompleteness and ambi-
guity of the preceding analysis than from the nature of the phe-
nomena themselves. In particular, the rules for introduction of
prepositions are a crucial step in this argument; even if the
proposals I have made above are correct in principle, there are

a lot of technical difficulties and individual analyses left
undiscussed purely because of the complexity and wide range of
the problem. At other points in this work, less formal, but
intuitively satisfying, suggestions have been made about the
nature of prepositions - e.g. in § 4.2. it was suggested that the
accusative case will correspond to the loc element; this would
presumably mean in more formal terms that there would be an
operation which would replace the elements loc and dyn by case
and prepositional elements, perhaps after copying them so that
they would be available to be lexicalised also as a verb. This
is a proposal which might be worth developing, but it would
still come up against problems; why, for instance, is the ele-
ment loc only sometimes lexicalised as a preposition, at other
times being a simple dative or an instrumental or a genitive?
It is evident that the solution of such questions will not be
easy.


5.7.1.

It might be worthwhile to discuss in this final section
some of the general problems involved in incorporating into the
model some of the unelaborated suggestions that have been made
in the course of this study, and also to show some of the possi-
bilities and problems involved in generating underlying struc-
tures of the type used here, and converting them finally to
superficial structures in which will be contained information as
to the category and morphological class of elements, information
as to linear order, and a string of discrete lexical elements.

The suggestion was made in passing in §3.2. that greater
generalisation could be achieved by following Anderson (1973b)
in giving negatives a source in a superordinate two-place predi-
cation identical to an existential predication except for the
case of the existential element, which would be ablative for the
negative, as opposed to locative for the existential. Thus,
fig. 38a represents the existential, while fig. 38b represents
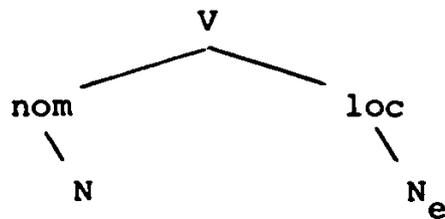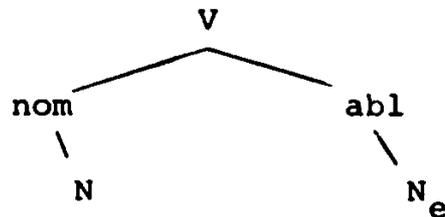the negative; ($N_e$ being an existential noun).

Fig. 38a

```
                        V
              _____/   _____
          nom                    loc
             \                      \
              N                      N
                                      e
```

Fig. 38b

```
                        V
              _____/ _____
          nom                  abl
             \                    \
              N                    N
                                    e
```

This notation is justified on the basis of an analysis of quanti-
fier constructions, but also on the numerous pieces of data in
which morphologically ablative elements have a negative import.
This applies also to Russian, where there are numerous examples
of the negativeness of ablative markers; in some contexts, neg-
ative markers and ablative markers are interchangeable:

(4o) a. Ego proisxoždenie daleko ot proletarskogo.
        "His origins are far from proletarian."
     b. Ego proisxoždenie daleko ne proletarskoe.
        "His origins are not proletarian by a long
        way."

In other constructions, an element which governs an ablative
element is synonymous with a negative existential element:

(41) a. Kniga ne svobodna ot nedostatkov.  "The book
        is not free from faults."
     b. V knige imejutsja nedostatki.  "In the book
        are faults."

Other verbs with ablative markers (especially ot) are also
clearly negative:

(42) On otkazalsja ot podarka.  "He refused the
     present."
(43) On otrical svoe učastie v dele.  "He denied
     his participation in the affair."

It is evident, however, that Anderson's solution for this
problem cannot be converted directly into this theory, as there
is no ablative case, and the analysis of ablative prepositions
in this work has been rather more complicated than the analysis
that Anderson gives them. However, it is also apparent that at
least a part of the negative construction should be analysable in
terms of the 'traditional ablative' - the 'subject' of a spatial
dyn predication. This is connected with the claim made in § 2.1.
that the ablative is the motional correlate of absence, which is
in turn defined as the negative of a locative. A curious result
of the notation developed in chapter 3 is that this observation
is not fully formalisable within the model as it now stands;
this can be shown by considering a typical ablative-allative
sentence such as:

(44) On uexal iz Moskvy v Leningrad.   "He went from
     Moscow to Leningrad."

This will have the structure of fig. 39:

Fig. 39
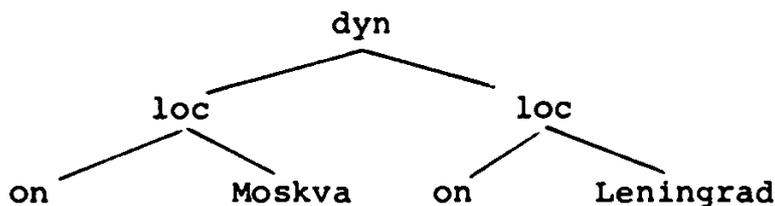


The same structure without the rightmost locative predication
will produce the structure of the simple ablative sentence (45):

(45) On uexal iz Moskvy.   "He left Moscow."

It is such sentences that I have called motional versions of
sentences of absence; unfortunately, there is no way in which
a structure like that in fig. 39 can be converted into a sen-
tence denoting simple absence. Taking away the dyn element
that dominates the leftmost locative predication would simply
leave a locative predication rather than the expected negative
locative. It is indeed a problem whether such a solution, or
any adequate solution, can be incorporated into this model;
however, any solution would need to be one which took account
of the syntactic behaviour of quantifiers in Russian, which is

in many ways very similar to that of negatives (cf. Miller, 1972).

## 5.7.2.

If the general notation of this study is accepted, the claim that categorial distinctions do not appear in underlying structures follows almost inevitably. The chain of reasoning that leads from the model to this claim is quite simple; the abstractness of the relations posited leads to the inevitability of verbs being decomposed into more elementary units. When this is done, verbs consist of configurations of abstract relational elements and a number of other elements; these other elements are frequently capable of being realised as abstract nouns, as well as combining with relational elements to form verbs. There is clearly no possibility of labelling these elements as verbs because they are not relational, and cannot themselves be lexicalised as verbs. Many elements may be lexicalised either as verbs, or as adjectives, or as nouns (elements of colour are an example of this in Russian) in combination with other elements. It would clearly be vacuous to label these elements as nouns, as the absence of any other categorial distinctions would make this labelling redundant through lack of oppositions. Such a position seems almost beyond dispute, given the initial assumptions, yet it will clearly also be necessary at some later stage in the derivation to specify categorial information, if only to effect morphological marking of inserted elements. The level at which this categorial marking needs to take place might in fact be quite superficial. It has been suggested in the transformational literature (e.g. Postal 1971, §18E) that prepositional phrases and noun phrases should be identically marked for certain transformations, and that they may both be marked as NP's. It is also significant that many syntactic constraints (of the type developed in Ross 1967, Chomsky 1971) and possibly even some transformations (cf. the account of coordination in Sanders 1970) have been couched in terms that do not directly take into account the syntactic category of the elements speci-

fied in them. Here as elsewhere it is difficult to know to what
extent results gained in the development of other transforma-
tional models is valid in a model such as this one, but any
development which lays less stress on categorial information
must bring transformational theory to some extent towards this
model.

It seems to me that a certain indeterminacy is bound to
exist as to whether an element in a structure is going to be
realised as a noun or is going to be combined with another struc-
ture and realised as a verb, an adjective, or a verbal noun.
The reason for this indeterminacy is that there is a fairly
large group of verbs which have a paraphrase with an abstract
verb and a noun; such alternations are, for example:

(46) a. On soglasilsja na èto.    "He agreed
        on it."
     b. On dal soglasie na èto.    "He gave agree-
        ment to it."
(47) a. On otčajalsja.   "He despaired."
     b. On byl v otčajanii.   "He was in despair."
(48) a. Oni ubrali urožaj.   "They gathered in the
        harvest."
     b. Oni proizveli uborku urožaja.   "They con-
        ducted the gathering in of the harvest."

The general position, however, is that one can predict things
that are definitely going to be nouns, but cannot predict that
something is not going to be realised as a noun (except in a
single relational element). It has already been suggested that
the proposal put forward by Lyons (1966) that nouns as a class
are basically words denoting things, is fundamentally correct.
From observation of the structures considered in the course of
this study, it seems that another sure source for a noun is any
element that has been raised out of its original predication.
This is not surprising and follows from the first consideration
in part, in that the concreteness of the noun in a predication
is in itself a criterion favouring its being raised aut of that
predication (cf. §§1.4.4. and 4.3.3.). I know of no other cer-

tain criteria that an underlying element should be a noun, but I
have no doubt that there are such criteria; indeed, it seems
likely that any such will be connected with criteria for element-
making - the same general set of criteria which needed to be
invoked in a discussion of the genitive (§ 4.3.3.).

## 5.7.3.

Relations of linear order have in general been treated
fairly lightly in this study, save insofar as they marked signi-
ficant position with respect to relational elements. (Even this
could have been marked by other means, such as little arrows
which could have pointed either way (as in Leech 1969)). Rus-
sian, of course, has a relatively free superficial word order,
and I can see no reason why the order of elements in a super-
ficial sentence should not be determined directly by the crite-
ria which determine superficial word order. This is to claim
that there is no such thing as 'grammatical word order' (cf.
Isačenko 1966); rather according to this view, the fact that
the 'unmarked', most frequent word order in Russian is the
order SVO, is due to the fact that the criteria which determine
word order (the various phenomena included in the label 'func-
tional sentence perspective' - cf. Adamec 1966) also have some
relevance in the choice of the subject (cf. §4.3.3.). 'Gramma-
tical word order' is rejected simply because, if it existed, it
would be non-functional in the model suggested here.

Other elements require a fixed order in surface structure,
but this is no evidence for this order being present in under-
lying structure either. The superficial order of prepositions
and their dependent nouns is of this type. This could easily
be accounted for as being due to a 'surface structure constraint'
of the type justified by Perlmutter (1971). If the suggestion
made above about the introduction of prepositions is even remo-
tely correct, the ordering of prepositions and nouns will have
to be controlled by such a constraint, as it will not have any
necessary correlation with their underlying order. Even if this
suggestion about prepositions is not correct, their order could

probably still be described best in terms of such a surface structure constraint, as they show a rigidity of order uncharacteristic of the rest of Russian word order phenomena, not being affected by any communicative considerations. Another type of word order phenomenon - that of the negative particle - has also an explanation separate from that of other word order phenomena. Within a given semantic reading, the negative particle has a fixed position - when the negation is on the whole sentence, the negative particle is usually in front of the verb. This can be explained in terms of the scope of the negation, and the restrictions on movement of quantifier or negative elements which are illustrated, for example in Lakoff 1971. The restriction is not on word order, but on the combination of word order and stress; the distinction is shown by the non-synonymity of (49 a) with (49 b), which is however synonymous with (49 c):

(49) a. On ne sidit na stole.   "He is not sitting on the table."
     b. *On* ne sidit na stole.   "*He* isn't sitting on the table."
     c. Ne on sidit na stole.   (lit.)   "Not he is sitting on the table."

It can be seen, therefore, that such restrictions on word order in no way affect the point made here about the lack of evidence for an underlying fixed order of elements.

# Footnotes to Chapter 5

1. For instance, one possible modification of the theory that would be consistent with these conditions would be if it were decided that there was not enough evidence for the identification of causative and motional nodes; (cf. § 3. 2.) these two relational elements could be separated consistently with the conditions I have imposed here. I am not at all sure whether or not this would be a good thing.

2. Several alternative possibilities for this sort of structure exist - one might, for instance, take up the suggestion made in Ross 1972 and include a verb DO in the representation of the antecedent situation in fig. 3. This is not just a notational suggestion, as it has certain empirical consequences: under a proposal such as Ross's, a sentence like *John surprised me* would be ambiguous between the readings where John does something, which surprised me, and the reading where John is just there, and that surprised me. An indeterminate sentence as in fig. 3 would claim that sentence to be merely vague. My intuitions on this point are not crystal clear, however.

3. Question marks governing subtrees are here used in two different senses - the one in which the structure of the subtree is likely to be irrelevant to the structure of the sentence (cf. fn. 2), as in the antecedent situation of fig. 9, and the other in which I have not gone into enough detail (usually through lack of any idea as to what the structure might be) to say what elements should really be there. None of the crucial points I am making should be affected by this, although it all adds to the indeterminacy of the framework.

4. There is a conceptual difficulty here about what is meant by 'main predication'. This might seem intuitively obvious, but when there is a large hierarchy of predications, with time, place, aspect, etc. above the type of structure we have been considering in this thesis, it is

not clear how a formal definition of this could be arrived
at. And of course predications of time or place can easily
be made the main predication of a sentence insofar as the
'main verb' in a sentence can be that of a tense predica-
tion, for instance, ("It was yesterday, that ...").

5. It will of course be noted that rule 2 will *not* have this
effect, but this is the process which it has been assumed
throughout this thesis underlies subject forming. What in
fact seems a more hopeful basis for both raising and sub-
jectivisation is that both should be determined by the
same rule, but that there should be different rules for
extraction of an element from loc and dyn predications.
Under this interpretation, an element raised above a top-
most predication would automatically become a subject;
the rule for raising from locative predications would be
rule (1 a), while the rule for raising from dyn predica-
tions would be rule 2. It would of course be desirable to
generalise these two rules into a single rule of raising,
but it is not obvious to me how this could be done.

6. I am assuming that the difference in word order between
these different types of locational sentences is not par-
ticularly significant. In this connexion it should be
noted (as it has on occasion been assumed on previous
sections) that rules involving superficial word order
will follow case assignment. It would clearly not do for
cases to be assigned on the basis of order when that order
was itself determined by purely superficial factors. An
alternative to this of course is to adopt the proposal
mooted in chapter 1 that argument-order in this framework
could be represented by numbering branches rather than by
ordering them. It would then be perfectly possible to
allow superficial order to be fixed before case assign-
ment. I see no substantive difference between these two
proposals, however.

7. The element *pomošč'* ("help"), in fig. 25, would probably
be replaced in a more complete analysis by a full predica-

tion with the meaning "that help be given them."

8. This will at least be true of neutral verbs of this type;
   it is dubious whether one would talk of someone being
   shaved if his beard was being burned off with a blowlamp.

9. One such 'other ground' is that sentences of the type in
   which an inalienable possessor is raised to become subject
   of the sentence often leave behind a reflexive 'trace',
   which seems to indicate that this is a copying transforma-
   tion; e.g.:

   > Oktjabr'skaja revoljucija uxodit svoimi kornjami
   > (I) v zaveršajuščie gody XIX veka.
   > "The October revolution goes back in its roots
   > to the final years of the 19th century."

   This of course, is derived from the structure underlying
   the sentence:

   > "The roots of the October revolution go back ..."

10. Of course, this position, like the position that cases are
    unified elements of meaning (cf. § 1.4.5.1.) has the advan-
    tage that it is one which cannot be rejected as a general
    position, as no analysis which claims that the choice of
    case is to some degree arbitrary can be proved correct;
    on the other hand, any theory which claims a specific rat-
    ionale for choice of case with prepositions is easily ver-
    ifiable, and is therefore preferable.

## APPENDIX

It is clear from most of the above discussion that many of the particular decisions I have taken as to formal properties of the grammar are arbitrary, and based on insufficient evidence. But I think there is still enough of a framework to make it worth attempting to enunciate at least a basic set of rules. On the other hand, although I have espoused certain formal devices (such as dependency grammar), I have not done so with any conviction that they offer any substantive benefits over other such devices: I therefore feel it is not worth while giving the appearance of a formal system to my rules. They will therefore be expressed largely in verbal form.

Formation Rules: Trees will conform to the following specifications:-

- dyn, loc and neg are the heads of predications;
- dyn takes 2 arguments, both of them predications (§3.2.);
- loc takes 2 arguments (cf. p. 26);
- neg takes 1 argument, a predication (pp. 27-8);
- a non-relational element governing a predication is a relative clause structure: this must contain an element identical to the head (ch. 3 fn. 5).

N.B. It is clear that many questions are begged in this set of rules, especially the nature of the non-relational elements. I cannot specify procedures for specifying this set.


Transformation Rules: The basic rules are the raising and subjectivisation rules discussed in § 5.3.:

1. a. Given an embedded predication, raise one of the arguments as right daughter of the element immediately dominating that predication.
   b. Given a relative clause of inalienable possession, raise the possessor to be right daughter of the topmost relator in the sentence.

These apply bottom to top, right to left.

2. To form a subject, raise the rightmost daughter
   in the topmost predication so that it governs the
   topmost element.

Other rules will need to include:

- a deletion rule which deletes redundant elements (in
  the sense specified in §5.5.2.) in favour of elements
  in a relative clause: more specifically, the rule
  which seems justified will convert:
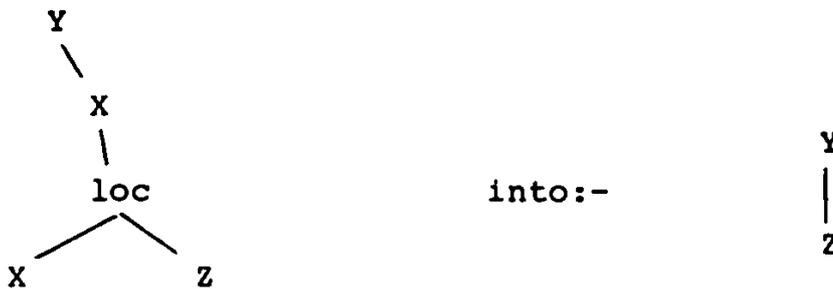


- concord, where a dependent verb or adjective will
  receive the features of the element governing it. It
  is not clear whether or not different rules will be nec-
  essary for different features agreed with (i.e. number
  and person in present tense verbs, number and gender in
  adjectives and past tense verbs) or whether this could
  follow from the morphological form of the verb (cf. p.
  96).

- a relative clause reduction transformation, deleting
  identical elements (cf. § 2.4.5. and p. 132).

- a pruning rule deleting relational nodes which do not
  govern any material (cf. p. 145).

## Case Introduction Rules:

Nominative - any ungoverned noun will be in the nomin-
            ative (§ 4.1.).

Instrumental - any noun governed by an element on its

- right will be in the instrumental (cf. § 3).

Dative       - any noun which is marked as inalienably possessing a noun to which motion is indicated will be in the dative (§§ 5.5. and 2.7).

Accusative   - any noun governed by a dyn, or by a loc governed by a dyn, will be in the accusative (§ 4.2.).

Locative    - any noun governed by a loc will be in the locative (§2.).

Genitive    - any noun governed by an element on its left will be in the genitive (§ 4.3.).

If these specifications are taken as being ordered, and all except the first two have the condition implied: 'and which is not already marked for case', this should have the results envisaged in the body of this work.

I recoil from attempting fo formulate introduction conditions for prepositions.

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