

Syntactic Operators in a Geometric Model of Linguistic Structure

I

1. Among the urgent issues of the text linguistics of the literary theme one which deserves special attention is the unification of thematic analysis in terms of elementary constructions and the analysis of the world of discourse by means of the quantitative-structural aspects of its linguistic expression. The former discipline, labeled **grammar of themes** (GT), addresses itself to the **discrete structures** of theme-rheme arrangements and the hierarchically ordered positions of morphologic categories within the sentence; the latter, called **situation grammar** (SG), deals with linguistic expressions embedded in a continuous socio-cultural situation (e.g. a dramatic performance, the effects of advertisements on their relevant target groups, etc.), and with the linguistic coding of the message in a communication process, where the amount of information contained in intonation profiles likewise shows a continuously variable behaviour. The constructions in which the relevant features of GT and SG structures come to converge in the simplest way appear to be of two types:

- (1) (i) **topic-comment** constructions, to be represented here in their canonical form as an expression with rising-falling tone contour and containing a sentence stress, say

$$S_1 | | S_2,$$

where $S_1 | \rightarrow$ topic, $S_2 | \rightarrow$ comment, $| | \rightarrow$ juncture;

- (ii) **action** constructions, consisting of an agent and a verbal predicate of 'motion' or 'mutation', say NP VPAct, with plot-advancing function in a narrative.

2. In what follows we shall analyse the constructions (1i-ii) by letting each of the constituents $S_1 |$, $| S_2$ and NP, VPAct come about as the successive application of a pair of **operators** A, B, such that the order of application may be relevant; hence in general

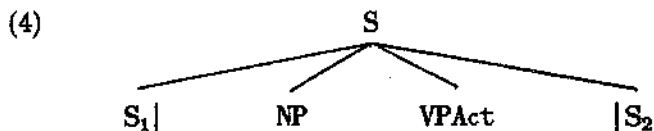
$$(2) \quad AB - BA = 0 \text{ or } \neq 0.$$

The second alternative is of particular interest to our problem, because the total information conveyed by the succession of topic + comment or subject + dynamic predicate never vanishes, despite the fact that the information value of either $S_1|$ or NP is **undone** by $|S_2$ and VPAct at the level of sheer linguistic form - thus the phase of 'arousing curiosity' co-extensive with $S_1|$ is undone by the phase of 'satisfied curiosity' obtained after adding $|S_2$, and the initial situation of zero information preceding $S_1|$ $|S_2$ is restored; likewise the initial state of the referent of NP is restored after adding VPAct, as appears from common representations¹ of *John ran away as*

$$(3) \quad \left. \begin{array}{l} \text{NP...away from home} \\ \text{NP...at home} \end{array} \right] - \text{NP...running away ;}$$

yet the clause NP VPAct realised by S carries a meaning such as 'being abroad after running away', which is not cancelled.

In both constructions (li-ii) the 'added value' is the same constant feature, which may be labeled 'speech act' (in li) or 'narrative act' (in lii); in both cases, indeed, the net effect of the construction's realisation is the transition from one state of information to another (4).



3. Finally, to conclude these preparatory remarks, let us call attention to one more property the constructions (li-ii) have in common. As can be inferred from Keijsper's convincing argument (1986), the function of the sentence stress in construction (li) amounts to the repeated denial of the presence of an element *a* of the lexicon; this operation has to be carefully distinguished both from the logical operation of negation obeying the principle $\bar{p} = P$, and from the semantic content of the particle *ne* (in Russian), which in Keijsper's view is an ordinary lexical item to be treated on a par with others. Incidentally, this view is decisive in delimiting the linguistics of form-and-meaning from those logic-oriented approaches which proclaim

that every sentence in natural language has a negative partner². Be this as it may, the denial meant by Keijsper is an operation that cannot be expressed in natural language, yet is needed to capture the function of sentence stress (Keijsper 1986, 272). As I have argued in a previous paper (Van Holk 1986), the operation of repeated denial may be made explicit by considering one possible effect of particles like *ne* on sentence intonation as one of provoking an IK-3 contour (type I in 5i), while the immediately subsequent sentence then carries the sentence stress under an IK-1 (type II in 5i)³. Repeating the process of denial on sentence type II leads, first, to a **concessive** sentence type (III in 5ii), to be continued in turn by the **contrastive** type IV; this completes the sequence (5i-ii), and thus restores the speech situation immediately preceding type I in (5i).

(5) (i) I II

Ivan ne lentjajničet, a rabotaet

(ii) III IV

Pust' i rabotaet, a ničego ne zarabatyvaet

Thus the operation of denial satisfies the condition that only a **fourfold** application equals the **unit** operation which leaves any speech situation unchanged. On the other hand we note that the double denial establishes an **anti-symmetric** relationship between the two lexical items of topic/subject and comment/predicate once these have been selected. This relationship is rendered in Keijsper's diagrams by an arrow pointing from comment to topic (Keijsper 1986, 273).

A lexical element with amount of information α , when selected for a given position in the sentence, may be symbolized by α . Next we note that the anti-symmetry consists in that the comment is the answer to the expectations aroused by the topic (see *supra*), or, as in (1ii), in that the predicate contains a lexical item which **mirrors** the subject lexeme in a relation of 'leaving' vs 'approaching'; so we are entitled to interpret the observed asymmetry as a relationship between $+\alpha$ and $-\alpha$ in a geometrical model of syntactic structure. This means that the denial operation complies with a condition of the form

(6) $D^2\alpha = -\alpha$ (where $D \rightarrow$ denial operation)

If α is a vector, the denial operation may be interpreted as the quantity $i = \sqrt{-1}$ (Van Holk 1986). A plausible way to incorporate this factor in the total structures (li) or (lii) would be to let it combine with each sentence construction as a whole, since it characterises the juncture between the protactic and apodotic constituents of any sentence as one step towards full-fledged sentence stress, i.e. as denial of the constituent just accomplished at the juncture. The incorporation of i into the relationship (2) proposed above will thus be obtained in the form (7), where the result leading to (4) has been also used.

$$(7) \quad i(AB - BA) = \text{constant}$$

The expression $i(AB - BA)$ is called the **commutator** of A and B.⁴ The equation (7) thus summarises the two constructions (li-ii):

$$\begin{array}{ll} (8) & (i) \quad i(S_1 \parallel S_2) = \text{constant} \\ & (ii) \quad i(NP \text{ VPAct}) = \text{constant} \end{array}$$

In the following sections we shall attempt an interpretation of A and B as operators representing known syntactic variables, in the frame of a geometric model of syntactic structures as developed in my earlier work (Van Holk 1980,1982,1983 (a,b)).

4. Let us first take a closer look at the construction (li). The components of this construction, to wit the topic S_1 and the comment S_2 , are not merely arranged in sequential order: this arrangement reflects a **chronological** order in the world of discourse, inasmuch as the topic represents the **initial** state of information of the interlocutors, whereas the comment represents the **final** state. Indeed, the sentence is the minimal construction with chronologically relevant sequence of components. It follows that the **time axis** t will be one of the parameters of the information value conveyed by S.

This is not, however, the whole story, since the construction requires the assignment of **meaning**, in the form of lexical elements a, b to be projected onto the time axis of S. The meaning of a sentence was obtained, in some of my earlier papers (Van Holk 1982, 1983a), as the content value w assignable to an exocentric construction of the form NP VP. This goes to say that the topic/comment construction somehow results from the

coextensive application of a time axis t (with values $t_1, t_2, \dots$) and a content value w .

The coextensive application of t and w to linguistic material is described by means of corresponding operations, $t \rightarrow T, w \rightarrow W, \dots$, and is supposed to yield the two components S_1 and S_2 of the topic-comment construction. The order of application of T and W is not the same, however, for the two components. The topic resumes the content transmitted by the preceding sentence, and thus connects this resumed content to the following comment by means of a forward-pointing feature (such as the IK-3 tone contour in Russian), which projects a lexical element of the content onto the time axis; in the comment, it is the inflected verb which, jointly with a level high tone feature, connects the comment to the topic, and it is only to the so obtained subsequent time stretch that the other element of content is applied, to bring about the comment. Indeed, the order of morphs (connectives, case suffixes, inflected verb forms, predicative nominals) tends to reflect this order of application, even though the order of the operators is a fact of syntax rather than surface expression. A few examples may be cited to show our point.

(9)	W	-----	-----	-----	-----	W
			t		t	
		-----	-----	-----	-----	
		S1			S2	
		<i>Pogoda-to</i>			<i>stojala nenastnaja</i>	
		<i>Dlja provedenija opyta</i>			<i>nužen fil'tr⁵</i>	
		<i>Pri nagrevanii</i>			<i>vse tela rassirjajutsja</i>	
		<i>Iz-za doždja</i>			<i>èkskursija ne sostojalas'</i>	

To complete the above analysis it should be remarked that the comment stands in an **anti-symmetric** relationship (as mentioned before) to the topic, as appears from the fact that the falling part of the tone contour mirrors the rising part, and so undoes the latter's effect. The nearest reflex of this relationship in surface expression is provided by such pairs of morphs as *čto ...* | *to ...*, *kuda...* | *tuda...*, known traditionally as correlative pronouns.

So the representation of the topic-comment constructions by means of the operators W, T will unite the following conditions:

- (10) (i) the order of application of W, T;
 (ii) the role of the denial factor *i* characterising the sentence as a whole;
 (iii) the mirroring relation between topic and comment;
 (iv) the speech act constant *h* representing the irreversible minimal contribution of an utterance to the interlocutors' state of information.

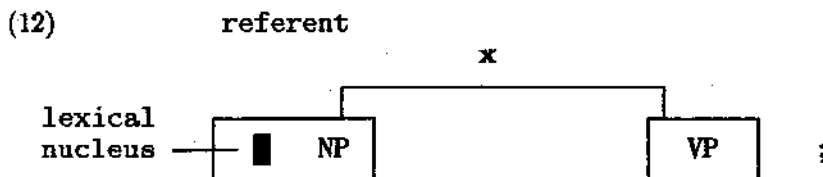
This leads to the formula (11)

$$(11) \quad \begin{array}{ccc} WT & - & TW = -ihI, \\ S_1 & | & S_2 \quad S \end{array}$$

where the unit operator *I*, which leaves any structure to which it is applied **unchanged**, is introduced in order that both sides of equation (11) be expressed in terms of operators.

5. The above approach may also be applied, with due alterations, to the plot-advancing action construction (1ii). The operators needed to represent the components NP and VP Act will have to be chosen in conformity with the variables and their structural levels defining NP VP Act expressions.

As pointed out in more detail in previous papers (esp. Van Holk 1983a), we should carefully distinguish in this type of expressions the **sign function** *m* of the noun phrase's lexical nucleus, from the semantic value of the NP-VP relation, which specifies the **state** or **situation** of any entity referred to by the lexical nucleus (12)



the latter relation is said to constitute the structural level *x*, which is made up of the sum total of an entity's relations to its environment in the space

of discourse. In particular, if an entity functions as the subject of a sentence, the static situational relation x may have to be extracted from a predicate containing dynamic, plot-advancing constituents as well.

- (13) (i) $\overbrace{\text{Ivan ostalsja doma}}^x$
- (ii) $x; \text{Ivan (...sidel) za stolom}$
 $\overbrace{\text{Ivan vstal iz-za stola}}$
- (iii) $x; \text{Ivan ... doma}$
 $\overbrace{\text{Ivan edet domoj}}$

The relation x covers expressions specified for case (the subject in the nominative) and/or position relative to the inflected verb; it is therefore interpreted as a vector quantity, being determined both by the semantic value of the predicate (a certain state or situation) and the position indicated by the case suffix (Van Holk 1983a, 173-174). The projection of an arbitrary expression onto the level x will again be symbolised by the operator X .

Turning now to the verb of motion or mutation in 13 (ii-iii) we observe that the corresponding structural level may be derived from that of the x -level as follows. First note that the relation x of (13i), *Ivan ... doma*, may become involved in a process through which (i) the time level t is established as an interval $t = t_2 - t_1$, between subsequent moments of some narration, and (ii) the relation x is turned into an interval x between two time-dependent states $x_1(t_1)$ *Ivan ... ne doma* (*vne doma*, *v gorode*,...) and $x_2(t_2)$ *Ivan ... doma*. As $x(t)$ has the status of a "small clause" (Chomsky 1972, 106ff.), it is dominated by the sentence as a unit of the time level; hence $x(t)$ is subordinate to t , a status which I have proposed in earlier work (Van Holk 1983) to write as the difference quotient $\Delta x / \Delta t$. Within the infinitesimal interval dt represented by the inflected verb form as such or the boundary between sentences, $S_k \# S_{k+1}$, the difference quotient becomes replaced by the differential quotient

$$\frac{dx}{dt} = \lim_{\Delta t \rightarrow 0} \frac{\Delta x}{\Delta t}$$

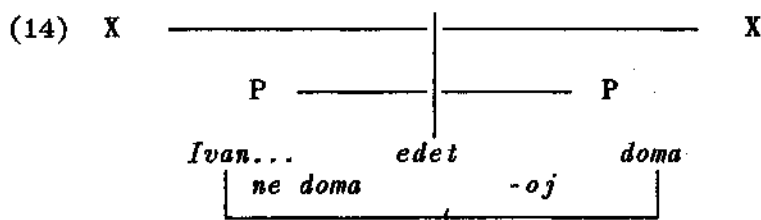
The combination of $v = dx/dt$ with the sign function m into the action function $p = mv$ is of particular interest, because the quantity p captures the fact that every process v when projected onto an expression in natural language always takes its origin in some internal or external agent (*milicioner ranil studenta* beside *ranilo studenta pulej*).

6. The coextensive application of the operators X and P to expressions featuring a dynamic predicate, such as (13ii-iii), is similar in principle to the same use of T and W (section 4).

First of all, let us construct a set of states $\{x_1, x_2, \dots, x_n\}$ to make up the **path** of an agent through the situation of discourse, e.g. $x_1 \rightarrow$ *Ivan v gorode*, $x_2 \rightarrow$ *Ivan doma*; the operator X then projects any expression onto such a set.

In the same way, we construct a set of actions $\{p_1, p_2, \dots, p_m\}$, such that every p_j presupposes p_{j-1} ; the action p_m then includes all previous action phases, and in this sense will display the highest degree of complexity. Again, the operator P projects any expression onto the set $\{p_1, \dots, p_m\}$.

In dealing with expressions of the form *Ivan edet domoj*, featuring a dynamic predicate, the agent's initial state, say, *Ivan v gorode* or *Ivan ne doma* (the latter view is due to Kilby 1977, 47) will be represented by X ; to this state we then apply P in order to obtain *Ivan edet domoj*. The final state, c.q. *Ivan doma*, will be obtained by applying X to P . Since the final state *doma* stands in a predicate-subject relation to the initial state *Ivan*, we conclude that the two products of operators, apart from the different order of factors, stand in **inverse** relation to one another (14).



The representation of the initial (or prefinal) state by *ne doma* is of course just another instance of the *denial* factor D (6), which in the case at issue represents the *transition* from *domoj* to *doma* (or, from *Ivan v gorode* to *Ivan vyezšael iz goroda*), and as such cannot be expressed in natural language save by implication.

Finally, the dynamic predicate construction as a whole, i.e. NP VPact, has the status of S, insofar as it links the successive static situations of a narrative. In other words, the construction as a whole must equal the speech act constant h, or what may be identified with the "plot-advancing" factor of narratology (cf. e.g. Chvany 1985). The operator equation for the action construction may thus be written as

$$(15) \quad XP - PX = iI,$$

where I again represents the identical operator.

II

1. To round off the above discussion it might be worth looking into the case of the non-coextensive application of the operators X and P obtained in the previous section. For this purpose, let us consider the three active-passive pairs listed in (16).

(16) I DONATION

Gost' peredaet zapisku dvorniku $\longleftrightarrow$
 NP₁ VTra NP₂ NP₃

Zapiska peredaetsja gostem dvorniku
 NP₂' VPas NP₁' NP₃'=NP₃

II CREATION

Knjaz' postroil cerkov' dlja Bogorodicy $\longleftrightarrow$
 NP₁ NP₂ NP₃

Cerkov' byla postroena knjazem dlja Bogorodicy
 NP₂' VPas NP₁' NP₃'=NP₃

III FORWARDING

Sekretar' otoslal menja k načal'niku $\longrightarrow$

NP₁ VTra NP₂ NP₃

*Ja byl otoslan sekretarem k načal'niku*⁶

NP₂¹ VPas NP¹ NP₃¹=NP₃

As we shall see in a little more detail presently, these expressions represent three basic three-place diatheses, to be referred to here as DONATION (I), CREATION (II) and DIRECTIVITY (III), the first type being pivoted on a verb of 'giving', the second on a verb of 'making', the third on a verb of 'forwarding'.

In each of these constructions there is one constituent, labeled NP₃, which remains unaffected by the active-passive transformation.⁷ Therefore, the additional constituent NP₃ may be taken to carry the diathetic orientation of the entire construction, i.e. one of the features 'donation', 'creation' or 'forwarding' distinguished in (16). The main peculiarity of the three-place constructions apparently lies in the fact that the combination NP₁ VTra NP₂ somehow implies the presence, in the situation of discourse, of a third constituent, to wit NP₃. Now, in the traditional structuralist approach, the combination NP VP (where VP $\longrightarrow$ any property ascribed to NP by which the subject may become involved in a process) is considered exocentric, inasmuch as the distribution of NP VP as a whole deviates from those of NP and VP taken separately⁸; in particular, while NP and VP each occupy definite positions in the clause, marked by case suffixes like the nominative and the predicative, respectively, the resultant combination NP VP is not so marked, but merely represents a positionless cluster of semantic features. In the examples under discussion, however, the combination of NP₁ with VP = VTra NP₂ produces an exocentric relation of a different type, involving a third constituent which is equally marked for case, just like NP₁ and NP₂. Clearly, the difference must be due to the fact that the predicate introduces a second noun phrase, the object, which is not coextensive with the subject; the final result is a three-place construction in which each NP₁ selects its own modifiers more or less independently of the other two.

2. In previous papers I have proposed a geometrical representation of these facts in terms of vectors; the three NP's with maximal independence (usually those representing different persons) are represented by three

mutually perpendicular vectors. In terms of this representation, the constructions listed in (16) will be each characterised by a diathetic magnitude, say M_i , which is the **vector product** of the relation r between grammatical subject and predicate, and the verb of motion or mutation represented before by p (section 1.6). The vector product $r \times p$ will reach its maximum value when r and p are perpendicular (= maximally independent), and decrease to zero when r and p become parallel (= coextensive, modifying the same entity). This state of affairs is accounted for by the definition of $r \times p$ as $|rp| \sin \Theta$ (where $|rp|$ is the product of the absolute values r and p , and Θ the angle between the vectors, varying from $\Theta = 0^\circ$ to $\Theta = 90^\circ$). An alternative way to express the quantity $|rp| \sin \Theta$, i.e. the surface of the parallelogram spanned by r and p , may be obtained in terms of the Cartesian coordinates of r and p , say (x, y, z) and (p_x, p_y, p_z) . The vector product has components (M_x, M_y, M_z) , which satisfy the conditions

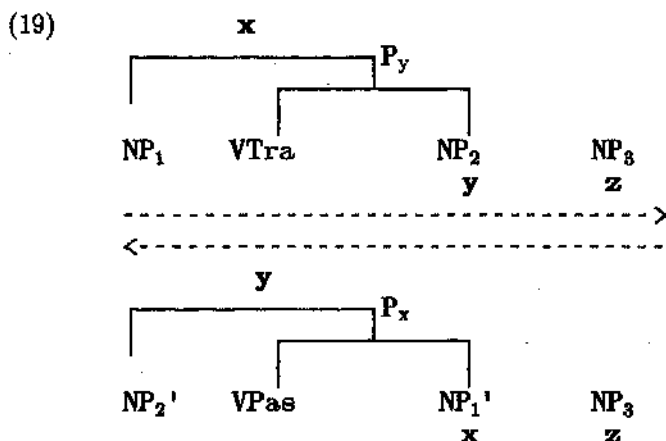
$$(17) \quad \begin{aligned} M_z &= xp_y - yp_x \\ M_y &= zp_x - xp_z \\ M_x &= yp_z - zp_y. \end{aligned}$$

Let us now select one of these equations, say the first, and see how it might account for the structure of the three-place constructions (16), say type I, the DONATIVE. The following observations may be made:

- (18) (i) NP_1 combines with (VTra NP_2) as a whole, not with VTra alone, because of the close complementary connection between verb and object;⁹
- (ii) VTra may be decomposed into an intransitive component (valence) V_1 coextensive with $x \rightarrow NP_1$ and a passive component V_2 coextensive with $y \rightarrow NP_2$ (where x and y are perpendicular);
- (iii) NP_2' as the subject of the passive transform *zapiska peredaetsja gostem dvorniku* in (16) again combines with (VPas NP_1') as a whole, because of the close complementary relation between the passive form *peredaetsja/peredan* and the instrumental of 'agency' NP_1' *gostem*, whereas the person-gender-number suffix in the passive predicate indicates a less immediate connection with the subject;

(iv) if the process in the 'active' member of type I points from NP_1 to NP_2 , in the 'passive' member this direction is reversed¹⁰, so that $NP_2' = -NP_2$.

Using these familiar facts, the active-passive transformation may be represented as the coordinative coexistence (symbolised by a sum; cf. Van Holk 1983a) of the two products xpy and $-yp_x$, i.e. the difference $xpy - yp_x$, as diagrammed in (19).



The diathetic component M_x is coextensive with $z \rightarrow NP_3$, and, as stated above, remains unaffected by the transformation.

3. The three types of three-place constructions in (16) may be specified from the semantic side¹¹ by noting that the nine roles represented in (20) below in fact are divided over only three different positions relative to the transitive verb as a node.

- (20)
- | | | | |
|-----|--------|---------|-------------|
| I | giver | present | receiver |
| II | maker | product | beneficiary |
| III | source | message | target |

To begin with, the receiver, product and source undergo a transition from one state to another, subsequent state: the receiver becomes the possessor of the present; the product is the result of shaping the initial raw material (cf. *postroit' dom iz kamnja*); the source makes its initial inner

knowledge public, or realises an initiative. These roles may thus be subsumed under the common heading of inner arguments: inner indirect object, inner object, inner subject.

The maker, the present and the target, remain outside the mutation denoted by the verbal node, but their position relative to this node is a close one, inasmuch as each is immediately involved in the mutation, as its agent (the maker piling up stones, etc.), as its vehicle (the present moves from the giver to the receiver) or as its terminal point (the target's typical verb of motion/mutation).

Finally, the giver, beneficiary and message share a maximally loose connection with the verbal node: the giver's position may be made explicit by an auxiliary like *let* in *he let us have (keep) the book*; the beneficiary's position is explicited by a preposition phrase like *for the sake of NP₃*, *for the benefit of NP₃*, or by a clause like *in order to please/honour NP₃*; the position of the message is apparent from the fact that this argument can be extraposed from its original clause to form an object clause, as in *He told her it was all over*; the message is thus opposed, as the third person of the speech situation, to the first and second persons of the interlocutors (Klimonov 1972).

From the above data we are now in a position to conclude that the three types (16) are obtained from one another by cyclic permutation, as shown in diagram (21).

(21)	I	NP ₁ giver l	N ₂ present m	NP ₃ receiver j
	II	NP ₂ ' maker m	NP ₃ ' product j	NP ₁ ' beneficiary l
	III	NP ₃ ' source j	NP ₁ ' message l	NP ₂ ' target m
Legend:		l - loose connection j - inner connection m - mutative connection		

4. The necessity to handle diathese in terms of operators seems to become apparent if we wish to account for the fact that the active-passive transformation may be made to bear on entire sentences (rather than phrases or even clauses). Thus, despite the possibility to nominalise a tri-valent verb, as in *cerkov', vozvedennaja knjazem dlja Bogorodicy* or *zapiska, vručennaja emu načal'nikom*, the passivisation of active constructions often rather serves to turn the direct object into the primary topic of a sentence, and is known to interfere with categorial features like 'definiteness' and 'quantification'. To quote just two examples: the active sentence in (22) does not allow passivisation without supplementary changes in quantification, while the passivisation in (23) yields a sentence whose referent does not coincide with that of the active original, as shown by the fact that the concessive compound (24) makes sense.

- (22) *Mother does not drink any beer* →
 **Any beer isn't drunk by Mother*

- (23) *Many people drink only one kind of beer* →
 Only one kind of beer is drunk by many people.

- (24) *Although many people drink only one kind of beer, only one kind of beer is drunk by many people.*

In order to accommodate this peculiar asymmetry of the active-passive pairs a possible solution might be to introduce a diathetic operator M and assign it the same domain as the operator $XP - PX = ihI$ obtained before (1.6), viz. the domain of the sentence as a topic-comment structure and as a member of a narrative sequence with a particular modal profile. The most straightforward way to achieve this would be to replace the unit operator I by M , giving equations like

- (25) $XP_y - YP_x = ihM_z$

The fact that M_z represents an invariant structure underlying the active-passive transformation proves of paramount significance in any attempt to link the continuous variables x and p , which describe situations of discourse, to the discrete variables of thematic constructions, like the diathetic feature M_z , which defines the orientation of the predicate towards the subject, the object, or another clause: cf. *The plumber was working in the kitchen /The plumber was repairing the sink/ The plumber was*

working in the morning (Van Holk 1980). The elaboration of this possibility requires a great deal of further syntactic research, which could only be adumbrated in the frame of this paper.

Notes

- 1 Cf. esp. the work of Anderson (1971) and Kilby (1977).
- 2 Cf. Kraak (1966).
- 3 Cf. Bryzgunova (1963).
- 4 For this expression and the use of operators to represent variables we refer to Temple (1951, 42, 45-46, and *passim*).
- 5 Cf. Bryzgunova (1963, 169); cf. also Japanese
nihon no tabemono wa || goku kantan desu
 'Japanese food is very simple' (McGovern, 162)
 which shows the connective roles of *wa* and *desu* (the latter with low-level enclitic status equivalent to neutral proclitic status in other languages).
- 6 The symbol $\longleftrightarrow$ is meant to suggest that the transformation is principally reversible, even though the active turn is in some sense more 'basic' (cf. Lyons 1969, 376); the question of this asymmetry is taken up further on (section II.4).
- 7 Cf. Tesnière (1976, 110), who probably was the first to draw attention to this fact; he writes: "le tiers actant n'est en rien affecté par l'intervention des actants et par le passage de l'actif au passif. Dans l'une comme dans l'autre diathèse, il reste tiers actant: *Alfred donne le livre à Charles ... comme le livre est donné par Alfred à Charles*".
- 8 Cf. e.g. Bloch and Trager (1942, 76): "If a phrase has not the same function as any of its immediate constituents, it is an EXOCENTRIC PHRASE and has an EXOCENTRIC CONSTRUCTION".

- ⁹ This is the reason why in 'ergative' languages the subject of a transitive predicate is assigned an ergative suffix; cf. West Greenlandic *arnap tiriyaniiyaq takuwaa* [woman-ERG fox-NOM/ACC seeing-Pe3-Pe3] 'the woman saw the fox' (the transliteration is from Bergsland 1955; cf. also Lyons 1969, 351-352; 354-359).
- ¹⁰ Cf. Tesnière (1976, 109): "Nous nous sommes placés, pour définir le deuxième actant, dans le cas le plus fréquent, qui est celui de la *diathèse ... active*. Il y a lieu d'envisager maintenant le cas de la *diathèse passive*, ou l'action est conçue en sens inverse ...".
- ¹¹ In general, the semantics of a construction reflects relations in the world of discourse (reality) as moulded by 'linguistic phenomenology'; these may be made explicit (observable) by means of systematic paraphrasing, e.g., *Temneet - Temnota sguščaetsja* (< *gustoj/gušče*). I can only agree here with Zolotova (1982) when she writes in connection with this example: "*Grammatika prava: podležaščee est' v odnom slučae, podležaščego net v drugom, no vse li uvideno takim obrazom v strukture étix predloženíj i samoe li suščestvennoe uvideno? Ne važnee li s točki zrenija vyražаемого smysla i sredstv ego organizacii to, čto predloženiia (...) soobščajut o dinamičeskom sostojanii (izmenenii sostojaniia) sredy, prirody?*" (29-30). The device of systematic paraphrase is also extensively applied in Lomtev's penetrating study (Lomtev 1972). His specimen of correlate "*modeli predloženiia*" *Komandir vručil bojcu orden* and *Komandir nagradil bojca ordenom* (130), for one thing, serves to make explicit the position of *bojcu* as the 'inner indirect object' (receiver) by showing that it can also occur as the direct object of a transitive verb; on the other hand, the 'instrumental' construction differs semantically from the corresponding 'dative' in that NP₃ (*orden* $\cong$ *nagrada*), being potentially cognate with *nagradit'*, is not maximally independent of NP₂ (cf. also *bojec s ordenom*). For this reason, this type of construction is not selected as 'basic' in the system (16).

References

- Anderson, J.M.: 1971, *The Grammar of Case. Towards a Localistic Theory*, Cambridge.

- Bergsland, K.: 1955, *A Grammatical Outline of the Eskimo Language of West-Greenland*, Oslo.
- Bloch, B., Trager, G.L.: 1942, *Outline of Linguistic Analysis*, Baltimore.
- Bryzgunova, E.A.: 1963, *Praktičeskaja fonetika i intonacija russkogo jazyka*, Moskva.
- Chomsky, N.: 1977, *Zvuki i intonacija ruskoj reči*, Moskva.
- Chomsky, N.: 1982, *Lectures on Government and Binding*, Dordrecht.
- Chvany, C.V.: 1985, 'Foregrounding, 'Transitivity', Saliency (in Sequential & Non-Sequential Prose)', *Essays in Poetics* 10, 2, 1-27.
- Holk, A.G.F. van: 1980, 'Static and Dynamic in Situation Grammar', *Studies in Slavic and General Linguistics*, Vol. 1, 171-185.
- Holk, A.G.F. van: 1982, 'Reflections on the Syntax of the Russian Infinitive', *Russian Linguistics* 6, 255-274.
- Holk, A.G.F. van: 1983a 'Impersonal Sentences in Russian and other Slavic Languages', *Dutch Contributions to the Ninth International Congress of Slavists, I, Linguistics*, 145-212.
- Holk, A.G.F. van: 1983b, 'On the Syntax of Conditional and Object Clauses in Russian', in: B.J. Amsenga et al. (eds.), *Miscellanea Slavica. To Honour the Memory of Jan M. Meijer*, Amsterdam, 341-362.
- Holk, A.G.F. van: 1986, *Über kontrastive Funktionen der Satzbetonung im Russischen*, (Publications of the Slavic Institute Nr. 26), Groningen.
- Keijser, C.E.: 1986, 'Between link and no link: observations on Russian 'ne'', in: A.A. Barentsen et al. (eds.), *Dutch Studies in Russian Linguistics*, Amsterdam, 267-366.
- Kilby, D.A.: 1977, *Deep and Superficial Cases in Russian*, Frankfurt a/M.

- Klimonov, V.D.: 1972, 'Die inhärenten semantischen Merkmale des Verbs und die Struktur der Verbalphrase im Russischen (am Beispiel der semantischen Unterklasse der Verben des Gebens)', *Zeitschrift für Slawistik* XVII, 685-693.
- Kraak, A.: 1966, *Negatieve zinnen. Een methodologische en grammatische analyse*, Hilversum.
- Lomtev, T.P.: 1972, *Predloženie i ego grammatičeskie kategorii*, Moskva.
- Mc. Govern, W.M.: *Colloquial Japanese*, London.
- Temple, G.: 1951, *The General Principles of Quantum Theory*, London.
- Tesnière, L.: 1976, *Éléments de syntaxe structurale*, Paris.
- Zolotova, G.A.: 1982, *Kommunikativnye aspekty russkogo sintaksisa*, Moskva.