

Tartu Riiklik Ülikool



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**AASTAKOOSOULEK
ANNUAL MEETING**

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**TEESID
ABSTRACTS**

Tartu 1970

TARTU RIIKLIK ÜLIKOOL
Eesti keele kateeder

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ABSTRACTS

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ON ONE TYPE OF COMPARATIVE SENTENCES IN ESTONIAN

Mati Ereht

1. In the present paper we shall consider sentences in which the real extent of a certain property of an object is compared with its imaginable, conceived, expected, etc. extent, as in the following sentences:

- (1) Mees on (tegelikult) pikem kui naine arvab (tema olevat)
'The man is (actually) taller than the woman thinks (he is)'
- (2) Rebane oli (tegelikult) kavalam kui jahimees lootis (tema olevat)
'The fox was (actually) slier than the hunter hoped (he was)'
- (3) Film oli (tegelikult) igavam kui vaatajad olid oletanud (selle olevat)
'The film was (actually) more tedious than the spectators had supposed (it would be)'

In each of these sentences there is a verb marking 'psychical activity' of human beings whose sentential argument is implicit (or presented in an incomplete form). In sentences (1)-(3) there are the verbs arvama 'think', lootma 'hope', oletama 'suppose' but in addition there may also be the verbs uskuma 'believe', kujutlema 'imagine', ootama 'wait', mõtlemata 'think', näima 'look', tunduma 'seem', etc.

2. Let us consider sentence (1). Obviously, the verb arvama in this sentence has as its implicit argument the following sentence

- (4) Mees on nii pikk kui c
'The man is as tall as c'

where c stands for an imaginable object chosen by the woman

as an implicit standard for defining the length of the man. But sentence (1) as a whole asserts that the man in question is taller than this imaginable object, i.e.

- (5) Mees on pikem kui c
'The man is taller than c'

and the last fact is considered as reality (it is emphasized by the optional presence of the adverb tegelikult 'actually').

3. It is suggested in several recent works on syntax and semantics (Ross (in print), McCawley 1968, Lakoff 1970, etc.) that the underlying structures of all sentences must have as their topmost S a performative sentence, which contains a performative verb with its arguments. In the case of statements the logical form of such a sentence should be represented as

- (6) (SAY (I, YOU, t_0 , S_1))
S S

where I and YOU stand for the speaker and addressee respectively, t_0 is the time of the utterance and S_1 represents the propositional content of the statement.

Such a treatment is necessary also in the case of the comparative sentences of the present type. In particular, if we consider comparative sentences as isolated from the speech act, then it would be impossible to find any reasonable motivation for the fact that the sentence

- (7) *Mees on (tegelikult) pikem kui mina arvan (tema olevat)
'The man is (actually) taller than I think (he is)'

(where the person who thinks is marked by the 1. person pronoun and the verb arvama is in the present tense) involves a contradiction, whereas sentences in which the subject of arvama is the 2. or 3. person or in which arvama is in the past tense, are well-formed. But if we take the representation of performative sentence as a true part of the semantic

predicate and 'PIKK' marks the dimension of length (ÜTLEMA=SAY, MINA=I, SINA=YOU).

5. The obvious paraphrase of sentence (1) is

(10) Naine arvab, et mees on pikem kui ta (tegelikult)
 on
 'The woman thinks that the man is taller than 'e
 (actually) is'

It is interesting to note that there is a somewhat strange treatment of situation in sentence (10). It is impossible, logically, that one would think or believe what is not actual from one's own point of view, not to speak of comparing this "actual nonactuality" with reality. What is actual is always defined by the speaker and it is just the speaker who evaluates the statements of one or another person from the position of this actuality of his. Objectively, even in the present case the woman can only think (4) Mees on nii pikk kui c. Since it is clear that the objective situation expressed in sentence (10) is the same as in sentence (1) we present the underlying structure of sentence (10) in the following way

(11) (ÜTLEMA (MINA, SINA, t₀ (VÄHEM ('PIKK'(c(ARVAMA((Y(NAINE(Y)
 S
 S₁
))) (MEES ON NII PIKK KUI c) t₀))) ('PIKK'(X(MEES(X))))))
 S₁S

where the elementary predicate ROHKEM is replaced by its converse predicate VÄHEM 'LESS'.

6. The verbs listed above, arvama, kujutlema and others, are 'nonfactive verbs'. According to the present analysis of 'factive' verbs, the speaker when using them must believe that at the time of the utterance the complement of these verbs is true. It would be quite natural to suppose that it is only nonfactive verbs that occur in the given type of comparative sentences. For example

(12) ??Mees on (tegelikult) pikem kui naine teab (tema olevat)

'The man is (actually) taller than the woman knows (he is)

cannot be well-formed according to our present treatment of comparative sentences, because, on the one hand, the speaker presupposes that the complement sentence of teadma - (4) Mees on nii pikk kui c is true, but, on the other hand, the speaker asserts (5) Mees on pikem kui c. Therefore, a contradiction is present. Nevertheless, L. Horn and Jerry L. Morgan declare that in such a language as English it is possible to use some comparative sentences which contain factive verbs. For example, it is possible to say

(13) John is taller than he realizes

It is difficult to say anything definite as to whether the Estonian equivalent of (13), i.e. the sentence

(14) ??John on pikem kui ta taipab

as well as comparative sentences containing some other verbs such as teadma are well-formed or not. Most of the people whom we have asked for their opinion on this matter have taken a rather vague position. If such sentences should nevertheless be considered likewise acceptable in Estonian, we could not do any better than admit, with Morgan and Horn, our inability to explain them.

7. The comparative sentences discussed here such as (1)-(3) and their paraphrases of the type of (10) constitute only a subgroup of a more general group of comparative sentences. There is obviously a certain structural similarity between the sentences described and the sentences where some modal operator occurs instead of the verbs listed above:

(15) Mees on pikem kui vaja

'The man is taller than is necessary'

(16) Mees on pikem kui ta peaks olema
'The man is taller than he must be'
etc.

L. Horn & Jerry L. Morgan , Why comparatives are more complicated than you realize. (unpublished). - G. Lakoff 1970, Linguistics and natural logic. Studies in Generative Semantics No. 1. Michigan. - James D. McCawley 1968, The role of semantics in a grammar. E. Bach & Robert T. Harms (eds.), Universals in Linguistic Theory. New York, 124-169. - Jerry L. Morgan 1969, On the treatment of presuppositions in transformational grammar. Papers from the fifth regional meeting of the Chicago Linguistic Society. Chicago, 167-177. - John R. Ross (in print), On declarative sentences. R. Jacobs & P. Rosenbaum (eds.), Readings in Transformational Grammar. (The reference is taken from Lakoff.)

THE REQUIREMENT OF ALGORITHMICITY OF GRAMMAR
AND THE METHOD OF MORPHOLOGICAL DESCRIPTION

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Mati Hint

1. Although the algorithmicity of grammar and ordering of rules are in a weakened form required in traditional grammars as well, nevertheless it is only in generative grammars that the exact linking of grammar rules is required: the output of a preceding rule (or of some preceding rules) is the input of a following rule (or rules) or functions as an environment that must be satisfied for the given rule to apply (context-sensitive rules).

2. The most classical American variant of the theory of generative grammar leaves no room for the morphological component. Morphology is melted into the phonological and syntactic components of grammar. Such a solution cannot give an acceptable grammar for languages which have a large and complicated morphology as is the case in Estonian.

3. The main problem of Estonian morphology and morphophonology (resp. phonology) is grade alternation and especially consonant mutation. It is dubious whether in the description of Estonian grade alternation it is possible to proceed from the modern Finnish and historical Balto-Finnic basic grade alternation rule which states that the stem is in the strong grade when the following syllable is open, and in the weak grade when the following syllable is closed. In modern Estonian surface structure the weak or strong grade of the stem does not depend by and large upon the structure of the following syllable. There are many facts (including the mistakes made during the acquisition of the language by children

and foreigners) which show that this historical rule (which is indisputable in Finnish) does not function in modern Estonian word inflection to any considerable extent. In Estonian there has taken place so extensive a reconstruction of the morphophonemic system (in comparison with the Finnish and historical system) that it is impossible without many ad hoc rules and exceptions to make use of this historical and Finnish rule in the generative grammar of Estonian.

4. Hence, when describing Estonian morphology, it is necessary to accept (as one possibility) the view that in some morphological forms and in some inflectional types the strong or weak grade of the stem is a idiosyncratic morphological feature of the word or word type in question. The subsets of morphological features subcategorize all words into inflection types.

Now it is necessary to choose a method for introducing these morphological features into morphological description.

5. Among the structural methods which may be considered for the description of Estonian morphology there are the descriptivist item and arrangement method and the more generative item and process method. The first has been proposed in several theoretical papers on this question.

6. When choosing between these two methods, it is possible to distinguish some criteria of decisive importance which give preference to the item and process method. Such criteria are the resemblance of this method to the traditional description of Estonian morphology, the simplicity and clearness of description, and the brevity of the rules of the grammar in the case of this method (when compared with the alternative possibility).

7. Item and arrangement morphology must contain lists of all allomorphs, e.g. in the case of consonant mutation sigas: s`ea the genitive allomorph consists of the alterna-

tions $g \rightarrow \emptyset / V - V /$ (or $/k/ \rightarrow \emptyset$), $i \rightarrow e / - a /$ and adding the 3rd quantity to the resulting diphthong. The conditions of occurrence of every allomorph must be given either in the description of the genitive allomorphs (preferably) or in the word index. Thus item and arrangement morphology contains in an indirect form all the operations which are needed for the derivation genitive form from the nominative, but the grammar does not contain genitive forms in a distinct shape. In order to obtain genitive forms we must add to the grammar the results of the application of genitive allomorph alternation rules:

Nominative	+	Gen. allomorph	→	Genitive
<u>siga</u>		$g \rightarrow \emptyset / V - V /$		
		$i \rightarrow e / - a /$		
		$ea \rightarrow \text{'}ea$		<u>s'ea</u>

Such direct rules are needed on the occasion of programming morphology for computer. Then it becomes evident that all other parts of item and arrangement description are superfluous.

8. The item and process method describes only the derivation of morphological forms from a basic form. Using this method it is necessary to formulate operations (rewrite rules) which apply to the basic form and yield the appropriate morphological form, e.g.:

Basic form:	Genitive:
nominative or	1. $g \rightarrow \emptyset / V - V /$
partitive	2. $i \rightarrow e / - a /$
	3. $ea \rightarrow \text{'}ea$
<u>siga</u>	<u>s'ea</u>

Next it is necessary to formulate the conditions for applying these operations, e.g. the inflectional type of a word.

It follows that item and arrangement morphology contains all the item and process morphology and in addition to it a list of allomorphs as a main part of morphology. This list does not give any additional information and is thus redundant.

9. Using ordering of rules it is possible to automate and abbreviate part of item and process morphology rewriting rules, e.g. the 2nd rule $i \rightarrow e / - a /$ and the 3rd rule $ea \rightarrow 'ea$ (the latter may be generalized as $VV - \backslash VV$ if it follows the rules of the 1st and 2nd type, e.g.

$$g, b, d, s \rightarrow \emptyset / V - V / \text{ or } \left| \begin{array}{c} k \\ p \\ t \\ s \end{array} \right| \rightarrow \emptyset / V - V / \text{ and}$$

$$\left\{ \begin{array}{l} i \rightarrow e \\ u \rightarrow o \\ \ddot{u} \rightarrow \ddot{o} \end{array} \right\} / - a / \text{ or } [+ \text{high}] \rightarrow [- \text{high}] / - [- \text{high}] /$$

There are several possibilities for the abbreviation of rules in an item and process grammar while in an item and arrangement morphology it is not possible to exclude the alternation rules from the composition of allomorphs. This makes the item and arrangement method very redundant and inappropriate for the description of Estonian morphology. This redundancy grows proportionally: the larger the fragment of morphology, the more redundant becomes item and arrangement description and the more economical proves to be the item and process method.

Moreover it is not clear why when using the item and arrangement method one should formulate genitive allomorphs proceeding from the nominative as the basic allomorph of the stem and not vice versa. Using the item and process method the question of the basic form arises mainly from the standpoint of simplicity of description.

WORD CLASSES - SYNTACTICAL AND MORPHOLOGICAL

Jaán Kaplinski

In the Comparative Grammar of the Uralic Languages by Björn Collinder (p. 243) we read: "The typically finite verb-forms of the Uralic languages were from the beginning nominal constructions. - - - Finnish laulavat'(they) sing', '(they) are singing', is historically identical with laulavat, the nom. pl. of laulava, the present participle of laula-. Compare the sentence Laulavat Lapinki lapset 'the children of Lapland also sing', with the syntagm Lapin laulavat lapset 'the singing children of Lapland'.

Valter Tauli in his Structural Tendencies of Languages (p. 7) writes: "The pre-grammatical language had no distinction between word-classes. It lacked the possibility of distinguishing between sentences like 'song of the bird' and 'the bird sings'."

Later V. Tauli referring to numerous linguists is inclined to presume that "as to its form, the noun is older than the verb in all languages." (p. II)

The adjective is considered by V. Tauli, as well as by other linguists, to be of relatively late origin: "Originally the noun and the adjective were not separated from each other, the same word occurring in an unchanged form in both meanings." (p. 12).

Now, we must ask two questions. To begin with, all grammarians agree that there is a basic difference of meaning between a "sentence" like the children sing and a "syntagm" like the singing children, a difference rendered by various morphological means in various languages. What kind of difference is it? (Here we have no possibility of

reviewing the numerous answers previously given to this question). Second, V. Tauli speaks of "the same word occurring... in both meanings", i.e. in the meaning of both noun and adjective. What kind of "meaning" is it? If one word occurred in two "meanings", there was nevertheless some means of making the difference between these two, between two word classes. We can say that this difference was a syntactical or even semantical one not rendered by morphology, but it is impossible to consider this difference an extralinguistic one. We believe that word classes must exist in every language where two or more basic meaning-bearers can be combined in a higher-level meaning bearer. This point can be analyzed as follows:

Whenever two meaning-bearers (hereafter we shall call them simply semes) are combined, there are theoretically two possibilities of combination. E.g. bird + fly gives a combination corresponding roughly to the bird flies, the flying bird, the flight of the bird which can be said to be interconnected transformationally having more or less the same deep structure (DS) representation and meaning. Another combination is in fact not normal. If it were used, it would be something like *the fly birds, *the bird-ing fly. It appears that nearly always only one possible combination of two is really in use. So we can say that the set of all the semes in a language is not an unordered set, but possesses some kind of order. This order is exactly the thing we can call the existence of syntactical word classes. It has some interesting peculiarities. Most semes are ambivalent - their place in a pair depends on their own meaning as well as on the meaning of the other seme. In other words, each seme of a language belongs to several classes. It is only in pairs that this entropy is reduced and both members of the pair have their syntactical value fully fixed. The seme fly, to give an example, is a "verb" with the seme bird, but a "noun" with the seme high. Now, two points are not completely clear to us. First: are all pos-

sible pairs similar, so that we may always call one member of a pair "argument", and another - "predicate" (the terms are not very important)? Second: Can we always reckon only with pairs or is it necessary to introduce also triads (or even quadruplets)? We are inclined to consider all the pairs basically similar and sufficient to represent every deep relation in a sentence. But we are not completely sure that they are this. How can we decide which member of the pair is the argument, which the predicate? The best of possible preliminary answers seems to be: a predicate presupposes an argument, not vice versa. Of course, all words and semes presuppose something, but the difference is one of degree. For example, fly is probably not used in isolation, bird is: Dad! Bird! In general, the word denoting a person or thing is an argument, the word denoting property, change (movement) is a predicate. The semes can be classified according to their preferred position (argument or predicate) in a pair. Thus, semes (and words) like red, old, move, love normally function as predicates with arguments like house, stone, butterfly, girl, the seme very has for its arguments the semes normally functioning as predicates (red, old, etc.). But what is to be done with predicates ordinarily considered to have more than one argument? The triads may well be introduced as we mentioned before, but it is in itself not sufficient to reduce ambiguity, If we have two pairs man + love and girl + love the information is not sufficient to give a normal phrase. But the triad man + love + girl is not better in this connection as it remains unknown who is the lover and who the loved one. If we add the needed information, having something like man + agent, girl + patient, man + love, girl + love then these four pairs give us, e.g. the following phrase the man loves the girl.

From this we may draw the conclusion that in every linguistic complex there is some information necessary for avoiding ambiguity, information which can be interpreted as

belonging to each seme (meaning-bearer) and introducing an ordering to the set of all semes. This ordering is linguistic and not extralinguistic: we suppose we cannot find plausible extralinguistic reasons for permitting, e.g. the bird flies and not *the flight birds.

We presume that in many cases the thing we have called seme is more or less identical with stem morphemes and some auxiliary morphemes. The latter can indeed be divided into two subclasses: auxiliary morphemes which actually represent the semes of DS and auxiliary morphemes which do not, i.e. morphemes simply manifesting the kind of ordering we are discussing here. To this category belong the morphological differential features of word classes. In the Fenno-Ugric languages predicative semes and corresponding stems are in general differentiated from argumentive ones, i.e. we have two kinds of stems - verbal and nominal. The latter are declined, and they have very often some nominal derivation suffixes. On the contrary, adjectives and nouns are in these languages not so clearly differentiated. It is clear that syntactically adjectives are a special class of preponderantly predicative (1st level predicates) words from the time of their appearance. In some languages, e.g. in Slavic, adjectives have also some morphological peculiarities, but we cannot say that Fenno-Ugric adjectives are less adjectives than their Slavic counterparts. But we may say that the morphological peculiarities of a word class simply illustrate or complete the syntactic features present in all languages. In fact, these morphological features are mostly redundant. It is well known that in classical written Chinese the word classes have no morphological characteristics at all. This language can be taken as a non plus ultra case of the varied instances of relationship between syntactical (deep) word classes and morphological (surface) ones. The morphological features are indeed redundant, as every two stems can be combined in only one way. If a phrase consists of more than two words (or

stems), it can be analyzed as consisting of word pairs, pairs of pairs, etc. This approach is similar to the IC analysis or the methods of L. Tesnière. We can suppose that in DS the stems of a phrase are ordered in pairs. Such an order can rather well be rendered in surface structure by means of linear order of speech (resp. writing) where the words are placed one before another.

We can go a step farther and presume that not only the morphemes simply conveying the abstract meaning 'adjective', 'noun', 'verb', etc. are redundant, but also the morphemes of place, time, direction, etc. This redundancy is comparatively reduced in classical written Chinese, and rather great in Estonian owing to the complexity of its case system. We believe that this complexity of declension is in some way counterbalanced by the simplicity of verb stems. For instance, the verb form on 'is' is very many-faceted and can replace nearly every static verb, in particular it can connect every noun and some kind of predicative: Mats on mees 'M. is a man', Mats on tubli 'M. is brave', Mats on kodus 'M. is at home'. Mats on kõrtsmikukuks 'M. is (for some time) an innkeeper'. In classical Chinese we have many verbs corresponding to the copula on 'is'. Nevertheless some verbs, especially the "causatives" consist of two parts which roughly correspond to their deep constituents. Such verbs are in Estonian surmab 'kills', jahutab 'cools (something)', lõpetab 'ends (something)', etc. The intransitive verbs are respectively sureb, jahtub, lõpeb. Sometimes causative verbs are morphologically simple, e.g. tapab 'kills', loob 'creates, begins'. Some of these have changed their original meaning (e.g. tapab: 'beats' > 'kills'). Some are possibly very early derivatives, now completely amalgamated into a single stem.

So we have in some way answered our second question: what is the difference of "meaning" between verbs and adjectives or some other two word-classes. The first one

was: what is the "deep" difference between the singing children and the children sing? The answer, in our opinion, is rather simple. Such "sentences" as the children sing, the bird flies consist of only one - central-predication (CP). The "syntagms" are in fact only parts of larger sentences, representing not central but peripheral predications (PP). A simple sentence has only one CP which is its obligatory part and a variable number of PP-s, which are facultative. If we are given an example in the form of a PP, e.g. the singing children, the flight of the bird, we naturally ask: what is the matter with the children or the bird, i.e. we simply look for the CP which is absent. Every full and normal sentence must have a CP. Of course, in dialogues, there are many not full (and not normal) sentences lacking a CP. Nevertheless, the latter is present somewhere in the dialogue.

Historically speaking the distinction between CP and PP is probably of later origin than predication (the combination of two words) itself. To say that originally phrases such as the bird sings and the song of the bird or the singing bird were not differentiated, is ambiguous - it can mean that the CP and PP were not differentiated at that time. This means that the sentences consisted only of a single predication or (what is in fact the same) of chains of coordinated single predications. The sentence the flying bird sings was probably rendered by a phrase like bird fly bird sing or bird fly sing. Such a representation is somewhat similar to the various DS representations proposed and analyzed by the transformationalists in the last decades. The other possibility is that, e.g. in Proto-Fennic the CP and PP were differentiated only by some non-morphological means (word order?). This is a reasonable hypothesis, but it must be put in clear and non-ambiguous terms.

SOME PROBLEMS OF THE SEMANTIC ANALYSIS OF
VERBAL NOUNS

Reet Kasik

There are three aspects in the study of word-formation. In diachronic reviews the origin and the formation of suffixes and derivations is examined. The synchronical word-derivation may be studied on two different levels, considering surface structure and deep structure. Those linguists who deal with surface structure focus their attention on the morphological structure of derivations and to what kinds of stems certain suffixes may be added.

On the level of the deep structure the semantic representation of the linguistic units is of great importance. Thus, the semantic homogeneity of the word and its derivation is of primary importance also in word derivation. The suffix can change only the part of speech without adding to or retaining any marker from the semantic entry of the verb (kirjutama 'to write' → kirjutamine 'writing'). A great part of the suffixes, however, changes in addition to the part of speech also the lexical entry of the verb, adding to it one or more markers. Alongside with some nouns derived by means of derivational suffixes we may regard as belonging to the verbal nouns (according to their deep structure) also such words with simple stems as töö 'work' (cf. töötama 'to work'), huvi 'interest' (cf. huvitama 'to interest'), nali 'joke' (cf. naljatama 'to joke'), usk 'belief' (cf. uskuma 'to believe'), etc. The derivational suffix is absent in the morphological structure of these words, but there is a semantic marker [\pm STATIVE] typical of verbs in their deep structure.

Like deverbal nouns, they resemble in their syntactic features the verbs with the same stem.

Gf. töötab kombainiga põllul tuleviku heaks '(he) works in the field with a combine-harvester for the good of the future'

- töö kombainiga põllul tuleviku heaks
'work in the field with a combine-harvester for the good of the future';

huvi läikivate asjade vastu ~ armastus läikivate asjade vastu

'interest in shining things', ~ 'love for shining things'.

Passing on to the semantic analysis of the great number of Estonian verbal nouns, it would be necessary in the first place to determine the universal features which are common to the greater part of the verbal nouns. The Russian linguist O. Revzina has used the concept of the field of word-formation (cf. O.Ревзина, Структура словообразовательных полей в славянских языках. Москва, 1969) which can also be applied in principle in the present instance. We group all verbal nouns according to two semantic features which are [± ANIMATE] and [± ARTICULATED]. Nouns which are characterized by the marker [+ ANIMATE] form the field of agent. The other nouns which are characterized by the marker [- ANIMATE] form the field of activity and state if their semantic entry contains the marker [- ARTICULATED] and the field of things if their semantic entry contains the marker [+ ARTICULATED].

If we examine more closely the field of agent, we can see that a certain semantic similarity is common to all nouns belonging to this field and their contents can be transferred by the same transformation.

laulja - keegi, kes laulab 'somebody who sings'
kirjutaja - keegi, kes kirjutab 'somebody who writes'
lõpetanu - keegi, kes on lõpetanud 'somebody who has finished'
uppunu - keegi, kes on uppunud 'somebody who has drowned'

õppiija } - keegi, kes õpib 'somebody who learns'
õpilane }

In case of the last derivation (õpilane 'a pupil') a semantic marker is added showing that learning is the basic action of the agent, his so-called "profession".

In the case of the field of activity and state we can also find a common semantic scheme (term introduced by O. Revzina).

kirjutamine - see, et keegi/miski kirjutab
'writing - that somebody/something is writing'
laulmine - see, et keegi/miski laulab
'singing - that somebody/something is singing'

Of course, some more semantic markers can be added but the basic scheme remains the same, e.g.

sõidetavus - see, et [+ on võimalik, et] keegi/
miski sõidab
'drivability - state, quality, condition of being
driven (over)'
kuuldavus - see, et [+ on võimalik, et] keegi
kuuleb
'audibility - state, quality, condition of being
heard'.

The field of things is more dismembered and therefore it is difficult to find a common semantic scheme for all members of the field.

Within the limits of the field of agent and of the field of activity and state it is possible to derive verbal nouns with general abstract meaning, the semantic entry of which contains in addition to the features of the verb only the semantic markers which characterize the whole corresponding field. In the field of agent the suffix -ja is used to form agent nouns with such a general meaning and the suffix -nu if the derivation refers to the past. In the field of

activity and state the suffix -mine is used and in the case of transitive verbs the suffix -us is added to the tud- participle which has the meaning of state.

In the case of the derivations with other suffixes some more semantic markers are added to the entry of the verbal noun which form subdivisions within the limits of each semantic field.

ON CLASSIFICATIONS

Mart Rimmel

The report will attempt to develop guidelines for the following types of problems which arise in the application of classification theories to research in historical linguistics:

How should a classification be described?

When can a given classification be considered complete?

Of what value are the properties of a classification in understanding the process being studied?

ÜBER DIE SYNTAKTISCHE STRUKTUR DER
HAUPTVERSE DER ALTESTNISCHEN ALLITERIERENDEN
VOLKSLIEDER

Helle Niinemägi

Die Sprache der altestnischen Volkslieder hat sich auf der Grundlage der Sprachelemente zu einem vergangenen Zeitpunkt, welche in Verse gebracht wurden, herausgebildet. Bei der mündlichen Verbreitung der Lieder kamen im Laufe der Jahrhunderten immer neue sprachliche und poetische Einflüsse hinzu. So wäre die Sprache der Volkslieder und besonders ihre syntaktische Struktur nicht als rein sprachgeschichtlich interessantes Material, sondern als eine eigenartige Erscheinungsform der gegebenen Sprache aufzufassen.

Die Sprache der Runen ist bisher hauptsächlich vom phonetischen, morphologischen und lexikalischen Gesichtspunkt aus erforscht worden, syntaktische Untersuchungen gibt es fast keine. Bei der Betrachtung der syntaktischen Struktur sind hier zwei Etappen zu unterscheiden: zuerst muss man die Oberflächenstruktur bestimmen und danach zur Tiefenstruktur übergehen, bei der schon semantische, verstechnische u. a. Faktoren in Betracht gezogen werden. Die Oberflächenstruktur wird in parallelen und nichtparallelen Versen voneinander getrennt betrachtet. Bei den parallelen Versen ihrerseits werden Hauptverse und ihre Verbindungen mit den übrigen Versen in der parallelen Versreihe voneinander abgesondert behandelt. In der jetzigen Arbeitsetappe werden die Strukturtypen der Hauptverse bestimmt (nicht auf Grund der Satzglieder, sondern auf dem der Redeteile und der morphologischen Formen). Als Quellenmaterial sind die ältesten epischen Volkslieder in der Sammlung "Eesti rahvalaulud" = I 1926, II 1932) benutzt worden.

UBER VERBALE MÖGLICHKEITEN ZUR BEZEICHNUNG
DES BEGINNS IM ESTNISCHEN

Maie Raitar

Zur Bezeichnung des Beginns gibt es in der Sprache viele Möglichkeiten. Hier werden die Verben und die Verbalverbindungen der estnischen Sprache betrachtet, bei denen die Bezeichnung des Beginns primär ist. Die Verben, bei denen der Beginn verursacht wird, d.h. bei denen die Kausalität primär ist, und die Verben, bei denen die Anfangs- und Schlussmomente beinahe zusammenfallen, werden ausser acht gelassen.

Um über die Möglichkeiten des Beginns einen vollständigen Überblick zu gewinnen, genügt es nicht, nur Einzelverben zu betrachten. Für alle diese Einzelverben muss man synonyme Verbalverbindungen finden. Hier gehen wir davon aus, dass in der Sprache eine nicht geringe Anzahl von Einzelwörtern und Wortverbindungen gleichwertig sind. Die Hauptbedingung ist, dass die zu untersuchenden Verbalverbindungen in der gegenwärtigen Sprache gebraucht werden oder dass sie früher gebraucht worden sind und zur Zeit eine gewisse archaische Schattierung angenommen haben.

Die Verbalverbindungen bestehen aus zwei Komponenten, wobei eine der Komponenten ein Verb ist. Die verbalen Komponenten enthalten Einzelverben, die verschiedene Bedeutungen haben und die sich in vielen Verbalverbindungen wiederholen. Zum Beispiel:

ajama - sirutuma ~ sirgu ajama 'sich ausstrecken',
hakkama - jõustuma ~ kehtima hakkama 'in Kraft treten',
jääma - uinuma ~ magama jääma 'einschlafen',
minema - hulluma ~ hulluks minema 'verrückt werden',
muutuma - kohmetuma ~ kohmetuks muutuma 'verdutzt, ver-
legen werden',
saama - taipama ~ aru saama 'verstehen',
tulema - meenuma ~ meelde tulema 'sich erinnern' usw.

Am häufigsten kommen die Verbalverbindungen mit den Verben jääma, minema, muutuma, saama, hakkama vor.

Es ist auch möglich, dem Einzelwort entsprechende synonyme Verbalverbindungen zu finden, bei denen die Kombinationen dieser fünf Verben parallel gebraucht werden können. Zum Beispiel:

jääma - muutuma: kangestuma ~ kangeks jääma ~ kangeks muutuma 'erstarren, starr werden',
muutuma - saama: kainenema ~ kaineks muutuma ~ kaineks saama 'nüchtern werden',
minema - muutuma: punastama ~ punaseks minema ~ punaseks muutuma 'rot werden, erröten' usw.

Mit Hilfe des Prädikatverbs kann man eine gewisse Information über Vorgänge, Prozesse oder Zustände erhalten, die vor dem Beginnsmoment stattgefunden haben. So kann der Zustand des Subjekts

1) normal sein (jääma, minema), z.B.

haigestuma ~ haigeks jääma 'erkranken, krank werden',
hulluma ~ hulluks minema 'verrückt werden';

2) Elemente des Übergangs oder irgendeine quantitative Stufe eines Zustands enthalten (jääma, muutuma), z.B.

kehvenema ~ kehvemaks jääma 'verarmen',
elavnema ~ elavamaks muutuma 'lebendiger werden';

3) ohne nähere Bestimmung sein (z.B. im Falle eines physischen oder verstandesmäßigen Zustands) (jääma, minema, muutuma, saama), z.B.

uinuma ~ magama jääma 'einschlafen',
avanema ~ lahti minema 'sich öffnen',
lödvenema ~ lödvals muutuma 'locker(er) werden',
taipama ~ aru saama 'verstehen, begreifen';

4) bei einem psychischen Zustand ganz unbestimmbar sein (saama), z.B.

solvuma ~ solvunuks saama 'sich beleidigt fühlen';

5) bestimmbar sein, wenn das Subjekt ein Stoff ist (muutuma), z.B.

tahkuma ~ tahkeks muutuma 'hart werden'.

Das Prädikat ermöglicht auch das Vorhandensein irgend-einer Eigenschaft oder Fähigkeit des Subjekts vorauszu-setzen: jääma, minema (die Bewegungsfähigkeit), z.B.

vaikima ~ vait jääma 'still werden',

ühinema ~ kokku minema 'sich zusammenschliessen'.

Das Prädikat selbst kann zeigen:

1) die Veränderung entweder eines physischen oder psy-chischen Zustands (muutuma, saama), z.B.

lõtvuma ~ lõdvaks muutuma 'locker werden',

ehmuma ~ ehmunuks saama 'erschrecken';

2) eine Veränderung des Zustands im allgemeinen zu anormal oder zu einem von der Norm abweichenden Zustand (jääma, minema, muutuma, saama), z.B.

haigestuma ~ haigeks jääma 'erkranken',

hulluma ~ hulluks minema 'verrückt werden',

metsistuma ~ metsikuks muutuma 'verwildern' usw.;

3) die Veränderung eines Zustands zu einem neuen Zu-stand ohne nähere Bestimmung der Qualität und die Verände-rung eines Zustands quantitativ (jääma, minema, muutuma, saama), z.B.

sõngestuma ~ sõngeks muutuma 'sich verdüstern',

soojenema ~ soojaks minema 'wärmer werden',

süvenema ~ sügavamaks muutuma 'sich vertiefen' usw.;

4) das Aufhören der Einwirkung der Eigenschaft, infol-gedessen ein neuer Zustand entsteht (jääma), z.B.

vaikima ~ vait jääma 'still werden';

5) Beziehungen zwischen den Argumenten (saama), z.B.

tutvuma ~ tuttavaks saama 'sich bekannt machen';

6) die Veränderung der Lage und der Stellung bei der Bewegung oder die Beziehungen zwischen den Argumenten im Anfangsmoment der Bewegung (minema), z.B.

eemalduma ~ lähku minema 'sich entfernen';

7) einen neuen Aggregatzustand des Stoffes (muutuma), z.B.

tuhastuma ~ tuhaks muutuma 'zu Asche werden'.

Wie wir sehen, ist es unmöglich, nur auf Grund des Prädikats eine genaue Schlussfolgerung zu ziehen, wann das eine oder das andere Verb von den fünf untersuchten Verben zur Bezeichnung des Beginns angewandt wird. Es gibt viele inhaltliche Übereinstimmungen bei verschiedenen Prädikatgruppen. Die Analyse der oben erwähnten Kombinationen ermöglicht eine genauere Differenzierung. Daraus ergibt sich zum Beispiel, dass

1) minema und muutuma die nächsten Synonyme sind, sie bezeichnen den Übergang aus einem Zustand in einen anderen, wobei sie besonders den Beginn des Übergangs hervorheben, z.B.

tuhmuma ~ tuhmiks minema oder muutuma 'sich trüben',
kahvatuma ~ kahvatuks minema oder muutuma 'erblassen':

2) in gewissen Fällen das Verb saama dieselbe Bedeutung wie die Verben minema und muutuma hat, z.B.

söbrunema ~ söbraks saama oder muutuma 'sich befreunden';

3) jääma hebt immer das Aufhören des Übergangs aus einem Zustand in einen anderen und den Beginn eines neuen Zustands hervor, z.B.

varju jääma 'verborgen bleiben';

4) die Hauptbetonung von saama liegt auf dem Nachzustand des Übergangs, z.B.

vabanema ~ vabaks saama 'frei werden'.

GOVERNMENT STRUCTURE TYPES OF THE VERB AND
SITUATION ANALYSIS

Huno Rätsep

1. As we have earlier pointed out (Rätsep, 1969) government structures of the verb with a certain meaning may be treated as variants which can be considered as one government structure type. This type must reflect all acceptable combinations of government structure elements in the case of a verb with a certain meaning. The government structure types thus obtained represent surface structures of certain sentences and possibilities of their variation.

2. When considering the content of such sentences conditioned by the verb, one can see that each sentence describes a certain situation which in its turn represents some action or state. These situations are called tegevussituatsioonid 'action situations'. In each action situation one can distinguish relevant situation elements, components which can be joined into one situation by a certain action.

3. Example. A common singing situation forms a base for the sentence Müüja laulis tuttavatele laulu mustast kassist 'The shop-assistant was singing a song about a black cat to her acquaintances'. In this situation we can distinguish several relevant situation elements (they are given in capital letters):

{ LAULJA, KUULAJA, TEKST, INSTRUMENT, KEEL, ASUKOHT,
LÄHTEKOHT, SIHTKOHT, TAKISTUS }

These are ten situation elements joined into one situation by an action - SINGING.

Let us consider these situation elements in a more detailed way. The element LAULJA 'singer' marks the accomplisher of the given action in the situation; KUULAJA 'listener' marks the receiver of the singing; TEKST 'text' marks the result of the singing as an action; LAULMISALIS 'singing topic' what is being sung about while VAHEND 'instrument' marks by means of what the action takes place. ASUKOHT 'place' refers to the place where the singer and listener find themselves. LÄHTEKOHT 'starting point' defines the location of the singer. SIHTKOHT 'destination' refers to the place or direction where the action - LAULMINE 'singing' is directed. Under TAKISTUS 'hindrance' are meant obstacles on the way of the voice which are surmounted. KEEL 'language' marks the natural language or its variant in which the above mentioned text is performed.

4. It seems that the number of such action situations is no completely universal quantity and may be somewhat different in different languages. The elements of the present singing situation have been fixed on the basis of Estonian only. Naturally this does not mean that it is impossible to reach a certain universal singing situation as a result of the generalization of the analysis of several languages. Each language considers essential and realizes only some of those elements.

5. Such action situations may be presented in quite different linguistic forms. Here we are interested only in such a presentation of the situation in Estonian where the action (LAULMINE in the present case) is rendered by the verb or its equivalent and the situation elements are realized as parts of the sentence containing this verb.

6. How is the present singing situation represented in the surface structure of Estonian? The situation com-

ponents are most frequently rendered in the form of the verb-governed nominal forms (complements). In the present case the surface structure elements are as follows:

LAULJA - N+nom. (a noun in the nominative); word-combinations that may occur in this position or elsewhere have been left aside.

KUULAJA - N+all. (a noun in the allative).

TEKST - N+ngp. (a noun in the nominative, genitive or partitive);

KL (a subordinate clause);

OK (direct speech).

LAUTMISALIS - N+el. (a noun in the elative);

N+gen. kohta (a noun in the genitive with the postposition kohta 'about').

VAHEND - N+kom. (a noun in the comitative) when **LAULJA** is N+nom;

N+ad. (a noun in the adessive) in some cases depending on the meaning of N;

N+nom. (a noun in the nominative) when **VAHEND** is realized in the surface structure as the subject of a sentence. In this case the representation of **LAULJA** is either absent or it is represented by the element N+gen. (a noun in the genitive) which is an attribute of the noun marking **VAHEND**. Of the sentences: Miina laulis heleda häälega aariat 'Miina was singing an aria in a clear voice'. - Hele hääla laulis aariat 'A clear voice was singing an aria'. - Miina hele hääla laulis aariat 'Miina's clear voice was singing an aria'.

KEEL - Ll (a substitution class for uniting the forms marking the spoken language or its variant; its concrete manifestations are for example eesti keeles 'in Estonian', eesti keeli 'in Estonian', kodumurdes 'in the home dialect' etc.).

ASUKOHT - Loc (a substitution class referring to the place of location; form classes like N+in., N+ad., N+gen. sees, N+gen. peal, N+gen. all, N+gen. juures etc. belong here).

LÄHTEKOHT - De (a substitution class whose members denote the place of departure; form classes like N+el., N+abl., N+gen. seest, N+gen. pealt, N+gen. alt, N+gen. juurest, etc. belong here).

SIHTKOHT - Di (a substitution class whose members denote the place of destination; form classes like N+ill., N+all., N+gen. sisse, N+gen. peale, N+gen. alla, N+gen. taha, etc. belong here).

TAKISTUS - Dt₂ (a substitution class with the members läbi N+gen. and üle N+gen.).

All these substitution classes have been treated in a more detailed way in the above-mentioned article.

7. But this is not enough for the description of the surface structure correspondence of situation elements as depending on the language and the shade of meaning of the verb, different situation elements may be representative or not in the surface structure. In the case of the given verb the representation of a certain situation element may be obligatory, that of another one may be optional. Here we naturally have in mind the context-free occurrence of the given sentence (even as the only sentence in an utterance or discourse).

In addition several limitations have often been set for different surface structure manifestations of the same situation element. The speakers always take them into consideration. In the previous example the two surface structure elements rendering LAULMISALIS are used differently: N+el. may occur in the sentence even when TEKST is not realized in the surface structure (Cf. Müüja laulis mustast kassist 'The shop-assistant was singing about a black cat')

while N+gen. kohta can always occur with TEKST only (the sentence *Müüja laulis musta kassi kohta is not acceptable).

8. It is necessary once more to stress that the situation element may be represented in the sentence not only as a complement of the verb but also as an attribute of the noun representing some other situation element (such relations will be given in square brackets). As we could see this was the situation in the case of LAULJA. Similar subordination relations may sometimes be observed in the case of LAUIMISALIS. The subordination of the surface structure element representing the latter to the verb or the noun marking TEKST seems to depend on the word order, i.e. on the position of the complex marking LAUIMISALIS in the sentence. Cf. Müüja laulis laulu mustast kassist. Müüja laulis mustast kassist laulu. Still it seems that in many cases the determination of the direction of such a dependence is rather difficult: the element seems to be dependent on the element marking TEKST and the verb simultaneously. All that points to the fact that the ascertainment of attributive relations belongs to the surface structure of the sentence.

9. Joining the variants of the manifestation of the situation elements of the action situation forming the base for the given verb and limitations into one compound structure, we get the government structure type of the given verb. So, for instance, the government structure type of laulma is as follows.

$$N^1 + \text{nom. } V \left\{ \left(\{ N^2 + \text{ngp.} \sim \text{KL} = \text{OK} \} \vee N^3 + \text{el.} \right) = \left(\{ N^2 + \text{ngp.} \sim \text{KL} = \text{OK} \} N^3 + \text{gen. kohta} \right) \right\} (N^4 + \text{all.}) (N^5 + \text{ad.} \sim N^6 + \text{kom.})$$

(Loc) (De) (Di) (Dt₂) (LI)

$$/ (N^1 + \text{gen.}) N^{5 \sim 6} + \text{nom.} / V + 3. \text{p.} \left\{ \left(\{ N^2 + \text{ngp.} \sim \text{KL} = \text{OK} \} \vee N^3 + \text{el.} \right) = \left(\{ N^2 + \text{ngp.} \sim \text{KL} = \text{OK} \} N^3 + \text{gen. kohta} \right) \right\} (N^4 + \text{all.})$$

(Loc) (De) (Di) (Dt₂) (LI)

In the entry of this structure type parentheses mark optional elements, \vee marks disjunction relations while $V+3.p.$ means that the verb may be (in the case when the representation of VAHEND is in the position of the subject) in the third person exclusively.

10. Several verbs may have the same government structure type. The same set of situation elements may have several different representations of surface structure while the choice is determined by the shade of meaning of the verb. For instance the verbs of saying like kohmama 'blurt out', sosistama 'whisper', jutustama 'narrate' have the same action situation, but its manifestation in the surface structure differs as regards limitations.

11. Some situation elements may be represented in the sentence even as a part of the stem of the verb while the surface structure unit representing the situation element is embedded into the verb. Even in that case the situation element can freely be recognized. For example Naine looritas oma não 'The woman veiled her face' where the stem loor 'veil' marking VAHEND is embedded into the stem of the verb.

The same situation element may sometimes also be rendered in several ways in the surface structure, both as an independent complement of a verb and a part of the verb. For instance, in the sentences President kõneles rahvale 'The president spoke to the people', President pidas rahvale kõne 'The president made a speech to the people'. President esines rahvale kõnega 'The president appeared before the people and made a speech', the speech-making situation is the same but the situation element TEKST is expressed differently in the surface structure. In the first case it is embedded into the verb, in the second and the third case it occurs as an independent complement (kõne, kõnega), but in different forms depending on the verb.

In the present case the sentence President kõneles rahvale kõne 'The president spoke to the people' is not acceptable in Estonian. It does not mean that one situation element cannot be expressed in the sentence in two ways, as a part of the verb and as a complement of the verb. In certain conditions it is still possible. For example in the sentence Naine looritas oma näo õhkõrna roheline looriga. 'The woman veiled her face with a gauzy green veil'. The condition is that the complement must offer some new information, such information that cannot be obtained from the element embedded into the stem. This complement offers some new information when it is specified by the attributes and their complements.

12. In the determination of the government structure types of verbs the elucidation of the elements of the action situations which form a base for these structures and the ascertainment of their surface structure equivalents are of great use.

Rätsep, H. 1969. On the Form of Government Structure Types of Estonian Simple Verbs. - Annual Meeting of the Research Group for Generative Grammar, Tartu, pp. 20-28.

ON THE CONJOINING AND OPPOSITIONAL COORDINATION
OF SENTENCES IN ESTONIAN

Helle Saluveer

1. Coordination conjoins sentences as grammatical equals. Coordinated sub-clauses are comparatively independent, i.e. they may be observed as potential simple sentences.
2. The acceptability of a compound sentence does not solely depend on the acceptability of the sub-clauses; the coordination of two acceptable simple sentences may result in an unacceptable whole. This unacceptability may be caused by grammatical and semantical reasons. Cf.

(1) ? Kuhu sa õhtul lähed ja heida magama.

'Where are you going tonight and go to bed.'

(2) Ma tundsin end halvasti, aga jännes ei leidnud oma puuri üles.

'I felt sick, but the rabbit did not find its cage.'

Example (1) is ungrammatical, because the coordination of an interrogative and an imperative sentence is excluded; the sub-clauses of sentence (2) belong to unjoinable contexts, and the result is a comic effect.

3. Sentences can be conjoined syndetically by means of the conjunctions ja, ning, ei.... ega, and also some adverbs (isegi, küll.... küll, kord.... kord etc.). Sentences can be conjoined also asyndetically and in this case a comma is used in writing. Opposition is gained by the conjunctions aga, kuid, ent, vaid, sometimes by ja. Asyndetical opposition is rare, in this

case the opposed facts are vividly contrasted (Inimene kavatseb, saatus juhib. 'Man intends, fate directs.').

4. A conjoining connection may be symmetrical or asymmetrical. The order of symmetrically conjoint sub-clauses in a compound sentence is free: if the order of sub-clauses is changed, the acceptability and the meaning of the sentences remains unchanged.

Symmetrically conjoint sub-clauses of a compound sentence represent an enumeration of occurrences of a common topic, e.g.

- (3) Uneažad on segi, enesetunne on vilets, isu puudub, suitski ei maitse.

'Sleep is disturbed, I feel indisposed, I have no appetite, even a cigarette does not please me.'

Negations can also be connected symmetrically, e.g.

Ei õnnetus hüüa tulles ega häda hoiata ette.

'Disaster doesn't call you coming nor does woe forewarn you.'

The order of asymmetrically conjoint sub-clauses is not free. Sub-clauses express occurrences which are in temporal or causal relations. The changing of the order of sub-clauses makes such compound sentences unacceptable or changes their meaning.

- (5) Pudrukauss oli lõpuks tühi ja Riinu tõusis lauda koristama.

'The bowl of porridge was finally empty and Riinu rose to clear the table.'

- (5a)* Riinu tõusis lauda koristama ja pudrukauss oli lõpuks tühi.

'Riinu rose to clear the table and the bowl of porridge was finally empty.'

- (6) Vaenlane tulistas veel kord ja kogu kukkus.

'The enemy fired once again and the figure fell.'

- (6a) Kogu kukkus ja vaenlane tulistas veel kord.
'The figure fell, and the enemy fired once again.'

5. Oppositionally connected are sub-clauses opposed to each other either in their nature or from the viewpoint of the speaker, e.g.

- (8) Päev oli päikseline, aga luhtadel püsis tihe udu.
'The day was bright with sunshine but a dense mist lingered over the watermeadows.'

- (9) Tütar õpib ülikoolis, aga poeg astus EPA-sse.
'Her daughter is studying at the university, but her son entered the Estonian Agricultural Academy.'

The use of the conjunction *vaid* is limited, it is only used in cases where an affirmative sub-clause follows a negative sub-clause.

- (10) Ta ei tundnud piinlikkust, vaid sõi rõõmsalt edasi.
'He did not feel ashamed but went on eating cheerfully.'

In contrasting two negative clauses, an emphatic particle is used in the second sub-clause, e.g.

- (11) Kõhtu sellest täis ei saa, aga nälga ka ei sure.
'You can't eat your fill of it but you won't die of hunger either.'

ON THE AGENT ADVERBIAL IN THE tud-CONSTRUCTION

Ellen Uuspõld

1. The purpose of this study is to examine attributive tud-constructions with the agent adverbial, e.g.

(1) Laste tehtud lumememm.

'A snowman made by the children.'

(2) Ametniku poolt võltsitud allkiri.

'The signature forged by the official.'

(3) Pommist purustatud maja.

'The house crushed by the bomb.'

In such passive constructions the logical subject of the action is expressed adverbially (laste, ametniku poolt, pommist) and traditional sentence analysis uses the term agentadverbiaal here.

According to Chomsky's model of grammar noun-phrases (1)-(3) are based on structures which at the same time form the basis for sentences like

(1') Lapsed teevad lumemme.

'The children are making a snowman.'

(2') Ametnik võltsib allkirja.

'The official is forging the signature.'

(3') Pomm purustab maja.

'The bomb is crushing the house.'

Thus such grammar refers to the deep structure relations between the subject of the sentence and the agent adverbial of the corresponding passive construction.

2. The agent adverbial of the tud-construction may occur in three forms: in the genitive case (1), in the genitive case with the post-positional poolt (2) and in the relative case (3). These forms of the agent adverbial are not

alternative variants that can be freely chosen, cf. e.g. phrases (1)-(3) with phrases

- (1a) Laste poolt tehtud lumememm.
'A snowman made by the children.'
- (1b) ⁺Lastest tehtud lumememm.
- (2a) ?Ametniku võltsitud allkiri.
'The signature forged by the official' or 'The official's forged signature.'
- (2b) ⁺Ametnikust võltsitud allkiri.
- (3a) Pommi poolt purustatud maja.
'The house crushed by the bomb.'
- (3b) ⁺?Pommi purustatud maja.¹

Relatively free is the use of the agent adverbial with the poolt-postposition (see (1a), (2), (3a)). The agent adverbial phrases in the genitive case are often ambiguous (the agent adverbial-possessive genitive, see (2a)). The use of the agent adverbial in the relative case is limited most of all.

3. In the use of the agent adverbial in the relative some semantical regularities are revealed which cannot be explained in the limits of Chomsky's model of grammar. Let us consider phrases

- (4) ⁺Jahimehest ehmatatud lind.
'The bird frightened by the hunter.'
- (5) Paugust ehmatatud lind.
'The bird frightened by a shot.'
- (6) ⁺Juhendajast meelitatud praktikant.
'The probationer flattered by the supervisor.'

¹ Unacceptability is marked by ⁺, ambiguity by ? and doubtful acceptability by ⁺? before the sentence or phrase.

- (7) Kiitusest meelitatud praktikant.
'The probationer flattered by praise.'
- (8) *Peetrist üllatatud vanaema.
'Grandmother surprised by Peter.'
- (9) Telegrammist üllatatud vanaema.
'Grandmother surprised by the telegram.'

and compare them with sentences like

- (10) Jahimees ehmatas lindu pauguga.
'The hunter frightened the bird with a shot.'
- (11) Pauk ehmatas lindu.
'The shot frightened the bird.'
- (12) Juhendaja meelitas praktikanti kiitusega.
'The supervisor flattered the probationer with praise.'
- (13) Kiitus meelitas praktikanti.
'The praise flattered the probationer.'
- (14) Peeter üllatas vanaema telegrammiga.
'Peter surprised his grandmother with the telegram.'
- (15) Telegramm üllatas vanaema.
'The telegram surprised grandmother.'

Such phenomena of surface structure can be explained by Ch. Fillmore's model of grammar. In the terms of "case grammar" the verbs ehmatama, meelitama, üllatama may be treated as three-argument predicates, to the case structure of which belong the agent (A), the instrument (I) and the object (O). In examples (4)-(15) the agentive argument is represented by jahimees, juhendaja, Peeter as they express the active animate person who carries out the action; pauk, kiitus, telegramm represent the instrumental argument. In the form of the subject of surface structure the case differences of deep structure have been

- (21) ⁺Ehitajatest barjääriga piiratud mänguväljak.
⁺Ehitajate poolt barjäärist piiratud mänguväljak.
 Cf.: Ehitajate poolt barjääriga piiratud mänguväljak.
 'The playground enclosed by the barrier put up
 by the builders.'
- (22) ⁺Sõpradest tähelepanuga ümbritsetud juubilar.
⁺Sõprade poolt tähelepanust ümbritsetud juubi-
 lar.
 Cf.: Sõprade poolt tähelepanuga ümbritsetud juubilar.
 'The hero of the anniversary surrounded by his
 friends' attention.'
- (23) Barjäärist piiratud mänguväljak.
 'The playground enclosed by the barrier.'
- (24) Tähelepanust ümbritsetud juubilar.
 'The hero of the anniversary surrounded by
 attention.'

Here we also have three-argument predicates the case structure of which is A, I, O. Unlike such verbs as meelitama 'flatter', üllatama 'surprise', ehmatama 'frighten' where the expression of the instrumental argument is not obligatory, the agentive argument can here be realized only together with the instrumental argument. In the corresponding tud-constructions the relative is unacceptable for the expression of either the former or the latter (see (21) and (22)). Thus in cases where such a verb occurs with two arguments, namely the agentive argument is not expressed. Consequently in phrases (19), (20) and (23), (24) the relative adverbials are alike instrumental.

6. There is still another type of examples where the phrase formed by the relative agent adverbial is acceptable even in the case of the feature /+ animate/:

- (25) Kärbsesest äratatud laps.
 'The child woken by the fly.'

(26) Ussist ehmatatud lind.

'The bird frightened by the snake.'

On the other hand there are examples with the same verbs where the /+ animate/ relative adverbial is not acceptable:

(27) ⁺Enast äratatud laps. Cf.: Ena poolt äratatud
laps.

'The child woken by its mother.'

(28) ⁺Jahimehest ehmatatud lind. Cf.: Jahimehe poolt
ehmatatud lind.

'The bird frightened by the hunter.'

This phenomenon can also be explained by the difference in case relations: on the one hand cases like ema äratab ~ ema poolt äratatud 'the mother wakes ~ woken by the mother', jahimees ehatab ~ jahimehe poolt ehmatatud 'the hunter frightens ~ frightened by the hunter', where the action is purposeful, and on the other hand cases like kärbes äratab ~ kärbest äratatud 'the fly wakes ~ woken by the fly', uss ehatab ~ ussist ehmatatud 'the snake frightens ~ frightened by the snake', where the action is purposeless, while kärbes 'fly', uss 'snake' express the cause of the event only. The accomplisher of the purposeful action is agentive and it is not acceptable to express him by the relative. The involuntary cause of the event, although it has the feature /+ animate/, is expressed by the agent adverbial in the form of the relative.

7. The foregoing is but a sketchy example of the possibilities offered by the application of semantic analysis in the elucidation of the phenomena of the infinite syntax of Estonian. Work on the more extensive realization of these possibilities is in progress.

ÜBER DIE FREQUENZ DER WORTARTEN IN DREI
FUNKTIONALEN STILEN

Jüri Valge

In der vorliegenden Schrift werden nur flektierende Wörter untersucht. Also werden Substantive, Adjektive, Numeralien und Pronomina analysiert, wie auch die nominal gebrauchten ersten Partizipien des Verbs.

Im Vortrag fehlt die Erklärung der gebrauchten statistischen Methoden, die in einem vorhergehenden Beitrag im Sammelband "Keel ja struktuur" IV ("Sprache und Struktur" IV, Tartu 1970) erläutert worden sind.

Es wurden die folgenden funktionalen Stile analysiert: die Zeitungssprache, die Umgangssprache (die Sprache der handelnden Personen in Theaterstücken) und die schöngeistige Prosa.

Es fällt einem die Tatsache auf, dass die quantitativen Merkmale der Frequenz der Wortarten bei verschiedenen Verfassern und in verschiedenen Stilen sehr unterschiedlich sind. Deshalb erwies es sich als voreilig einen glaubenswerten durchschnittlichen Wert auszurechnen.

Wohl aber scheint die allgemeine Rangordnung der Wortarten ziemlich stabil zu sein. Man kann folgende Rangordnung aufstellen: 1) Substantive, 2) Pronomina, 3) Adjektive, 4) Numeralien, 5) Partizipien.

Wenn man die einzelnen funktionalen Stile getrennt betrachtet, könnte man folgende Tatsachen hervorheben.

Die Substantive haben die höchste Frequenz in der Zeitungssprache. Offensichtlich ist es verbunden mit dem seltenen Gebrauch der Pronomina im Vergleich zu den anderen funktionalen Stilen. Bedeutend mehr als irgendwo anders werden in der Zeitungssprache die Numeralien gebraucht, besonders in Sportartikeln.

In der Umgangssprache fällt die grosse Anzahl der Pro-

nomina auf. Die Substantive werden aber hier am wenigsten gebraucht im Vergleich zu den zwei übrigen funktionalen Stilen.

Nach der Frequenz der Substantive und der Pronomina bilden Mati Unt und Juhan Smuul ein gegensätzliches Paar. Der erste fällt auf mit der geringen Anzahl der Substantive und mit der Vielheit der Pronomina, der zweite mit der Vielheit der Substantive und mit der Wenigkeit der Pronomina.

Einen anderen Gegensatz finden wir im Gebrauch der Numeralien. Sie werden am meisten von Juhan Smuul gebraucht, am wenigsten von Mati Unt.

Die schöngeistige Prosa ist charakterisiert durch den verhältnismässig häufigen Gebrauch der Adjektive im Vergleich zu der Umgangssprache und der Zeitungssprache.

Was die Wechselbeziehung der Substantive und der Pronomina anbelangt, steht Arvo Valton von den anderen analysierten Verfassern (Aimée Beekman, Vladimir Beekman, Villem Gross und Harald Suislepp) ein wenig abseits. Die Substantive werden von Arvo Valton weniger gebraucht als von den anderen, dagegen ist jedes dritte zu analysierende Wort in "Luikede soo" von Arvo Valton ein Pronomen.

Schliesslich könnte man noch folgendes bemerken: Indem in der schöngeistigen Prosa und der Umgangssprache die Unterschiede zwischen den Frequenzen der jeweiligen Wortarten statistisch signifikant sind, bilden in der Zeitungssprache die Numeralien, Adjektive und Pronomina eine Gruppe, in deren Grenzen die statistischen Tests (Students t-Test) keine gegenseitigen Unterschiede feststellen lassen.

CONSONANT MUTATION IN ESTONIAN

Tiit-Rein Viitso

The paper deals with conditions of consonant mutation in Standard Estonian. Late borrowings (which, as a rule, do not undergo the mutation) are not taken into account.

1. Here the preliminary phonemic transcription proposed in Viitso 1969 is accepted. None of the prephonemes /i e ä õ ü ö a o u p t f k s š h m n ŋ l ɹ r v j/ in a designator of a simple sign neither precedes nor follows directly the same prephoneme; the phonetic length of prephonemes is considered to be conditioned by the mutual influence of four accents: (1) plain, (2) grave /˘/, (3) acute /˙/, and (4) circumflex /ˆ/. The plain accent in a long stressed syllable (i.e. in a stressed syllable ending either in a consonant or a diphthong) lengthens the diphthong (/naisi/ = [nãizi] 'woman, wife; part. pl.') or the first component of a consonant cluster (/mäkra/ = [mäkra] 'badger; part. sg.'). The grave accent lengthens the single postvocalic consonant (/üte/ = [utte] 'ewe; part. sg.', /kõna/ = [koõna] 'frog; part. sg.') or the first obstruent in a postvocalic consonant cluster (/mäkki/ = [mäkki] 'mark, sign, target; part. sg.', /kõntsa/ = [koõntsa] 'heel; part. sg.'). The acute accent in a stressed syllable lengthens the vocalic prephoneme (/üde/ = [üde] 'new; ill. sg. '), otherwise it weakens any lengthening conditioned by the ultimate preceding accent (/naiséka/ = [nãizeka] 'woman, wife; sociat. sg.', /üté/ = [utte] 'ewe; gen. sg.' /tôté/ = [tõde] 'product; production'). The circumflex accent is a combination of the acute and grave (/tõte/ = [tõtte] 'product, production; gen. sg.', /tõté/ = [tõtté] 'bring; 2pl.',

/sârt/ = [sârt] 'island; part. sg.', /sârtêlt/ = [sârttelt] 'island; abl. pl.', /ûtêlt/ = [uttelt] 'ewe; abl. sg.').

Two morphologizations of the transcription are introduced. First, in virtue of the inflectional paradigms subject to gradation the acute accent is introduced also into paradigms of such words whose stressed syllable is short (cf. part. sg. : gen. sg.: /üte : ütê/ 'ewe' > /kala : kalá/ 'fish', /kata : katá/ 'slingshot', /õte : õé/ 'sister', /pata : pajá/ 'pot'; gen. sg. : part. sg.: /võtme : võtî/ 'key' > /hapeme : hapêt/ 'beard'). Second, in paradigms of syncopated words the plain accent is substituted for the grave if in unsyncopated forms the grave accent can occur /võtî > võtme/ 'key; nom. sg. > gen. sg.'; /tâpêlta > tâp-
lep/ 'quarrel; inf. > 3sg.' > /õêlta : ütlep/ 'say; inf. : 3sg.' .

2. There are six morphological boundaries in Estonian:

- & - word boundary (&pû& 'tree'),
- ≠ - strong subword boundary (&kúsé≠pû& = ['kūZe, Bû] 'fir-tree'),
- = - weak subword boundary (&õuná=pû& = ['ëñappu] 'apple-tree'),
- ÷ - strong suffix boundary (&isa:si÷t÷ki& 'even the fathers; part. pl.),
- : - nominal stem boundary (&pû:t& 'trees'),
- % - verbal stem boundary (&jõ%n& 'I drink'),
- + - weak suffix boundary (&isá+ntá:tê+1+t& 'master; abl. pl.'). In the following we shall not make use of the boundaries except when they are needed.

We accept also the following supplementary symbols:

- E- vs. -E - the preceding vs. the following environment;
- ̲ vs. ̳ - any consonantal vs. any vocalic (pre)phoneme;
- ̣ - an unidentified consonantal (pre)phoneme which cannot assimilate with the following /m n/;
- ̤ - an unidentified consonantal (pre)phoneme which can assimilate with the following /m n/;

X vs. Y - an unidentified consonantal vs. vocalic (pre)phoneme;

A - auxiliary vowel.

- syllable boundary.

Note that we propose /K/ for cases such as /ānē : ante : ānēt/ 'talent, gift; nom. : gen. : part. sg.', namely ascribing here underlying forms ending in /K/. Likewise we propose /H/ for stems occurring permanently in the so-called weak degree, i.e. having always at least an acute accent in their second syllable, cf. /neiū : neiū : neiūt/ 'young unmarried woman', whose stem is /neito+H/ vs. /neit : neiū : neitu/ 'id.' whose stem is /neito/.

3. Now consonant mutation can be defined as follows. CONSONANT MUTATION consists either in the loss of an obstruent at the onset of an unstressed syllable or in its alternation with a non-obstruent under the influence of the acute or circumflex accent of the unstressed syllable in a word stem. Thus consonant mutation in Estonian includes the following alternation phenomena:

/	<u>p</u> : <u>∅</u>	<u>t</u> : <u>∅</u>	<u>s</u> : <u>∅</u>	<u>k</u> : <u>∅</u>
	<u>p</u> : <u>v</u>	<u>t</u> : <u>j</u>		
	<u>ymp</u> : <u>ym</u>	<u>ynt</u> : <u>yn</u> , <u>yn</u>		
	<u>lp</u> : <u>lv</u>	<u>ynt</u> : <u>yn</u> , <u>yn</u>		<u>lk</u> : <u>lj</u> , <u>l</u>
	<u>rp</u> : <u>rv</u>	<u>yrt</u> : <u>yr</u> , <u>yr</u>	<u>yrs</u> : <u>yr</u>	<u>rk</u> : <u>rj</u> , <u>r</u>
				<u>sk</u> : <u>s</u>
		<u>ht</u> : <u>h</u>		<u>hk</u> : <u>h</u> /.

The present paper, however, is limited to consonant mutation in inflectional paradigms.

4. In order to simplify the treatment we recall that all cases of mutation of /s/ occur in consonantal stems and therefore the mutation of /t/ and /s/ can be reduced to the mutation of /t/. There is, namely, a rule that any root-final /t/, when not preceded by /h/, is modified into

/s/ or /sA/ if the following sign expression is or begins in /i/ or /j/ or if /t/ is followed by a strong suffix boundary or a boundary stronger than that (cf. Vilitso 1969:44).

5. Mutation of /p t k/ can be described by means of the following rules of the shape A " B (i.e. 'A is to be modified into B').

R1 (a) ym " ym in -E = y ≠ {i ú} (lámás 'sheep', ámó (" ámú) 'cross-bow; gen. sg.');

(b) p " v in (i) -E = é: (tóvé 'disease; gen. sg.');

(ii) -E = y ≠ {i ú} and E- = {l r yy y} (halvá 'bad; gen.sg.', turvás 'peat', teivás 'pole', lővé 'rash');

(c) p " \emptyset in (i) -E = á and E- = u (luá (" loá) 'permission; gen.sg.');

(ii) -E = ó (nőó 'nephew; gen. sg.').

R2 (a) ynu " yn
ylt " yl
yrt " yr } in -E = y ≠ {i ú} and E- ≠ y (káná 'heel; gen.sg.', kálás 'shore, coast, bank', várás 'rod, spit');

(b) t " j in (i) -E = á and E- = xy where x = {p s r} for y = {ö a} and x = k for y = o (sőjá 'war; gen.sg.', kojá 'hall; gen.sg.');

(ii) -E = ó and E- = xy = sa (sajó (" sajú) 'rainfall, snowfall; gen. sg.');

(c) t " \emptyset in (i) -E = y and E- = h (lahé 'bay, gulf; gen. sg.');

(ii) -E = y ≠ {i ú} and E- = {n l r yy y} (küné 'nail; gen.sg.', kéló (" kélú) 'prohibition; gen.sg.', reie 'thigh; gen.sg.', lóé (" loé) 'north-west');

- (iii) $-E = \{\acute{a} \acute{o}\}$ and $E- = \{\underline{xy} \underline{y}\}$ where $\underline{y} = \{\underline{i} \underline{e}\}$ and $\underline{x} = \{\underline{p} \underline{r} \underline{v}\}$ except for stems ita: 'east' and itá+n+ta% 'bring to germination' (riá (" reá) 'row, line; gen.sg.');
- (iv) $-E = \{\acute{e}\% \acute{e}: \acute{e}\%$ and $E- = \underline{y}$, except for the stem tõt+g% 'experience as the truth' (käé 'hand; gen.sg.').

R3 (a) k : j in $E- = \{\underline{y1} \underline{yr}\}$ if $-E = \{\acute{e} \acute{a}\}$ and $\underline{y} = \{\underline{e} \underline{ä} \underline{ü}\}$ or $-E = \acute{o}$ and $\underline{y} = \{\underline{i} \underline{e}\}$ (küljé 'side; gen.sg., kärjé 'honeycomb; gen.sg.);

(b) k " \emptyset in (i) $E- = \{\underline{g} \underline{h}\}$ (kosé 'waterfall; gen.sg.', lehá 'stink; gen.sg.');

(ii) $-E = \acute{a}$ and $E- = \underline{ye}$ or $\bar{o}E = \acute{e}: \text{ and } E- = \underline{yu}$ (aeá (" ajá) 'time; gen.sg.', haué (" havé " haví) 'pike; gen.sg.');

(iii) $-E = \{\acute{e}\% \acute{e}: \acute{e}\% \acute{o}\}$, except for the stems pake%, 'escape', hake% 'claim, seek', koke% 'experience' (laé 'ceiling; gen.sg.' " luó (" ló) 'story; gen.sg.');

(iv) $-E = \acute{a}$ and $E- = \{\underline{yy} \underline{i} \underline{e} \underline{ü} \underline{u}\}$ except for the stem ika: 'every' (iá (" eá) 'age; gen.sg.').

6. The rules R1 - R3 follow in the grammar such rules as those for auxiliary vowels (cf. Viitso 1969:46-47), that of kt " ht, the one mentioned in §4, that ascribing the acute accent to closed unstressed syllables which directly follow the stressed syllables. The rules are applied before the rules of syncopation and apocopation and also before the rules concerning the loss of m, n, H and K in different positions and those of ö " ü and é " i in nonfirst syllables.

The known exceptions to the rules R1 - R3 are due to incorrect orthological norms and incorrect borrowing from several Estonian dialects or from Finnish.

Contrary to Kettunen 1962 and Kask 1967 we see no ground for postulating an "generalization of the strong degree" for those stems not covered by the mutation rules.

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PRONOMINALIZATION IN ESTONIAN ELEMENTARY

SENTENCES

Ülle Viks

0.1. Pronominalization can be divided into intersentential (Mari läks metsa. Tal oli korv käes. 'Mari went to the forest. She had a basket in her hand.') and intrasentential pronominalization. The latter can be observed in two different types of sentences: in a sentence with two verb-forms (Peeter läks endale raamatut tooma. 'Peeter went to buy himself a book.') and in an elementary sentence (Peeter tõi endale raamatu. 'Peeter bought himself a book.'). In an Estonian elementary sentence two types of pronouns can be substituted for the repeated Nominal Phrase: the reflexive pronoun enese - enda and the reciprocal pronouns teineteise or üksteise.

0.2. Possibilities of applying pronominalization in an Estonian elementary sentence depend on (1) the syntactical (resp. semantical) function of the underlying form and the pronoun, (2) the semantic characteristic of the predicate verb, (3) the characteristic of the predicate verb from the point of view of the situation.

1. The Nominal Phrase that repeats the subject of an elementary sentence is replaced, e.g.

Peeter peseb ennast igal hommikul. 'Peeter washes himself every morning.'

Jaan ja Mari meeldivad teineteisele. 'Jaan and Mari like each other.'

A reciprocal pronoun may also be used to repeat an object, e.g.

Ma peletan loomad teineteisest eemale. 'I shall frighten the animals away from one another.'

Oksad seotakse üksteise külge. 'The twigs will be fastened to one another.'

Besides repeating a grammatical subject, pronouns are also used to repeat the agent adverbial and the agent of an impersonal sentence, e.g.

Enda pärast mul hirmu ei ole. 'I have no fear for myself.'

Poistel on teineteise pärast tihti pahandusi olnud. 'The boys often had trouble because of each other.'

Tavaliselt pestakse end õhtuti.

'One usually washes oneself in the evening.'

Aja jooksul õpiti üksteiselt nii mõndagi. 'In the course of time much was learnt from one another.'

The pronoun of an impersonal sentence can be identified with a human being (in general) as with some person known to us from the preceding context.

Reflexive and reciprocal pronouns are themselves in the function of a predicate modifier in an elementary sentence.

2. What is essential in the use of reflexive and reciprocal pronouns is the pairs of semantic features /+animate/ contained in the semantic entry of the predicate modifiers and subject. There are nine possibilities for the realisation of the general pattern $x /+animate/ V y /+animate/$ (where x stands for a subject, y - for an object or an adverbial modifier, V marks a predicate verb):

- (1) $x /+animate/ V y /+animate/$ - keetma (kellelegi) 'to cook (for somebody)'
kirjutama (kellelegi) 'to write (to somebody)'
- (2) $x /-animate/ V y /-animate/$ - ristuma (millegagi) 'to cross (something)'
- (3) $x /-animate/ V y /+animate/$ - sobima (kellelegi) 'to suit (somebody)'

- (4) x /+ animate/ V y /- animate/ - lugema (midagi) 'to read (something)'
- (5) x /+ animate/ V y /+ animate/ - lähenema (kellelegi ~ millelegi) 'to approach (somebody ~ something)'
soojendama (kedagi ~ midagi) 'to warm (somebody ~ something)'
- (6) x /+ animate/ V y /+ animate/ - armastama (kedagi ~ midagi) 'to love (somebody ~ something)'
- (7) x /- animate/ V y /+ animate/ - seostuma (kellegagi ~ millegagi) 'to be connected (with somebody ~ something)'
- (8) x /+ animate/ V y /+ animate/ - toitma (kedagi) 'to feed (somebody)'
- (9) x /+ animate/ V y /- animate/ - eitama (midagi) 'to negate (something)'

As a pronoun (y) repeats x, y must have features in common with x. The application of a reflexive pronoun is possible if the subject of the elementary sentence and the predicate modifier both contain the feature /+ animate/. Consequently, pronominalization takes place in the cases (1), (5), (6), (8), e.g.

(1) Mari keedab endale suppi. 'Mari cooks soup for herself.'

(5) Poiss soojendab end tule paistel. 'The boy warms himself by the fire.'

(6) Peeter armastab ainult ennast. 'Peeter likes only himself.'

(8) Jänesepojad toidavad ennast juba varakult ise. 'Young hares feed themselves already early.'

It is not essential when using a reciprocal pronoun whether the NP, repeated by the pronoun, contains the feature /+ animate/ or /- animate/. What is essential is that x and y should have at least one common feature. Thus pronominalization is possible in cases (1), (2), (5), (6), (7), and (9), e.g.

(1) Jüri ja Mari kirjutavad teineteisele. 'Jüri and Mari write to each other.'

(2) Teed ristuvad teineteisega. 'The roads cross (each other).'

(5) Laevad lähenevad üksteisele suure kiirusega. 'The ships approach one another with great speed.'

Poisid lähenevad arglikult teineteisele. 'The boys approach each other shyly.'

(6) Jüri ja Mari armastavad teineteist. 'Jüri and Mari love each other.'

(7) Need probleemid seostuvad üksteisega väga tihedalt. 'These problems are closely connected with one another.'

(8) Lapsed toidavad üksteist kordamööda. 'The children feed one another by turns.'

(9) Seeme ja taim eitavad teineteist. 'The seed and the plant negate each other.'

3.1. What is essential from the pronominalization point of view is the connection between the number of the parts of sentence required by the government-structure of the predicate verb and the number of referents needed in the action expressed by the verb. Pronominalization is ruled out in such sentences which have a predicate verb with only one place (Päike tõuseb. 'The sun rises.') Pronominalization can take place in case the predicate has at least two places, i.e. the predicate must govern at least one modifier (an object or an adverbial modifier).

A reflexive pronoun can be used with verbs whose number of places exceeds the number of referents by one, be-

cause the subject is repeated by the object or the adverbial only if the referents are identical (Peeter peseb end. 'Peeter washes himself.').

It is characteristic of the use of the reciprocal pronoun that one place of the verb involves several referents (Jüri ja Mari armastavad teineteist. 'Jüri and Mari love each other.').

3.2. Whether a reflexive or a reciprocal pronoun must be used is determined by the direction of the action expressed by the predicate verb. According to direction, the verbs governing at least one modifier could be divided into three groups:

(1) verbs expressing an action directed towards the subject ($x_1 \rightarrow x_1$), e.g. ihkama (endale) 'to wish (for oneself)';

(2) verbs expressing an action directed outwards of the subject ($x_1 \rightarrow x_2$), e.g. äratama (kedagi) 'to wake (somebody)';

(3) verbs expressing a reciprocal action ($x_1 \leftrightarrow x_2$), e.g. vestlema (teineteisega, üksteisega) 'to talk (to each other, one another)'.

In the case of some verbs all these directions may occur, e.g. pesema (ennast, kedagi, teineteist, üksteist) 'to wash (oneself, somebody, each other, one another)'.

According to the classification given above the following conditions of pronominalization for reflexive and reciprocal pronouns can be presented. The reflexive pronoun is applied if $x_1 \rightarrow x_1$, e.g.

Peeter peseb Peetrit \rightarrow Peeter peseb end.

'Peeter washes Peeter \rightarrow Peeter washes himself.'

The reciprocal pronoun is applied, if $x_1 \leftrightarrow x_2$, e.g.

Peeter tervitab Antsu } \rightarrow Ants ja Peeter tervitavad
Ants tervitab Peetrit } teineteist.

'Peeter greets Ants }
Ants greets Peeter } → Ants and Peeter greet each other.'

Peeter tervitab Antsu ja Jürit }
Ants tervitab Peetrit ja Jürit } → Ants, Jüri ja Peeter tervitavad üksteist.

'Peeter greets Ants and Jüri }
Ants greets Peeter and Jüri } → Ants, Peeter and Jüri greet one another.'

4. As we can see intrasentential pronominalization depends to a great extent on the character of the predicate verb. Hence establishing the conditions of pronominalization requires semantic analysis.

ON PRONOMINALIZATION AND
SEMANTIC TREATMENT OF SENTENCES

Haldur Öim

I. Facts

There is an interesting group of facts connected with pronominalization that, when accordingly interpreted, point to the need for modifying the semantic treatment of sentences to a significant extent. Let us take the following examples.

- A. 1. John closed the door since the wind blew through it.
2. John closed the door although the wind did not blow through it.
3. John closed the door as soon as I had repaired it.
- B. 1. John closed the door ^{and} so that the wind did not blow through it any more.
2. John closed the door but the wind continued to blow through it.
3. Yesterday John found a new girl-friend and kissed her.
4. Mary realized that the boy wanted to take away her handbag and she began to shout, so that he hastily ran away.
- C. 1. Since the wind blew through the door, John closed it.
2. Although the wind did not blow through the door, John closed it.
3. As soon as I had repaired the door, John closed it.
- D. 1. John closed the door in order to prevent it from breaking.

2. John closed the door, before I could slip , through it.
3. Mary believed that the boy wanted to take away her handbag and she began to shout, so that he hastily ran away.

In all these sentences we have two clauses, in the first of which there occurs a noun referring to a certain object, while in the corresponding second clause the same object is referred to by a pronoun. The question is, what can we say - on the basis of the material contained in the corresponding sentence only - about the object referred to by the pronoun: is the information which we find to hold about it exactly the same as the information which holds about the object when referred to by the corresponding noun - the antecedent of the pronoun? The question may seem naive. But, as observation shows, the answer to this question can by no means be "yes". And, what is most important, there appear to be quite clear regularities on which it depends when and in what the information holding about the corresponding object differs in one case and in other.

More concretely, the problem we are interested in is the following. All the given examples consist of two clauses, each of which asserts something about the object under consideration. Now, one would like to find out whether and under what conditions the information asserted about the object in the first clause will already hold about this object when it is mentioned in the second clause. What is it in fact that the pronoun in the second clause identifies? Is it the object taken merely with the information which is identified by the noun in the preceding clause, or is it the object about which also the new information holds that is asserted about it in the preceding clause? The above examples are grouped according to what they reveal with respect to this problem.

In the case of the sentences A 1 - 3, as we can see,

the information asserted in the first clauses does not hold about the corresponding objects in the second clauses. In each case, the door referred to by the NP the door should be open - it is clearly a presupposition that should hold about the doors referred to in the corresponding clauses. And it is equally easy for us to decide in each case that the same should hold about the door referred to by the corresponding pronoun in the second clause, although in the first clause it has been asserted in each case that the door becomes closed. As we would say, the pronouns in these sentences do not identify the doors under consideration as taken after what has said to happen to them in the first clauses.

In the case of sentences B 1 - 4, on the contrary, the information which is asserted about the corresponding objects in the first clauses already is contained in what is identified by the pronouns in the second clauses. So, in the case of B 1 - 2, although the doors referred to by the nouns in the first clauses should be open (just as in case of A 1 - 3), there is no doubt that in the second clauses already it = the door which is closed. And, intuitively, it is clear also that these are just the assertions made in the first clauses that have caused this modification in the information holding about the corresponding doors; so to speak, in each case of B 1 - 2 the information asserted in the first clause has already been included in the information holding about the corresponding door when this is referred to by the pronoun in the second clause. Correspondingly, in B 3, we may say, her = the new girl-friend whom John found yesterday and in B 4 she = Mary, who had realized that... and he = the boy who had wanted to ...

The C cases, apparently, belong to the same group, with B cases, although C 1 - 3 are in fact the same sentences as A 1 - 3, only the order of the main and dependent clauses has been reversed.

Finally, the D cases are presented in order to show

that the facts cannot always be so straightforwardly determined as in the A, B and C cases.

Let us try now to find out what it is that the difference between A cases, on the one hand, and B+C cases, on the other, depends on. The first thing one will notice, undoubtedly, is that this difference has something to do with the conjunctions that occur in these sentences. This becomes particularly clear when we observe that, for instance, even if we have only John closed the door {so that/ and/ but} it ..., it is already clear that it should here refer to the door which is closed, no matter how the sentence will be continued.

But what is it exactly that possesses decisive force in the case of the corresponding conjunctions? As the comparison of the A and C examples reveals, a conjunction can affect the transmission of information only in a certain direction.

Apparently, it would not be very rewarding to try to connect the phenomenon under discussion merely with the temporal consecutiveness of the facts expressed in the corresponding clauses (such a treatment is suggested, in particular, by the examples with and - see B 1 and B 2), since it would be hard to show how exactly the factor of time is involved in the meanings of such conjunctions as since or although (C 1, C 2).

However, we appear to be in a much more familiar area when we notice that these same since and although clauses always present the presupposed information and that in the A cases the antecedent of the pronoun is in the main clause while in the C cases it is in the since/although clause, i.e., in the presupposed clause. If we now agree that the relation of temporal consecutiveness of the expressed events can be considered as a special case of the more general of relation of presupposition between clauses, then we can state a rule that adequately describes the facts of the examples A - C:

If the antecedent of a pronoun is in a clause that

stands in a presupposed position with respect to the clause where the pronoun itself occurs, then the new information which is asserted about the antecedent will be included in the information which the pronoun will identify in its clause.

Of course, this rule needs elaboration in many respects, since in the given form it is too general. The examples D 1 - 3 point to some of the facts that additionally should be accounted for. In the sentences D 1 and D 2, although the first clause is in the presupposed position, it is not the case that the information asserted in this clause holds about the corresponding object in the second clause. As is apparent, this fact has something to do with "world creating" predicates, in order to and can, respectively, in the scope of which the corresponding pronouns occur. The same situation can be observed in D 3. This sentence differs from B 4 only in that the verb believe occurs here instead of realize. But because of this difference it cannot be said that the pronoun he identifies here "the boy who wanted to ..." but, instead, "the boy of whom Mary believed that he wanted to ...". In other words, the problem under consideration appears to be directly related to the classification of predicates according to their semantic properties, as pursued, e.g. by L. Karttunen in his recent papers ("Implicative Verbs"; "The Semantics of English Predicate Complement Constructions").

II. Consequences

1. According to the treatment generally accepted in generative grammar, in the derivation of sentences of the above types a pronoun can replace a NP only if there is a coreferent NP - the antecedent - present in the sentence and if certain formal conditions with respect to relative positions of these two NP's are met. The evident semantic reason for such a treatment is that in this way it is pos-

sible to explain how the hearer is able to discover, in the case of such sentences, what exactly is the information identified by a pronoun in a concrete case.

But from the semantic point of view this means that the NP which the pronoun will replace and the antecedent NP should be not merely coreferential but semantically identical - they should identify exactly the same information. However, as the above examples show, the formal treatment of pronominalization can be considered adequate in this respect only in the case of A type sentences. In the case of B and C (and, in fact, also D) type sentences the information identified by the pronoun is different from the information identified by its formal antecedent. In order to bring the formal treatment of pronominalization also in these cases into accordance with the intuitive one it has to be shown how in these cases the appropriate antecedents can be established.

2. What this means is, in fact, that an explicit semantic treatment of predication is needed. The examples considered here are remarkable in that they unambiguously point out what such a semantic treatment of predication should consist in. Predication should be treated as the adding of new, asserted information in a definite way to the corresponding NP's - to the arguments of the corresponding predicate. Only in this way can the needed antecedents be created in the B and C cases. For every individual predicate there should exist definite rules that determine how the modifications in its arguments are to be carried out when the predicate is asserted. In the above examples the existence of such rules becomes particularly evident in the case of the predicates close, realize, believe. The general rule formulated at the end of the previous section states the fact that the presupposed clauses should already be processed in the described manner when the pronominalization transformation takes place in the asserted clause.

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ABBREVIATIONS

- CTIFU - Congressus tertius internationalis Fenno-Ugristarum. Tallinn, 17.-23. VIII 1970. Teesid.
- ENSV TA T - Eesti NSV Teaduste Akadeemia Toimetised, Tallinn.
- ESA - Emakeele Seltsi Aastaraamat, Tallinn.
- EST - Emakeele Seltsi Toimetised, Tallinn.
- GGG - Tartu Riiklik Ülikool. Eesti keele kateeder. Generatiivse grammatika grupi aastakoosoleku teesid, Tartu.
- МКПГ - Межвузовская конференция по порождающим грамматикам. Кяэрику, 15-25 септября 1967. Тезисы докладов.
- KK - Keel ja Kirjandus, Tallinn
- KMP - Keele modelleerimise probleeme, Tartu.
- KS - Keel ja struktuur. Töid struktuuraalse ja matemaatilise lingvistika alalt, Tartu.
- СФУ - Советское финно-угроведение, Tallinn.
- TRÜT - Tartu Riikliku Ülikooli Toimetised, Tartu.

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