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SOME VERB GOVERNMENT RULES FOR ESTONIAN

The (much simplified) syntactic framework for the present study is represented by the following three PS rules.¹

- F 1 SENTENCE \rightarrow # S #
F 2 S \rightarrow (SUB) VP
F 3 VP \rightarrow (ADVuniv) AUX + VC

Rule F 1 introduces the initial symbol S for an Estonian sentence. # is the sentence boundary marker. F 2 states that Estonian sentences contain an optional subject SUB and an obligatory verb phrase VP. SUB has little importance in our discussion and will not be expanded below. F 3 discloses the general structure of VP which has two obligatory members: AUX and VC. AUX stands for auxiliary elements such as person and tense. It will remain unexpanded. VC symbolizes a verb complex. This element will provide a basis for our verb government rules that follow. The optional element ADVuniv represents such adverbials of time, location, manner, etc. that cannot be regarded as rectional and combine with all or most verb classes. ADVuniv will remain unexpanded, but some necessary comments on that element will be included.

Having reached this point (and leaving all irrelevant details aside), we must now choose the proper way for the expansion of VC. The following tentative set of rules is intended to disclose the independent structure of VC and provide such expansions of it that are not directly related to the choice of SUB, AUX and ADVuniv. Rule F 4 expresses our main idea for deducing Estonian verb government types.

- F 4 VC \rightarrow V (OB) (RECT)

F 4 states that an Estonian verb complex contains an obligatory element V for the verb and two optional elements: OB for the object and RECT for all rectional verb complements other than the object. In terms of these three elements Estonian verb complexes fall into four main

¹ Our general conception of linguistic theory is that proposed by N. Chomsky in his *Syntactic Structures*, 's-Gravenhage 1957. For several formatives we use symbols similar to or identical with those already employed in R. T. Harms' syntactical sketch for Estonian (see his *Estonian Grammar*, Bloomington 1962, Chapter IV). However, the overall design assumed here for a generative Estonian syntax is somewhat different from that of Harms. Despite these differences the present writer owes much to R. T. Harms' courageous pioneering work.

types: 1. V + OB + RECT *Ta päästis lõvi lõksust* 'He saved the lion from the trap'; 2. V + RECT *Kartul pärineb Ameerikast* 'The potato is a native of America (lit. ... stems from America)'; 3. V + OB *Ta joob vett* 'He drinks water'; 4. V *Ta aevastab* 'He sneezes'.

We concentrate now on RECT. The next rule introduces a set of non-object complement types that must be treated as rectional.

F 5 RECT → {DIR, LOC, MST, SSE_{nondir}, CH, MTA, KA, NA, INF}

Our following rules will expand only DIR and LOC. Before disclosing their more detailed structure we find it useful to explain briefly all the symbols introduced by F 5.

DIR stands for the great variety of "direction-indicating" complements that combine with the wide "direction verb" class. In school grammars these complements are usually characterized as answering the questions "to where?", "from where?": *Jaan jõudis koju* 'John arrived home'; *Korstnapühkija viskas kassi katusele tänavale* 'The chimneysweep threw the cat from the roof into the street'; *Ta tuli ujumast* 'He came back from swimming'.

LOC stands for location adverbials that are rectional with some verbs (though they may be non-rectional with others): *Lennuväli asub džunglis* 'The airfield is located in the jungle'; *Ta hoiab kätt taskus* 'He keeps his hand in his pocket'; *Ta käis ujumas* 'He went swimming and came back'.

MST represents non-directional elative complements and corresponding infinitives: *Prints loobus troonist* 'The prince abdicated (from the throne)'; *Ta säästab oma naist majapidamistööst* 'He saves his wife from housework'; *Hoiatan teid hilinemast* 'I warn you not to be late (lit. ... from being late)'.

SSE_{nondir} symbolizes non-directional illatives (perhaps only long ones for most nouns): *Mari armus raugasse* 'Mary fell in love with the old man'; *Pühendan ta saladusse* 'I let him into the secret'.

CH stands for translatives or for non-directional elatives and translatives that combine with "change verbs": *Ta muutus ingliseks* 'She changed into an angel'; *Kindral ülendas ta reamehest seersandiks* 'The general promoted him from private to sergeant'.

MTA stands for abessives and corresponding infinitives: *Ta jäi isata* 'He became fatherless'; *Ta jättis küsimuse lahendamata* 'He left the problem unsolved'.

KA stands for comitatives: *Jüri sarnaneb Jaaniga* 'George looks like John (lit. ... resembles with ...)'; *Ta võrdles Jaani Jüriga* 'He compared John with George'.

NA stands for essives: *Jüri käitus kaabakana* 'George behaved like a scoundrel'; *Ma kasutasin teda vahendajana* 'I used him as a mediator'.

INF represents such rectional infinitives that have not yet been introduced by previous elements: *Maja süttis põlema* 'The house caught fire'; *Ta süütas maja põlema* 'He set the house on fire'; *Tahtsin puhata* 'I wanted to rest'; *Palusin teda puhata* 'I asked him to rest'; *Ta näis tukkuvat* 'He seemed to be dozing'; *Nägin teda tulevat* 'I saw him coming'.²

² The question of which infinitive constructions can be introduced by means of AUX (as is indeed proposed by Harms) needs further study. We believe, however, that

Note that all our tentative complement types derived from RECT³ have both transitive and intransitive variants. This observation seems quite suggestive. We hope to show further some of its possible implications.

We turn now to the elements DIR and LOC, leaving OB alone for the time being.

F 6 DIR → (SEP) (TO)⁴

SEP represents directional adverbials that can be characterized as answering the question "from where?", TO represents their counterpart answering the question "to where?".⁵ F 6 is so formulated as to determine further the alternative choice of one of the four main direction verb classes. These classes are the following: 1. Verbs which occur with SEP but not with TO: *Salakäik algab altari alt* 'The secret passage begins from under the altar'; *Ta varastas muuseumist Mona Lisa* 'He stole the Mona Lisa from the museum'. 2. Verbs which occur with TO but not with SEP: *Ta sulgus oma kabinetti* 'He locked himself up in (to) his study'; *Ta ehitas majakese jõe äärde* 'He built the cottage by the riverside (lit. ... onto the riverside)'. 3. Verbs which occur with both SEP and TO but not with SEP separately: *Ta jõudis töölt koju* 'He arrived home from work'; *Komisjon suunas ta linnast maale* 'The commission sent him from town to the country'. Such restrictions as 3. are perhaps not very rigid in contemporary Estonian and in some cases more stylistic than grammatical. *Ta hüppas voodist* 'He sprang from bed' seems as good as *Ta hüppas voodist välja* 'He sprang out of bed', though **Ta läks kodust* 'He went from home' is anomalous. However, as such restrictions are grammatical at least for some verbs, they cannot be ignored. Note also that there is no opposite case for 3. We have found no convincing examples for logically possible verbs that would combine with both SEP and TO but not with TO separately. In other words, every verb occurring with TO can go without SEP, but the contrary is not true. 4. The fourth direction verb class is such which occurs with SEP and TO in every way: with SEP, with TO or with SEP + TO: *Ta tuli Aafrikast* 'He came from Africa'; *Ta tuli koju* 'He came home'; *Ta tõi selle ahvi Aafrikast* 'He brought this monkey from Africa'; *Ta tõi selle ahvi Aafrikast Eestisse* 'He brought this monkey from Africa to Estonia'.

As shown by our examples, transitive and intransitive variants occur again inside all four classes. We expand now the element V, deriving from it the four direction verb classes described above — V sep, V to, V (sep) to, V (sep) (to), as well as location verbs V loc. The latter element is chosen when LOC is chosen.

the bulk of them must come from RECT. And even here they cannot usefully be introduced in a single block, but must be distributed between several complement types.

³ RECT itself is of course open for the inclusion of new rectional complement types, should the need arise.

⁴ We make it a convention that if the right-hand side of a rule or the context-restricting condition for some rule contains only optional symbols, at least one of these symbols must be chosen. Such a convention is used also in *Studia Grammatica* II, Berlin 1963, and III, Berlin 1964.

⁵ We shall ignore here such "VIA"-adverbials as *üle* 'over', *läbi* 'through', *kaudu* 'by, via', etc.

V (sep) (to) verbs (*tulema* 'to come') are only such that can always have infinitive and non-infinitive complements alternatively.⁷

At this point we cannot say any more with full conviction that all our 9 DIR and LOC verb classes have transitive and intransitive variants (though most of them do). This means that the moment has come at last to expand the element OB. With the next rules we let the intransitive-transitive verb classification cross with the government type classification. In existing generative grammars verb categorizations usually begin with the transitive-intransitive dichotomy. This is the case in Harms' sketch as well. We have found it useful to keep OB unexpanded as long as possible and to begin with the non-object verb government classifications. Theoretically both solutions are of course of equal value but we think that practically our procedure is more consistent with the structure of Estonian.

If all our 7 direction verb classes and 2 location-verb classes had both transitive and intransitive variants and among transitive variants aspectual, partitive and total subvariants, the number of resulting new classes would be 36. Our preliminary investigations show that several crossings are empty. However, at least 20 of them must be regarded as grammatical. As the necessary rules for producing these crossing classifications are long and hard to follow we present them in a simplified form. The actual OB rule would be:

$$F\ 15\ OB \rightarrow \left\{ \begin{array}{ll} ASP & \text{if} \quad \dots\dots\dots \\ PART & \text{if} \quad \dots\dots\dots \\ TOT & \text{if} \quad \dots\dots\dots \end{array} \right\}$$

where ASP will be the OB for such verbs that can have partitive and total objects alternatively (*ehitama* 'to build'). PART and TOT stand for the partitive and total objects respectively.

The exact conditions for the choice of ASP, PART and TOT, the resulting verb classes and illustrative rules, which turn these 20 classes into lists of verb stems, are all represented by the matrix on p. 178. We are treating the matrix as a single rule F 16. F 17 will then expand ASP in the simplest way:

$$F\ 17\ ASP \rightarrow \left\{ \begin{array}{l} PART \\ TOT \end{array} \right\}^8$$

What can be said of F 16 itself?

First, we note that many, perhaps most verb stems must inevitably be included in several syntactic classes. E. g., the verb *leidma* 'to find' must be included in VB sep tot for generating *Leidsin ta tukkumast* 'I found him dozing (lit. ... from dozing)', as well as in VB loc tot for generating *Leidsin ta tukkumas* (with the same meaning) which are both grammatical, though the normative viewpoint may be different. Second, our rules are certainly not complete enough. We have included *jääma* 'to remain' in VB to intr in order to exclude ungrammatical sentences like **Ta jäi linnast maale* 'He remained from town to the country'. But in doing so we have excluded such normal sentences as *Haiguse tõttu jäi laps koolist koju* 'Being ill, the child remained home

⁷ Further study will show, whether this is actually the case for V (sep) to as well. Here we assume tentatively that it is not.

⁸ We do not expand PART and TOT any further. More detailed (transformational) OB rules are to be found in Harms, *op. cit.*, p. 131 and 137. The clearly useful concept of "aspectual object" is also borrowed from Harms. We cannot guarantee, however, that all rules presented in this study could easily be reconciled with those of Harms.

from school'. Third, we have completely ignored the respective order of OB and RECT, enforcing OB + RECT as the only possible sequence. Our phrase structure rules will turn the clearly unnatural (though perhaps grammatical) *Ta peitis põõsasse püssi* 'It was a gun that he hid in the bush (lit. He hid into the bush the gun)' into ... *püssi põõsasse* '... the gun into the bush'. The order OB + RECT is normal for most of our 20 verb classes, but VB ab tot (*varastama* 'to steal', *röövima* 'to rob', *näppama* 'to steal, to snatch') for instance seem to prefer the opposite order.⁹ Fourth, we have completely ignored the most complicated restrictions that determine the form of the object regardless of the RECT (negation, tense, mode, the class of the object noun itself, etc.). All these rules must evidently follow the RECT rules.

With F 16 we have reached our immediate objective and fixed a set of relevant subcategories for the direction and location verbs, as well as for the elements DIR and LOC themselves.

What will be the further destiny of the strings generated so far? What will be the relatively economical and linguistically relevant way for generating the terminal strings of the syntactic component? We shall now discuss briefly some basic alternatives.

We shall tackle the infinitive constructions first. Our rules (F 1—F 17) will generate (among others) the following strings of symbols:

SUB + *tuleb* 'comes' + MAST
 SUB + *viib* 'brings, takes' + TOT + MA
 SUB + *leiab* 'finds' + TOT + MAS

How will these strings be turned into *Ta tuleb jalutamast* 'He comes back from walking', *Ta viib lapse jalutama* 'He takes the child for a walk', *Ma leidsin Jaani metsas jalutamas* 'I found John walking in the forest'.¹⁰

We shall ignore the problems related with the form of SUB and OB and concentrate on MAST, MA, MAS. The traditional counterparts of these elements as well as most other infinitive constructions are usually classified according to the relation of the SUB and OB of the finite verb to the "assumed" SUB' and OB' of the infinitive. Thus, in *Ma tulen ujumast* 'I come back from swimming' the "assumed" SUB' of the infinitive is said to be identical with the real SUB of the finite verb: *Mina tulen, mina ujun* 'I come, I swim'. But in *Ma saadan ta ujuma* 'I send him swimming' the assumed SUB' of the infinitive is identical with the OB of the finite verb: *Mina saadan teda, tema ujub* 'I send him, he swims'. Outside the directional group other combinations occur. In the MTA-sentence *Probleemid jäid lahendamata* 'The problems remained unsolved' the SUB is identical with OB' and in the transitive MTA-sentence *Ta jättis probleemid lahendamata* 'He left the problems unsolved' OB is said to be identical with OB'. Such a classification was

⁹ We are of course speaking of simple declarative sentences with no particular stress. Note also that the respective order of the object and the location adverbial may indicate the rectional or non-rectional character of the latter. Compare: *Ta pidas siga keldris* 'He kept the pig in the cellar — and did not let the poor animal out' (rectional) and *Ta pidas keldris siga* 'He was raising a pig in the cellar (non-rectional).

¹⁰ The ambiguity of the English sentence is not repeated in Estonian, because the latter has two separate infinitive forms for switching SUB and OB to the non-object complement. For joining OB and 'walking in the forest' we have the *mast*-infinitive, which is rectional, for joining SUB and 'walking in the forest' we have the *des-gerund*, which certainly is not rectional. For 'I found John walking in the forest' there are two unambiguous Estonian translations: *Ma leidsin Jaani metsas jalutamas* and *Ma leidsin Jaani metsas jalutades*.

given by E. Ahrens more than a century ago.¹¹ The same principle has been employed again in E. Päll's study of Estonian infinitives.¹² Indeed, the idea is sound and at the same time serves to illustrate the implicitly transformational orientation of traditional linguistics. By the way, such relations as described above are certainly to be found in several other languages.

This situation clearly calls for a radical transformational solution. Moreover, the infinitives can have their own complements and their relations with the infinitive are very similar or wholly identical with the parallel relations in full sentences. It would be most cumbersome and theoretically absurd to write one set of rules for generating such sentences as *Väike Jaan suitsetab garaazi taga sigaretti* 'Little John is smoking a cigarette behind the garage' and another almost parallel set of rules for generating *Suur Jüri meelitas väikese Jaani garaazi taha sigaretti suitsetama* 'Big George enticed little John to (come to) smoke a cigarette behind the garage'. But that is what we have got to do if we shrink back from transformations. Our investigations have not yet reached a point where the formulation of the actual T rules would have much sense. So we present only an embryonic idea of future transformations:

$$\left. \begin{array}{l} \text{SUB}' + \textit{peseb vannitoas hambaid} \\ \text{SUB} + \textit{tuleb} + \text{MAST} \end{array} \right\} \rightarrow \begin{array}{l} \text{SUB} \textit{ tuleb vannitoast hambaid} \\ \textit{ pesemast} \end{array}$$

$$\left. \begin{array}{l} \text{SUB}' + \text{is brushing his teeth in the bathroom} \\ \text{SUB} + \text{comes} + \text{MAST} \end{array} \right\} \rightarrow \begin{array}{l} \text{SUB comes from} \\ \text{brushing his teeth} \\ \text{in the bathroom} \end{array}$$

Where, of course, SUB = SUB'

The first (embedded) sentence stems from ADV_{univ} + V + OB, the adverbial *vannitoas* 'in the bathroom' being a simple universal, non-rectional adverbial of location. The T rule must turn this simple inessive noun phrase into an elative one and the verb *pese* into the elative infinitive. Correspondingly, adessives will be turned into ablatives and inessive or adessive postpositions and adverbs into their elative and ablative counterparts.¹³ T rules will use in a natural way the extensive parallelism between "from where?", "to where?" and "where?" complements that is a characteristic feature of Estonian.

The rules for OB sentences will be analogous, only the condition added is different:

$$\left. \begin{array}{l} \text{SUB}' \textit{ peseb vannitoas hambaid} \\ \text{SUB} + \textit{saadab} + \text{OB} + \text{MA} \end{array} \right\} \rightarrow \begin{array}{l} \text{SUB} \textit{ saadab OB vannituppa} \\ \textit{ hambaid pesema} \end{array}$$

$$\left. \begin{array}{l} \text{SUB}' \text{is brushing his teeth in the bathroom} \\ \text{SUB sends OB} + \text{MA} \end{array} \right\} \rightarrow \begin{array}{l} \text{SUB sends OB to} \\ \text{brush his teeth in} \\ \text{the bathroom} \end{array}$$

Where SUB' = OB

¹¹ E. Ahrens, *Grammatik der estnischen Sprache revalschen Dialectes*, Reval 1853, p. 101 ff.

¹² Э. Н. Пялль, *О роли инфинитива в грамматическом строе эстонского языка*, [Таллин] 1954 (unpublished thesis).

¹³ With MA, of course, the finite verb of the embedded sentence will be turned into an illative infinitive and its adessive or inessive locational adverbials into their allative or illative counterparts. The operations described are nothing but a special case of agreement on the sentence level.

F 16	ASP	PART	TOT	no OB
VB ab	VB ab asp <i>otsima</i> 'to seek'		VB ab tot <i>varastama</i> 'to steal'	VB ab intr <i>pärinema</i> 'to stem from'
VB sep			VB sep tot <i>leidma</i> 'to find'	
VB ad	VB ad asp <i>ehitama</i> 'to build'		VB ad tot <i>peitma</i> 'to hide'	VB ad intr <i>peitma</i> 'to hide'
VB to			VB to tot <i>jätma</i> 'to leave'	VB to intr <i>jääma</i> 'to remain'
VB (ab) ad	VB (ab) ad asp <i>laadima</i> 'to load'		VB (ab) ad tot <i>suunama</i> 'to direct'	
VB (sep) to	VB (sep) to <i>ajama</i> 'to drive, to impel'			VB (sep) to intr <i>minema</i> 'to go'
V (sep) (to)			V (sep) (to) tot <i>tooma</i> 'to bring'	V (sep) (to) intr <i>tulema</i> 'to come'
VB in		VB in part <i>säilitama</i> 'to maintain'		VB in intr <i>aseksema</i> 'to be located'
VB loc	VB loc asp <i>hoidma</i> 'to keep'	VB loc part <i>nägema</i> 'to see'	VB loc tot <i>leidma</i> 'to find'	VB loc intr <i>käima</i> 'to go (and come back), to pass'

The case for verbs governing inessive infinitives (*olema* 'to be', *käima* 'to go often, to go and come back', *nägema* 'to see', *kujutlema* 'to figure', etc.) is analogous.

The symbols MAST, MA, MAS themselves are needed in PS rules only as elements that determine the choice of the finite verb and indicate the place for the embedded sentences. They are no longer needed after the transformations and will be deleted by the very T rule that uses them.

Our PS rules as formulated so far would allow as well the generation of extreme cases such as *Ta tuli aiast muru pügamast kamina ette piipu suitsetama* 'He came from cutting the lawn in the garden to smoke a pipe in front of the fireplace'. Here of course many detailed restrictions remain unclear. *Ta tuli (aiast) töötamast tuppa* 'He came from working (in the garden) into the house' may be regarded as very bad style by some people, though *Ta tuli aiast töötamast tuppa puhkama* 'He came from working in the garden to rest in the house' is all right. This need for (stylistic?) balance can perhaps be accounted for in a very detailed grammar where MA will be used for TO only if MAST is used for SEP and if the embedded sentence contains a locational ADVuniv.

Nevertheless, the main outlines are clear and the future of MAST, MA, MAS seems to be settled. But what about the non-infinitive directional complements AB, AD and IN? As the latter do not contain verbal elements that can lead to OB and RECT rules once more, the need for a transformational solution seems not as compelling as in the case of MAST, MA, MAS. The PS rules introducing non-infinitive directional complements directly would be something like the following:

F 18 AB	→	$\left. \begin{array}{l} \text{ST} \\ \text{LT} \\ \text{ADV ab} \\ \text{PP ab} \end{array} \right\}$	relative noun phrases: <i>metsast</i> 'from the forest'
			ablative noun phrases: <i>põllult</i> 'from the field'
			relative and ablative adverbs: <i>kaugelt</i> 'from far'
			relative and ablative postpositional phrases: <i>maja juurest</i> 'from near the house'

The following analogous rules should be understandable without comment, except for the element NI that stands for terminative noun phrases and disturbs a little the overall symmetry:

F 19 AD	→	$\left. \begin{array}{l} \text{NI} \\ \text{ILL} \\ \text{LE} \\ \text{ADV ad} \\ \text{PP ad} \end{array} \right\}$	<i>piirini</i> 'up to the frontier'
			<i>metsa</i> 'into the forest'
			<i>põllule</i> 'to the field'
			<i>kaugele</i> 'far'
			<i>maja juurde</i> 'near the house'

F 20 LOC	→	$\left. \begin{array}{l} \text{S} \\ \text{L} \\ \text{ADV loc} \\ \text{PP loc} \end{array} \right\}$	<i>majas</i> 'in the house'
			<i>põllul</i> 'in the field'
			<i>kaugel</i> 'far away'
			<i>maja juures</i> 'near the house' ¹⁴

¹⁴ For slightly more detailed expansions of these elements see Harms, *op. cit.*, pp. 119–123. The rules for expanding noun phrases, adverbs and postpositional phrases have no special importance for our discussion. The choice of the verb is generally no more dependent on the possible expansions of AB, AD and IN. The verb *tulama* 'to come' for instance, is free for all 9 possibilities of AB and AD. There are, however, some noteworthy exceptions as for example the verbs *lähenema* 'to approach', *lähendama* 'to bring nearer', etc., which take from AD only allative noun phrases. Some doubts may arise whether these verbs are AD-verbs at all (though they are possibly AB-verbs). The allative verb complement evidently needs further unprejudiced study. The idea of making it (outside its directional functions) an indirect object within OB may not be so bad after all, though this has given rise to violent controversy.

The rules are disturbingly parallel. But this is not the main reason for seeking a transformational solution.

Note that the relation of SUB and OB to AB, AD and IN complements may be different, depending on the verb type. Thus it is clear that in *Ta päästis mind puu otsast* 'He saved me from the tree' the OB (*mina* 'I') is up the tree, while in *Ta pilkas mind puu otsast* 'He teased me from the treetop' the OB (*mina* 'I') is not up the tree, nor is it related to the tree in any way. Analogous phenomena cannot be observed for AD, but they are back again in IN-sentences where they can lead to interesting ambiguities. In the sentence *Ma märkas in teda tänaval* 'I noticed him in the street' IN (*tänaval* 'in the street') can be related either to SUB or OB. In the first case SUB has to be in the street, though OB is probably there as well. In the second case OB has to be in the street, while SUB may be peering through a window or be on the roof or anywhere else.¹⁵ But the verb *tervitama* 'to greet' in an analogous sentence does not lead to such an ambiguity. Moreover, the described ambiguities cannot be explained in the same way as the usual ambiguities that are due to nominalizations: *Ta uurib imelikku nähtust kuu pinnal* 'He investigates a strange phenomenon on the moon's surface'. The OB of our example *Ma nägin teda tänaval* 'I noticed him in the street' is a personal pronoun which cannot enter such nominalizations. (Compare: *mees tänaval* 'the man in the street' and **ta tänaval* 'he in the street'.) If we replace the personal pronoun with a noun, that can, together with the IN complement, be interpreted as a nominalization, we get a triple, though perhaps semantically not very important ambiguity: *Nägin meest tänaval* 'I saw the man in the street'. How are we going to handle this situation? We believe that the problems encountered are not restricted to DIR and LOC but will emerge in some other verb government types as well. Recall that in F 3 we introduced the element ADV_{univ}, which is meant to provide such universal adverbials of time, manner, location, comparison, etc. that cannot be treated as rectional. *Arm õitseb lillena* 'Love blooms like a flower' as it is affirmed in a popular song, is in no way superior to *Arm õitseb* 'Love blooms'. Both are grammatical, only the first sentence contains an optional universal adverbial, the other does not. The essive comparison adverbial *lillena* 'like a flower' has nothing rectional in it. The verb *õitsema* 'to bloom' has no special preference for this type of complement.

But the same cannot be said of the sentence *Jüri käitus kaabakana* 'George behaved like a scoundrel'. The verb *käituma* evidently governs certain adverbials of manner and comparison (*hästi* 'well', *halvasti* 'badly', *kaabakana* 'like a scoundrel', etc). Once chosen, these complements cannot even be deleted, because the result would be an ungrammatical sentence **Jüri käitus* 'George behaved'. It is the same thing with the comitative in the respective sentences *Jüri jalutas Mariga* 'George walked with Mary' and *Jüri sarnanes Mariga* 'George looked like Mary (lit. ... resembled with Mary)'. And again, we think that it is basically the same thing with location adverbials. In *Jüri jalutas metsas* 'George was walking in the forest' the location adverbial *metsas* 'in the forest' has nothing rectional in it, but in *Maja asub metsas* 'The house lies in the forest' the same adverbial certainly is rectional and cannot even be deleted, once it is chosen. **Maja asub* 'The house lies' is anomal-

¹⁵ The difference may become clearer if we compare sentences like *Ma nägin teda kirstus* 'I saw him in the coffin' and *Ma nägin teda Adis-Abebas* 'I met him in Addis-Ababa'.

ous. The simplest way out of this situation would be to introduce such adverbials twice — once as ADV_{univ} and once as stemming from RECT. This trick is somewhat redundant but it is explicitly or implicitly used in many grammars. The same solution would give us a rather convincing explication for the ambiguous transitive LOC-sentences such as *Ma nägin teda tänaval* 'I saw him in the street'. If *tänaval* 'in the street' stems from RECT, it is related to OB, if it comes from ADV_{univ}, it is related to SUB. Or: if *nägema* 'to see' is a "proper" V loc, for which LOC is rectional, it switches the non-infinitive location adverbial to OB, just in the same way as it switches MAS infinitive complements to OB. Again, the same explication suits the two different kinds of AB-sentences. *Päästma* 'to save', 'to free', which is a proper VB sep switches the AB-adverbial *puu otsast* 'from the tree' to OB, *pilkama* 'to tease', which, indeed, is not a proper VB ab switches the same AB-adverbial to SUB.

In other words, AB, AD and IN, though they do not contain verbal elements, behave very much like MAST, MA, MAS, the scheme of SUB and OB switchings for non-infinitive complements being the same as for infinitive complements. Therefore, the transformational solution presents itself in a rather natural manner.

Again, we do not formulate any actual T rules but present the future transformations only in an illustrative way.

The only full sentences produced directly by PS rules would be the intransitive IN-sentences:

Ta 'He'	$\left\{ \begin{array}{l} \textit{on} \textit{'is} \\ \textit{käib} \textit{'goes and comes} \\ \textit{back} \\ \textit{asub} \textit{'lies} \\ \textit{asetseb} \textit{'lies} \\ \textit{paikneb} \textit{'lies} \\ \dots \dots \dots \end{array} \right.$	$\left\{ \begin{array}{l} \textit{metsas} \textit{'in the forest} \\ \textit{põllul} \textit{'in the field} \\ \textit{kaugel} \textit{'far} \\ \textit{maja juures} \textit{'near the house} \\ \textit{tööl} \textit{'at work} \\ \textit{karjas} \textit{'looking after the cattle} \\ \dots \dots \dots \end{array} \right.$
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All transitive and intransitive AB- and AD-sentences, as well as transitive IN-sentences will be generated transformationally from these and from the AB, AD and OB + IN strings of the PS component:

SUB + <i>on</i> 'is' + <i>puu otsas</i> 'up the tree'	}	→	<i>Ta pääseb puu otsast</i> 'He gets free from the tree'
SUB' + <i>pääseb</i> 'gets free' + AB			

where SUB = SUB'

SUB' + <i>on</i> 'is' + <i>puu otsas</i> 'up the tree'	}	→	<i>Onu päästab ta puu otsast</i> 'The uncle saves him from the tree'
SUB <i>päästab</i> 'saves' OB + AB			

where SUB' = OB ≠ SUB

The rules for AD and OB + IN will be analogous.

Should we still want to include such "improper" direction verbs as *pilkama* 'to tease' into VB ab, we could do so by changing the SUB—OB identity conditions and by fixing the class of verbs for which this condition is applied.

In the "improper" direction sentence *Ta pilkas mind puu otsast* 'He teased me from the treetop' the condition is that SUB' = SUB ≠ OB: He was up the tree. He teased me. The OB ('me') has no relation to the AB ('tree').

The same trick has probably no sense for AD-sentences, where there is also some difference between *Ta lükkas mu vette* 'He pushed me into the water' and *Ta tõmbas mu vette* 'He pulled me into the water'. However, in AD-sentences it is always the OB, which is related to AD; in both examples it is the OB that is going to be wet, though the SUB in the first sentence probably remains dry. For making this last distinction there is simply no grammatical motivation.

With this we conclude our discussion of directional and locational verbs. Our tentative rules and other considerations, not yet explicitly included in the rules, show that the correct choice of the finite verb is determined by several crossing classifications, or, in other words — it is determined as a set of co-occurring syntactic features. As more and more classifications are added the resulting verb classes become more and more numerous and their membership more and more restricted. From the grammarian's viewpoint then, the lexical elements of the lowest classes are simply synonymous names for points where syntactic relations meet. It is a noteworthy fact that the members of the same class are usually very close semantically. This observation is of course a by-product of formal grammatical studies (and possibly a most useful basis for a semantic theory) but not a basis for the grammar itself.

ХЕННО РАЯНДИ (Таллин)

НЕКОТОРЫЕ ПРАВИЛА ГЛАГОЛЬНОГО УПРАВЛЕНИЯ ДЛЯ ЭСТОНСКОГО ЯЗЫКА

Излагается фрагмент порождающей грамматики эстонского языка. Правилами 1—3 вводится глагольный комплекс, который является исходным пунктом при формализации отношений глагольного управления. Правилами 4—6 вводится предварительный набор основных типов глагольного управления, которые имеют транзитивные и интранзитивные варианты. Правила 7—14 раскрывают внутреннюю структуру обстоятельств направления и места, а также производят деление глагола на подклассы в зависимости от типа управления. В правилах 16—18 пересекаются классификации глагола по типу необъектного управления и по типу объекта, чем обеспечивается правильный выбор конкретного лексического элемента в пределах поставленной задачи. Наконец, исследуется возможность применения трансформационных правил для порождения таких конструкций, включение которых в число ядерных не является разумным.