

HALDUR ÕIM (Tartu)

ON THE RELATION BETWEEN SEMANTIC AND SYNTACTIC REPRESENTATIONS

(With Special Reference to the Semantic Analysis of Some Estonian Words)

I

In the present paper* we shall examine some problems connected with the interrelationship between syntax and semantics in generative grammar. This relationship has become one of the problems most discussed in the theory of generative grammar. At the present time the view is gaining more and more support that the earlier conception according to which semantics and syntax are two wholly separate components of grammar and the task of the semantic component is merely to interpret the structures generated in the syntactic component, should be replaced by the conception according to which there is not any clear division into components, and instead the grammar consists of "a single system of rules which converts the semantic representations into surface syntactic representations".¹ This means that the structures which primarily are generated in a grammar are in fact semantic representations of sentences, and from these structures the concrete surface structure sentences are derived. In particular, it also means that there is no need in this grammar for such a separate level of representation as deep structure in the Chomskyan sense. Instead of it there is continuous transition from the semantic representations to the surface structures of sentences.

But so far such a conception has not yet been explicitly stated; it is not at all clear what this "single system of rules" must include and how it must work. So far only some facts have been pointed out which show that such an organization of grammar is not only possible but also necessary;² and the conviction has been expressed that sooner or later generative grammar will take such a form. Undoubtedly, the main obstacle to an explicit formulation of the new conception is the fact that it is not clear how — in what form — the semantic representations should be given. At present we have a relatively clear and abstract picture

* I am indebted to H. Rätsep for reading the manuscript of this paper and making many useful remarks, and to M. Erelt for discussing with me the problems presented here.

¹ J. McCawley, *The Role of Semantics in Grammar*. — *Universals in Linguistic Theory*, New York 1968, pp. 124—169. See also E. Bach, *Nouns and Noun Phrases*. — *Universals in Linguistic Theory*, New York 1968, pp. 90—122; D. T. Langendoen, *On Selection, Projection, Meaning, and Semantic Content*. — *Working Papers in Linguistics No. 1*. The Ohio State University, Columbus, Ohio 1967, pp. 100—109.

² J. McCawley, *op. cit.*, p. 167.

of what the syntactic structure of sentences looks like, and by what formal means to present it. But on the other hand, it is also clear enough that the semantic representations given in the "feature-notation" (i. e. in the form of sets of semantic features with pluses and minuses) are not suited to serve as the underlying structures from which the surface syntactic structures can be derived. Instead of the unstructured sets of features some far more "syntactic" structures are needed. This has long been pointed out.³ But in order to solve the problem practically, an answer must be given to many questions.

We will discuss here only some of these questions, concerning ourselves mainly with the question of what is the function of concrete words (or, more precisely, lexical items) in such a process of derivation: what type of items the words represent in relation to the underlying semantic structures and how (by what rules) the concrete words are to be inserted into these structures. And, of course, directly related to this is the question of what are the semantic "basic units" in terms of which the underlying semantic structures of sentences are stated, in particular, in what aspect these items differ from words.

Since we are interested in the relationship between syntax and semantics, we will present the syntactic structures of sentences in the form which directly reflects the semantically significant properties of the respective structures, i. e. in the form of deep structures (taken in the standard sense). For treating the syntactic structures we will use the "case grammar" of C. J. Fillmore⁴; and so in our view the deep structures of sentences are structures presented basically in the predicate—argument form.

According to Fillmore, the basic structure of a sentence consists of a "proposition" and of a "modality component" (as symbols we will use here PROP and MOD, respectively). The proposition — "a tenseless set of relationships" — in turn consists of a predicate, expressed by a predicate word (PRED), and of one or more arguments, each of which is expressed by a noun phrase (NP) or by a sentence (S). Each of the arguments is connected with the predicate by a definite semantic relationship. C. J. Fillmore calls such semantic relationships — *cases*. The modality component consists of modalities connected with a sentence as a whole, as negation, tense, mood, aspect, etc.; but in general the exact nature of the modality component has remained obscure, and also in our discussion we will not touch upon the problems connected with it. The case notions present universal semantic relationships between a predicate and constituents depending on it (the arguments), as: who is doing something, whom it is happening to, where it is happening, what gets changed, etc. Some of the cases will be explained and used later.

As concrete illustrative material we will offer here the semantic analysis of some Estonian words. We are interested here only in the words which are included into the category of predicate words (and accordingly, our results are applicable directly only to these words). But for our discussion it is not very important which words exactly are included into the class of predicate words. (It has been shown quite convincingly that with respect to the conceptually relevant features here

³ See, e. g. U. Weinreich, *Explorations in Semantic Theory*. — *Current Trends in Linguistics III. Theoretical Foundations*, The Hague 1966, pp. 395—477.

⁴ C. J. Fillmore, *The Case for Case*. — *Universals in Linguistic Theory*, New York 1968, pp. 1—88.

may be included verbs, adjectives, conjunctions, and also the majority of nouns.⁵ However, there are still many open questions here.)

II

We always speak by means of words. Words are the units of language with which definite meanings are connected. On the other hand, also the surface syntactic structures of sentences are always presented ultimately by means of words. It is clear, therefore, that if we want to construct grammar in such a form that the surface structures of sentences are derived from respective semantic representations, the problem of the semantic analysis of words is of cardinal importance.

In practice it is very common that in explaining the meaning of a word we present this explanation (or definition) in the form of a certain syntactic structure, in particular, in the form of a sentence. Intuitively we take it as an *a priori* truth that if the meaning of a word is analysable at all (can be explained in some other way as ostensively), then this analysis can be presented as a syntactic structure. For instance, if we choose such an Estonian word (the language, of course, is not of fundamental importance here) as *veenma* 'to convince, to persuade', then it can be analysed (at least in one sense) as *uskuma panema* 'to make somebody believe' (or, more theoretically but more unnaturally in Estonian, as *kauseerima uskuma hakkamist* 'to cause somebody to believe'). In fact, this means that every sentence *x veenis y selles, et z* 'x convinced y of z' can be represented as *x pani y uskuma seda, et z* 'x made y believe that z' (or *x kauseeris selle, et y hakkas uskuma seda, et z* 'x caused y to believe z').

In practice this is all very well known. But we are interested in these facts from the theoretical point of view. And the main theoretical points to be found in the foregoing discussion are, as we think, the following: (1) the items which are used in analysing the meanings of words — in representing the semantic material — are in their formal properties wholly similar to the items under analysis: they are words, too; (2) in the explanations we are joining these items into certain syntactic structures using the same relationships as in "usual" sentences. There is no doubt that these facts to a great extent reflect the manner in which human beings understand language. Although it is clear that the items in terms of which we understand the expressions of language must be far more elementary semantically than most of the words, there is no reason to think that these items should be in principle of another formal type than the usual words — i. e., explicit predicates. The usual words which occur in a language are, as a rule, semantically complex. But this semantic complexity is not any obligatory property of words as predicates. In the case of most words we can find that their existence in language as such complex items has a pragmatic rather than a semantic motivation. So, for instance, it can be explained above all by pragmatic factors that in Estonian, in addition to the word *uskuma* and the words expressing causation (*panema, kauseerima*), there is also the word *veenma*. It is as if such words (as *veenma*) were functioning as representants of corresponding complex structures. When we want to say in Estonian that x caused y to believe z, then instead of the complex expression *x pani y uskuma seda, et z* we can use simply the verb *veenma*.

⁵ G. Lakoff, On the Nature of Syntactic Irregularity. — Mathematical Linguistics and Automatic Translation, Report No. NSF-16, Cambridge, Mass. 1965; E. Bach, *op. cit.*

Here we may recall W. V. O. Quine's reference to two notions of economy in languages (of logic and mathematics, in the first place). One is the economy of practical expressions, their brevity, simplicity, etc.; the other is the economy of grammar and vocabulary of language: we can find some minimal set of basic concepts and rules so that by means of these everything required can be expressed. These notions, although contradictory in some sense, are both valuable, and so "the custom has arisen of combining both sorts of economy by forging in effect two languages, the one a part of another. The inclusive language, though redundant in grammar and vocabulary, is economical in message length, while the part, called primitive notation, is economical in grammar and vocabulary. Whole and part are correlated by rules of translation whereby each idiom not in primitive notation is equated to some complex built up of primitive notation".⁶ In the case of natural languages, of course, this relation of inclusion is not to be understood as if the expressions used in "primitive notation" obligatorily form a subset of the expressions really occurring in the corresponding natural language since then it would be necessary to construct for every individual natural language its own "primitive notation". Instead, this "primitive notation" is to be formulated as a universal (meta)language.

What we have wanted to say is in short that in describing the semantic facts of a language there is no need to search for (or to postulate) some very special items (as semantic features with pluses and minuses) which were formally and conceptually wholly different from the items we use in presenting syntactic structures of sentences. The meanings of words (their semantic explanations, or definitions) are to be presented in the same form of predicate—argument structures as are the (deep) syntactic structures of sentences. In other words, the units of semantic metalanguage are conceptually and formally predicates just as the words (predicate words) themselves, only that the former are taken to be semantically elementary.

Of course, also the semantic features, which so far constitute the basic instrument of semantic analysis, are in fact nothing else than predicates. Quite apart of whether they are presented by special symbols (as [\pm Caus]) or by appropriate words (as [\pm Activity]), conceptually each of them has definite arguments, has definite requirements to these arguments, and so on. Thus we may find here one, two, three place predicates. But their arguments are never stated explicitly — and, as it seems, this is just the distinctive peculiarity which they have as features. But there is no doubt also that this is the main reason why the "feature-notation" turns out to be so inadequate in semantic representations of sentences.

Hence we regard semantic underlying structures as (1) presented in terms of elementary semantic predicates (instead of features), and (2) formed as "syntactic" structures analogous to the (deep) syntactic structures of sentences. But here we will not investigate directly the concrete properties of these structures. Instead we will turn now to the question of how from such semantic representations the corresponding syntactic structures with concrete words can be derived, i. e., we will concentrate on the moment at which a given predicate word is to be inserted into the respective underlying structure.

How this insertion should be formulated, must in general outline be apparent already from the foregoing discussion. For instance, we have said that the meaning of the Estonian verb *veenma* 'convince' can be

⁶ W. V. O. Quine, From a Logical Point of View, Cambridge, Mass. 1953, pp. 26—27.

presented by the structure *x kauseerib selle, et y hakkab uskuma seda, et z 'x causes y to believe z'*. But if we look at this relation from the other side and suppose that the mentioned structure is already formed (generated), then we may say that this represents just the situation (in the semantic sense) where the given predicate word (here the verb *veenma*) can be used. We may formulate it so that the predicate word is to be inserted into this structure, and at the same time it replaces ("swallows") definite parts of the structure and preserves others (in particular, it takes over definite arguments of the predicates in underlying structure). In our example, the verb *veenma*, as we see, replaces just the predicates *kauseerima, hakkama, uskuma* and takes over the arguments *x, y, z: x veenab y selles, et z*. Of course, it is to be determined specially for every word what is its underlying structure, and what parts of the latter the word replaces and what parts it preserves as explicit. In the following we will examine these problems in some detail on the basis of the analysis of a concrete word.

But first we must point out that the semantic analysis of a word should not be limited to merely ascertaining the semantic components of the word. At present many general requirements are known for structuring the semantic material contained in a word. This means that the requirements which the underlying semantic structure must meet are stronger and more structured than we have pointed out so far. We have here in view, first of all, the requirements which are formulated in the works of C. J. Fillmore.⁷

We may say that the semantically significant facts connected with a predicate word can be divided into three categories. (1) The arguments of the predicate word and their cases (i. e., the conceptual relations between them and the predicate), (2) the requirements of the predicate word to the arguments — selection in the traditional terminology. But Fillmore treats these requirements more generally as conditions which are presupposed to hold when the predicate word is used appropriately. (3) What the predicate asserts about its arguments, i. e., the new information brought in by the use of the given word (and what may be said to be the meaning of the word in a restricted sense). The difference between what a word presupposes and what it asserts is demonstrated, for instance, by an analysis of the word *bachelor*. The meaning of this word is considered usually as consisting simply of the components "unmarried", "male", "adult", "human". But, according to Fillmore, it is more adequate to say that only the component "unmarried" represents the asserted meaning of the word *bachelor*, while the components "male", "adult", "human" identify what is presupposed whenever the word is used appropriately as a predicate.

It is fairly clear that introduction of the distinction between the presuppositions and assertion of a predicate word is essentially much more than a mere reformulation of the concept of selection. In particular, as it seems to us, these concepts are directly related to such a category as predication (i. e., from the linguistic point of view, they are connected rather with "topicalized" structures), and so this distinction seems to be in some contradiction with the treatment of predicate words (offered by Fillmore itself) as representing "abstract objective relationships arguments". But we will later return to this problem of presuppositions and assertions. Here we may still say that, at least, the underlying structure must explicitly account for (1) the arguments of the

⁷ C. J. Fillmore, Lexical Entries for Verbs. — Foundations of Language 4 1968 4, pp. 373—393; C. J. Fillmore, Types of Lexical Information. — Working Papers in Linguistics, No. 2. The Ohio State University, Columbus, Ohio 1968, pp. 65—103.

respective predicate word, and their cases; (2) the presuppositions about these arguments; (3) the asserted meaning of the word. Let us now examine how in the case of a concrete word to construe the underlying semantic structure so that it will meet these requirements. As our example we have chosen the Estonian verb *saavutama* 'to achieve, to obtain, to gain'.

As we have shown elsewhere⁸, the verb *saavutama* has conceptually two arguments (let us designate these simply as x_s and y_s : x_s *saavutas* y_s 'x_s achieved y_s'). The first of these arguments identifies the person who achieves something, and the other identifies what is achieved:

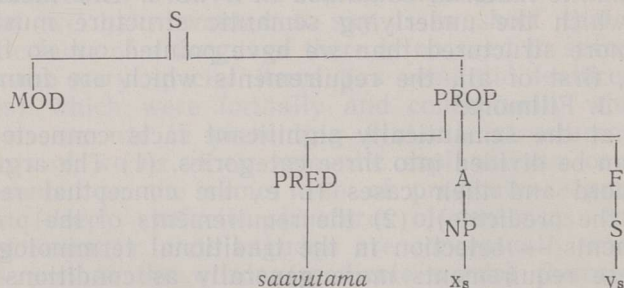
(1) *Ants saavutas selle, et naabrid kolisid teise korterisse* 'Ants achieved it that the neighbours moved into another flat'.

(2) *Maie saavutas Jüri nõusoleku* 'Maie gained Jüri's consent'.

(3) *Üliõpilased saavutasid loengu ärajätmise* 'The students achieved a cancellation of the lecture'.

For x_s we may choose the case Agentive (A), for y_s the Factitive (F).⁹ Thus, the standard syntactic structure (deep structure) of the respective sentences may be given as follows:

(4)



In the surface structure there may be also other syntactic components connected with (dependent on) the verb *saavutama*. Very common are, for instance, sentences of the following type:

(5) *Neil läbirääkimistel saavutasid nad selle, et president kirjutas lepingule alla* 'At these negotiations they achieved the signing of the treaty by the president'.

(6) *Jüri võlumises saavutas Maie märkimisväärsed edu* 'Maie achieved notable success in charming Jüri'.

In these sentences the verb *saavutama* comprises a component which points to a definite activity (of x_s): it is the activity in which x_s achieves something. But as our analysis has shown¹⁰ it is not reasonable to treat this component as representing a separate argument of the verb but rather as connected with the presuppositions of the verb about argument x_s . The phrase expressing the activity is always definite. The verb *saavutama* cannot be used for informing someone that x_s is (or was) doing something; it is always presupposed as known about x_s before asserting that x_s has achieved something. This means that x_s

⁸ H. Õim, *Eesmärk, taotlema, saavutama, tulemus*: süntaktilis-semantiline analüüs. — Keel ja struktuur III, Tartu (in print).

⁹ These cases Fillmore explains in the following way: Agentive: the case of the perceived instigator of the action identified by the verb, typically animate; Factitive: the case of the object or being resulting from the action identified by the verb. Later we will need also the Instrumental (I): the case of the inanimate force- or object causally involved in the action. See C. J. Fillmore, *The Case for Case*, pp. 46–47.

¹⁰ H. Õim, *op. cit.*

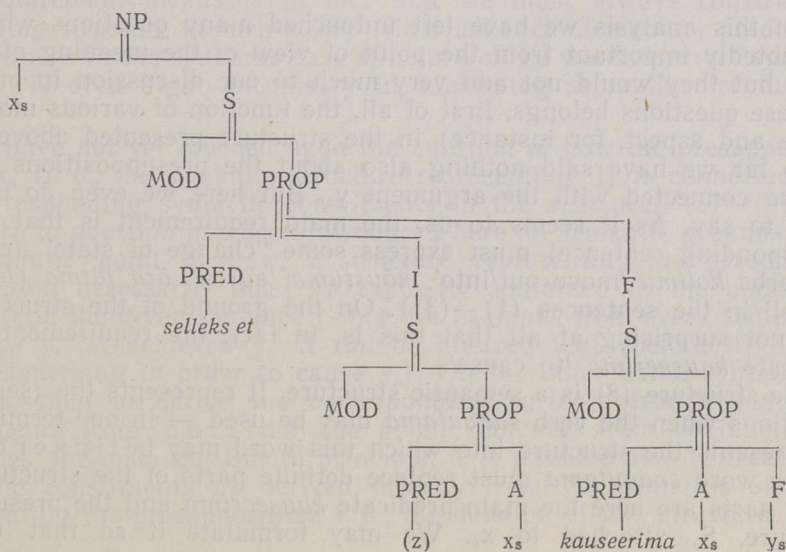
must come into the given structure already with this information. This is supported by the fact that the negation x_s ei *saavutanud* y_s 'x_s did not achieve y_s' does not deny this activity of x_s but, on the contrary, presupposes it in the same sense.

Thus we hold that *saavutama* has two arguments, x_s and y_s. And we have just found an important presupposition about x_s. However, the word *saavutama* is not appropriate in the case of every kind of activity. Apparently, when we say about x_s that he has achieved y_s we have in mind not merely that x_s was doing something but that he was doing it with a definite purpose: with the purpose of causing y_s. For example, from the sentence (1) we understand not only that the moving out of neighbours was connected with some activity of Ants but also that what Ants was doing (let us designate this activity by z) he was doing just with the intention of causing the neighbours to move out; otherwise, it would be inappropriate to use the word *saavutama*.

In order to formulate this presupposition explicitly we now need suitable elementary predicates. As these we will use here the following Estonian expressions: the conjunction *selleks et* 'for, in order to' and the verb *kauseerima* 'to cause'. The predicate *selleks et* has two arguments, both of which are represented by sentences: S₁ *selleks et* S₂; the case of the first argument is Instrumental, the case of the second is Factitive. The predicate *kauseerima* has in our analysis also two arguments, the first is represented by NP, the second by a sentence: NP *kauseerib* S; the cases of the arguments are Agentive and Factitive, respectively.

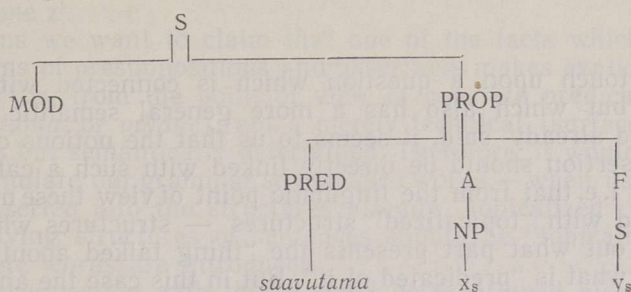
As we have said, x_s must come into the structure where it is asserted that x_s gained y_s, already with the information about the presupposed activity. This means, there must exist a description of x_s, and this description must contain, in particular, the information required here. Since for formulating such descriptions we are using here the (elementary) predicates, so it is natural that these descriptions will always take the form of definite sentences. As we believe it is most reasonable to formulate it so that (in the given case) to x_s is attached — as a "relative clause" — the structure (sentence) representing the information presupposed to be known about x_s. Thus, the argument under discussion will take the following form:

(7)



predicate *kauseerima* is replaced by *saavutama*, and (2) simultaneously the mentioned structure S is deleted. It is by means of these operations that we obtain the "standard" structure with the verb *saavutama*:

(9 = 4)



In our example the number of arguments of the verb *saavutama* is the same as that of the substituted predicate *kauseerima*. But we should not like to claim that this is the rule. Although (in our treatment) it is not possible that the inserted word would have more arguments than are present in the corresponding underlying structure, it is quite natural to think that the insertion of some word is accompanied by the suppression of certain arguments (i. e. that some of the arguments remain unexpressed syntactically). It is so, for instance, in the case of the word *bachelor* if we define the meaning of this word by means of the predicate *marry* which has at least two arguments. Such words are apparently also the (Estonian) *janu* 'thirst', *nälg* 'hunger', *isu* 'appetite' (as contrasted with the word *soov* 'wish, desire'). In fact, it may be found that the more elementary the predicates used in the underlying structure, the more arguments there appear to be in this structure which the corresponding word itself does not have expressed syntactically.

As for the cases of the arguments of the respective word, we think it must be a general requirement that these are "inherited" from the underlying structure, i. e. are the same as the cases of the respective arguments in the underlying structure. We regard it as a basic function of underlying structure to explain why a given predicate word (a verb, an adjective) requires just such syntactic exponents as it does. What this requirement means is in fact that we must always construe the underlying structure in such a way (find just such elementary predicates) that it would fit the syntactic case structure of the word. Such a "syntactic control" is even highly necessary in construing semantic structures of words.

We have not yet touched upon the question of how the presupposition about x_s (i. e., the semantic structure representing it) is connected with the corresponding syntactic constituents in the sentences (5)—(6). The structure in question has been introduced here on semantic grounds; from the semantic point of view, a structure representing the presupposed information necessarily must be explicitly contained in the underlying structure of the given sentence (since, for example, from every sentence x_s *saavutas* y_s 'x_s achieved y_s' it can be inferred that (before it) x_s was doing something in order to cause y_s). On the other hand, syntactically it is possible to derive the corresponding surface structure syntactic constituents from outside the given sentence, from conjunction of sentences, for instance. But in principle, it is possible also to treat these syntactic constituents as derived directly from the semantic structure representing the presupposition; i. e., the deletion of this structure (when

saavutama is inserted) is not obligatory but this structure can also be realized in certain syntactic structures. We cannot consider here the details of such a derivation¹¹, but it is evident that it would account nicely for many of the facts connected with the use of words.

III

Let us finally touch upon a question which is connected with our earlier discussion but which also has a more general semantic background. As we have already said, it seems to us that the notions of presupposition and assertion should be directly linked with such a category as predication; i. e. that from the linguistic point of view these notions should be connected with "topicalized" structures — structures where it is already pointed out what part presents the "thing talked about" and what part presents what is "predicated of it". But in this case the analysis of concrete words in terms of presuppositions and assertion has sense only in so far as the words are themselves inherently "topicalized". What is it that points to this in our analysis?

If we consider the underlying structure of the word *saavutama*, we can at once see the asymmetry of the presuppositions about the arguments of the word. While the presuppositions connected with x_s are fairly complex there is nothing similar to be connected with y_s . But the presuppositions, as we know, present the information which must be known (from the context) about the respective arguments when we employ the given word as a predicate. And now when in the case of some word the presuppositions so clearly tend to concentrate around some certain argument, when about one of the arguments much more specific information is presupposed to be known than about the others, then it is natural to explain it so that the given argument represents the "normal topic" in the case of the given predicate word. In the case of *saavutama* such an explanation is clearly supported by the fact that x_s and not y_s is here the normal subject — "the topic". (We do not want, of course, to claim that in Estonian the grammatical subject will always present the "topic". It is well known how obscure are these relations. But in the case of the given verb x_s is the "topic" and also the grammatical subject.) We may be sure that the facts described above do not present some individual property of *saavutama*. In analysing the words we may always see that the relationship between the "topic" and presuppositions is as described: when we find one of the arguments of a word to be the normal "topic" so we can find, as a rule, that much more rich and specific presuppositions are connected with this argument than with others. A good example in this respect is such an Estonian word as *vihane* 'angry' (x on *vihane* y *peale* 'x is angry with y'). Details aside, this word can be analysed at first sight in the following way: *vihane* asserts x to have the respective psychic attitude towards y , and presupposes that y has done (or is doing) something — that what makes x to have the given attitude towards y . (That the latter is a presupposition is evident already from the fact that x *ei ole vihane* y *peale* 'x is not angry with y' does not deny that but presupposes it as well.) But now this presupposition — so formulated — is clearly a presupposition about y while about x there seems to be no such special presupposition. At the same time undoubtedly x and not y is the normal "topic" of *vihane*. But if we look at this situation a little closer, we find that the presupposition described above is in fact to be formulated as a presupposition about x : it is not directly presupposed that y was doing (or had done) something but only that x was thinking,

¹¹ For some of these see H. Oim, *op. cit.*

or believing that y had done (was doing) it. For it would not make the use of *vihane* inappropriate if y had really not done what x believes him to have done; but there would clearly be an inappropriateness if we were to say 'x is angry with y because of z but he does not believe that y has done z'.

Thus we want to claim that one of the facts which such an analysis in terms of presuppositions and assertions makes explicit is that "topicalization" is, from the point of view of concrete predicate words (such as *saavutama*, or *vihane*), not a merely technical (surface structure) phenomenon but semantically determined. Therefore, it would be more adequate to formulate our grammar so that such words — when used as predicates — are inserted into the structures already "topicalized"; i. e., the semantic underlying structures of sentences should be "topicalized" before the concrete words are introduced.

In connection with this it must be mentioned also that actually it is rather peculiar that in the semantic theory of generative grammar there are no means to treat such problems as what is predication, and, in particular, what is the difference from the semantic point of view between the sentence (the predicative structure) and the noun phrase (the non-predicative structure). Present-day treatment tends more and more to the viewpoint that this difference consists merely in some "technical" details which have no semantic importance. However, many facts are known the semantic importance of which is beyond doubt but which are connected either only with sentences or only with noun phrases. For instance, we can speak of analytic sentences but not of analytic noun phrases. And it is clear that this is directly related to the fact that it is a sentence but not a noun phrase which is a predicative structure. The distinction of analyticity and nonanalyticity has sense only in the case of predicative structures. Therefore, the predicativity—nonpredicativity of a structure must affect the semantic treatment of the structure in such a way that, for instance, the sentence *esemel on kuju* 'a thing has a shape' appears to be a semantically peculiar — analytic-structure, while the noun phrase *eseme kuju* 'the shape of a thing' has no such semantic peculiarity, although both of these expressions consist of the same basic items connected with the same abstract conceptual relationship.

By all this we do not wish to claim, however, that "predicativity", or "topic — comment" relationship should be at the very beginning introduced into the underlying semantic structures. There is no doubt that the significance of such structures to a great extent consists in their original "objectivity", neutrality with regard to various possible "topicalizations", since it is on the basis of such structures only that we can say, for instance, when two different expressions represent the same "objective situation" (and are, in this sense, mutually deducible). But first, from this it cannot be inferred that such notions as predication and topicalization are semantically of no importance. Quite the contrary, on the ground of such objective underlying structures it must become clear what is the specific function of these categories — or, rather, operations — in the language. And second, we do not believe that it is possible to formulate these objective structures in terms of concrete words (as *saavutama*, for instance), since the words appear to be inherently "topicalized". Unfortunately, little that is definite can be said about these problems now since we lack any final account of the nature of the categories discussed.

So far, we have said nothing also about how the underlying semantic structures are constructed — how we must construct every such structure (as the underlying structure of *saavutama*) into which the respective concrete words can be inserted. But to this question, too, it is very hard

to find any definite answer at the present time. The problem is not, of course, by what type of formal rules these structures can be construed. According to our treatment the underlying semantic structures are formally quite similar to syntactic structures of sentences, and thus also the respective rules can be treated as formally similar (just in this sense it can be said that the grammar consists of "a single system of rules"). But the problem is to what extent the meanings of words are regular (and of what type are these regularities). On this it depends what sort of restrictions must be laid on the use of the respective rules, etc. But this is a wholly empirical problem, and very little is known of it at present. The main point which we have wanted to express here is that if it is agreed that (1) the generation of sentences must start in semantics, and (2) the semantic analysis of words is to be made in terms of pre-suppositions and assertions (and this is assured by many facts quite independent of our discussion), then it is inevitable that there is a stage in this derivation where we have to deal just with such structures as presented here (or very similar to these in principle).

ХАЛДУР БИИМ (Тарту)

О СООТНОШЕНИИ МЕЖДУ СЕМАНТИЧЕСКИМИ И СИНТАКСИЧЕСКИМИ РЕПРЕЗЕНТАЦИЯМИ

(О семантическом анализе некоторых эстонских слов)

В работе рассматриваются некоторые теоретические проблемы, связанные с соотношением семантики и синтаксиса в порождающей грамматике. Обсуждается возможность выведения синтаксической структуры предложения из его семантической репрезентации. Пользуясь в основном грамматической моделью Ч. Фильмора, автор стремится показать, что семантическая структура слов в принципе анализируема при помощи тех же формальных средств, что и синтаксическая (глубинная) структура предложений. В статье предлагается конкретный способ представления семантической информации, содержащейся в слове-предикате: аргументы данного слова-предиката, информация, что предполагается известным об этих аргументах, что утверждается (сообщается) о них. В качестве примера приводится семантический анализ эстонского слова *saavutama* 'достигать, добиваться'.

В заключительной части статьи рассматривается семантическая роль таких категорий, как топиализация и предикация. Высказывается мнение, что семантические структуры предложений следует «топиализовать» до ввода в эти структуры конкретных слов, так как слова-предикаты оказываются внутренне «топиализованными».