

SEMANTICS AND FUNCTIONAL DESCRIPTION OF SENTENCES

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1. It has often been pointed out that most of quite usual sentences, such as

(1) The cat frightened the dog.

are semantically ambiguous. The different meanings of (1) become evident in the following paraphrases:

(2) The one who frightened the dog was the cat.

(3) The one whom the cat frightened was the dog.

That these sentences do not convey the same meaning can be shown by the following context:

(4) Jolanthe does not believe that the one who frightened the dog was the cat.

(5) Jolanthe does not believe that the one whom the cat frightened was the dog.

Sentences (4) and (5) describe different situations. In the case of (4) Jolanthe knows that someone frightened the dog but does not know who it was, and she does not believe that it was the cat. In the case of (5) Jolanthe knows that the cat frightened someone but does not know whom, and she does not believe that it was the dog.

2. The description of sentences that brings forth the semantic difference discussed above is usually called functional, since it does not rely solely on the syntactic structure of sentences but takes into account also the function that the parts of the corresponding sentences play in communication. The difference between the described interpretations of (1) depends, as can be clearly seen, on which part of it is considered as presenting the known information and which part as carrying the new information that the speaker intends to tell the hearer. The division of a sentence according to such criteria is generally referred to as topic - comment or theme - rheme analysis (we are

certainly conscious of the fact that often the old - new division on the one hand and the topic - comment or theme - rheme division on the other are considered as two different divisions; but for the purposes of the present study this distinction is not very significant). In the case of our sentence (1), for instance, the cat frightened is topic and the dog comment, if the sentence is regarded in the interpretation that corresponds to paraphrase (3); but if it is regarded in the interpretation corresponding to paraphrase (2), then, on the contrary, the cat is comment and frightened the dog topic.

The described approach has not been very popular in the current theories of semantics; particularly in the semantic theory of generative grammar. For some time past, however, there has been a remarkable growth of interest in the functional aspects of language. We refer to V. Ingve, for instance, who has expressed the opinion that only communication can serve as the context in the frames of which it is possible to unite all the diverse and contradicting theories that are currently developing in linguistics (Ingve 1969).

The linguistic school where much attention is given to the phenomena under discussion is the Prague school of linguistics. Here the functional approach to language has always been in the centre of interest. This is true also of the version of generative grammar that has developed in Prague and is connected, first of all, with the name of P. Sgall.

One of the most remarkable results achieved by the Czech linguists in the functional analysis of sentences can be summarized as the following: it is not appropriate to divide a sentence just into two parts - topic and comment, or theme and rheme. Instead, it is necessary to use a whole scale or hierarchy into which the words of a sentence can be ordered according to the novelty of the conveyed information. Such a phenomenon is called communicative dynamism. For instance, take the sentence

(6) I have to talk to Kiur about our journey. Here in the usual interpretation I has the lowest degree of communicative dynamism and our journey the highest, while the other components are ordered in such a way that to Kiur has more communicative dynamism than to talk, to talk more than have. This is not, of course, the only interpretation; also other interpretations are possible. But the important point is that in every such interpretation we have to do with a certain order. The idea of communicative dynamism belongs originally to the Czech linguist J. Firbas. Now it has been accepted also by P. Sgall who is trying to incorporate it into his model of generative grammar.

3. How to represent the described phenomena explicitly in the semantic descriptions of sentences? There have been many suggestions mostly trying to explain these phenomena through the positions of the corresponding items in a sentence. P. Sgall departs from the fact that in most languages the hierarchy of communicative dynamism is expressed in surface structure by word order: the tendency is to place the less communicative items at the beginning of the sentence, the more communicative items at the end. We have seen it already in sentence (6). On these grounds P. Sgall has suggested that also in semantic representations (resp. in deep structures) of sentences the communicative dynamism of items should be expressed by their relative order (Sgall 1972). According to this from the structure

(7) (_S(acorn)_{ORIGIN} (develop)_{PRED} (oak)_{GOAL}'S

we could derive such sentences as

(8) The acorn develops into an o a k.

(9) An o a k develops out of the acorn.

but not, e.g.

(10) An oak develops out of the a c o r n.

The deep structure for the last sentence would be, instead:

(11) (_S (oak)_{GOAL} (develop)_{PRED} (acorn)_{ORIGIN}'S

At this stage the question arises what is explained by this treatment? Although sentences with different functional partition obtain different deep structures according to this treatment it does not explain the semantic nature of the above phenomena. As we have said, the functional partition of sentences departs, first of all, from the function language plays in conveying information from the speaker to the hearer. But what does the solution described above say about how language can fulfil this function? Why does the order of items in a sentence appear so significant from this point of view? And why just this order?

4. In the functional approach every sentence is analysed as a message. And the criterion for dividing a sentence into definite parts is, as already stated, the role the corresponding component plays in carrying information to the hearer. The concept of communicative dynamism, as we understand it, is intended to express the idea that a sentence is a complex message; every item (word) in it carries a definite piece of information, and these items are ordered in such a way that every new item in the sequence adds its information to the information already conveyed by the preceding items. But this means that every new item contains a new message. The explicit description of the functional structure of a sentence should be, accordingly, a sequence of messages and not merely words. Every single message in this sequence should explicitly bring forth not only the new information that is carried by the corresponding item but also that part or aspect of the old information to which the new information is added. Every message is made up, consequently, of a part that presents the new information and of a part that presents that part of the known information to which the new information is to be added. The new information is carried by the corresponding new item. The known information, to

which the new information is to be added, is made up of (some part of) the information conveyed by the preceding items. If we take, for instance, sentence (6) in the above interpretation, the sequence of messages corresponding to it could be (informally) presented as follows:

- (12a) I have to do something.
- (b) What I have to do is to talk to somebody about something.
- (c) The one to whom I have to talk about something is Kiur.
- (d) What I have to talk about to Kiur is our journey.

On the ground of the given informal presentation it is possible to make also a few inferences about the more formal properties of such messages. In each of the messages (12b) - (12d) - which present the basic type of messages - the subject contains some pro-form (what, the one, what). But this pro-form always represents a definite semantic category that remains implicit in the sentences chosen above to present the corresponding messages. When we replace the pro-forms by the corresponding categories we discover an interesting fact: the subject and predicate of a message are always "dominated" by one and the same general semantic category. For instance, the messages (12b) - (12d) could be given in the following more explicit form:

- (12b') The ACTIVITY I have to carry out is the ACTIVITY-of-talking-to-somebody--about-something.
- (c') The PERSON to whom I have to talk about something is Kiur-PERSON.
- (d') The PROBLEM about which I have to talk to Kiur is the PROBLEM-of-our-journey.

We may say that every message represents a definite operation of adding new information. The category that dominates the subject as well as the predicate presents the

category in the frames of which this operation is carried out. The operation itself consists, as we see, in concretizing a definite aspect in the general category. The information of the subject and predicate is united and as a result we have the same general category, but now it contains the information that was contained in the subject (this is the old information) as well as the information that was contained in the predicate (this is the new information). As a result of message (12b') the hearer knows about the corresponding activity the fact that the speaker has to carry it out as well as the fact that it consists in talking to someone about something; as a result of message (12c') the hearer knows about the corresponding person the fact that the speaker has to talk to him as well as the fact that his name is Kiur; etc.

Finally we would like to point out one more advantage of analyzing sentences into sequences of messages and not merely of words: in this case it is possible to take account also of other material beyond that is presented immediately by words. In particular, as it appears, the concept of the sequence of messages is connected in a definite way with such a semantic notion as the concept of presupposition. It appears, namely, that the sequence of messages that corresponds to a sentence is built up, as a rule, in such a way that every single message in this sequence (except the last one) functions with respect to some of the following messages as one of its presuppositions. For instance, from message (12b) as well as from its negation (= What I have to do is not (that I have) to talk to someone about something) follows logically that I have to do something, i. e. message (12a). From message (12c) as well as from its negation (= The one to whom I have to talk about something is not Kiur) follows that I have to talk to someone about something, i.e. message (12b). Etc.