ON THE PROPER DOMAIN OF SEMANTICS

R. PAVILIONIS

In recent years there has been much talk among linguists, logicians and philosophers about constructing an adequate theory of semantics of natural language. Methodologically and technically different proposals have been made as to the form and content of such a theory emanating largely from the generative-transformational analysis including both the interpretative (J. J. Katz[1] et al.) and the generative (G. Lakoff[2] et al.) conceptions of semantics and the logical analysis of natural language semantics based on the theory of models — ,,possible worlds" semantics (R. Montague[3] et al.). It has been generally acknowledged that semantics is concerned with what sentences and other linguistic objects express (mean), not with the arrangement of their syntactic parts or with their pronunciation. Moreover it seems to be the right thing to say (as generativists do) that the ultimate goal of a semantic theory is the systematic explication of the mechanism by which speakers of a language are able to produce and understand any novel utterance which they have never heard before (included in this process is the process of language acquisition, therefrom follows the necessity of its explication too). To spell it out, for any given utterance the theory should predict whether or not it will be understood, whether or not it will be understood in more than one way, whether or not it stands in certain semantic relation (e. g. entailment, synonymy, presupposition, coherence etc.) to other utterances of a language. Generally the theory should lay bare the conditions that should be fulfilled to enable a speaker to understand (if at all) an utterance in one or another way and to see whatever relation it bears to other utterances. The ability semantic theory should explain is fundamental in cognition and linguistic communication. Therein lies the creative aspect of our social-linguistic activity.

[1] J. J. Katz, Semantic Theory, Cambridge, Mass., 1972.

[2] G. Lakoff, Generative Semantics, — In: D. Steinberg, L. Jakobovitz (eds.), Semantics, Cambridge, Mass., 1971, pp. 233—296.

[3] R. Montague, English as a Formal Language, — In: B. Visantini et al. (eds.), Linguaggi nella societa e nella technica, Milan, 1970, pp. 189—224; Universal Grammar, — In: ,,Theoria", 1970, 36, pp. 373—398.

It is usually maintained that explaining this ability equals systematically explaining our linguistic intuition (unanalysed habits of language) as to semantic properties and relations of utterances. For example, when we say that we have an intuitive notion of grammaticalness we mean that we habitually and without reflection[4] distinguish some utterances as grammatical and others as ungrammatical („John is tall" from „John is and"). By „intuition" we do not mean here the hoary mysterious but rather the unconscious knowledge of things, the implicit system of rules and laws that science strives to make explicit. Granting the assumption that much of our linguistic intuition, namely one about the syntactic structure of language has been more or less successfully and specifically (depending on the view taken on the syntax-semantics boundary problem and general methodological attitude) explicated by current formal theories of syntax[5] the problem remains whether tmeaning can be as (relatively) effectively handled within some plausible semantic tiheory and, if positively answered, will this sort of theory be linguistic, i. e. a theory of linguistic structures.

It is usual methodology to build a formal theory (model) of an aspect of language by providing a set of discrete elements (primitive objects) and a set of rules (functions) operating on the former set and constructing „possible" objects of a certain kind. In generative-transformational grammars (wherein much is adopted from contemporary mathematical logic[6]) of an interpretative version they are semantic, syntactic and phonetical universals (markers) and the rules of the semantic, syntactic and dhonological component respectively. The possible objects are exclusively the objects generated by the rules of the grammar. The intuition of speakers of a language provides the criterion of adequacy of such a model of a language; the latter should be able to predict in a formal way — and relying solely on the formal structural properties of an utterance and the relevant theoretical definitions contained in the theory — such properties and relations of linguistic objects which are ascribed to them by speakers of a language. Thus the linguistic intuition of speakers must play the role of an ultimate empirical check upon the theory and consequently the theory must be falsifiable. To illustrate, since „The bachelor is dead" semantically can be understood in a number of ways depending upon the senses of the constituent

[4] W. Quine, Word and Object, Cambridge, Mass., 1960, p. 30.

[5] Although R. Montague argues that analysis of syntax as suggested by transformational grammarians lacks semantic relevance, whereas his own formal syntactical analysis provides a suitable basis for semantics, the latter's basic aim — in his view — being the characterisation of the notion of a true sentence under a given interpretation (R. Montague, Universal Grammar, p. 373).

[6] These grammars are formal in the way they (recursively) generate abstract underlying or deep structures and transform them into superface structures.

words, a theory of language must be able to formally predict the different ways in which this utterance may be interpreted. It is customarily claimed that the theory of language as proposed by transformationalists is a theory of linguistic competence as opposed to performance, i. e. a theory of an ideal speaker who knows his language (who knows all the rules and generates only possible linguistic objects and whose mental capacity is not limited by any psychological or physical constraints) perfectly[7]. The competence performance distinction (the transformationalist replica of the Saussurian „langue-parole" distinction) though seemingly sound in matters of syntax (granting one accepts its „autonomous" conception), raises hard problems when applied to the realm of meaning, the meaningful discourse for there it seems we are forced to transgress the „linguistic system" and step into the world, the extra-linguistic setting provided we set a theory such a far-reaching goal as that of accounting for meaningful utterances of language and particularly for semantic coherence among utterances of language.

Such radical expansion in the empirical domain of linguistics via an expansion of the definition of what is semantic is seen clearly in much contemporary linguistic research. It points implicitly to the necessity of radical revision of the traditional structuralistic principle of seperating linguistic knowledge (the knowledge of the system — syntactic, semantic and phonological) from the non-linguistic knowledge of the world. To give a few examples, G. Lakoff[8] in dealing with the notion of a meaningful (well-formed) utterance and still maintaining the distinction between competence and performance argues that there are a great many cases where it makes no sense to speak of the well-formedness of a sentence in isolation. Instead one should speak of relative well-formedness, that is, in such cases un utterance will be well-formed only with respect to certain presuppositions about the nature of the world: „In these cases, the presuppositions are systematically related to the form of the sentence, though may not appear overtly"[9]. He argues that judgments of well-formedness of utterances involve the knowledge and beliefs of the speaker. Thus sentences like „My birth enjoys tormenting me" would be perfectly normal among the Papagos where events are assumed to have minds (whatever that migh mean). Individual beliefs as construed in model-theoretical terms („possible worlds"

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[7] „Thus, given that, logically speaking, a grammar can be physically realized in indefinitely many ways, the linguist tries to formulate an abstract description of the information that can be realized in each of these ways while the psychologist tries to find out in which way it is actually realized" (J. J. Katz, op. cit., p. 25).

[8] G. Lakoff, Presuppositions and Relative Grammaticality, — In: Mathematical Linguistics and Automatic Translation, The Computation Laboratory of Harvard University, Report No NSF-24, February 1970, pp. 51—68.

[9] Ibidem, p. 51.

semantics) must be taken in account in formally representing, evaluating argumentation carried out in natural language[10]. To account for the validity of arguments like „if John believes that Smith is the president of the bank, and Smith is John's neighbour, then John believes that his neighbour is the president of the bank", one must be sure that singular terms refer to the same individual in the „worlds" compatible with (relative to) John's beliefs. Then, to specify the conditions of substitution of singular terms one has to know what is the content of beliefs of the subject of belief and what is excluded from it[11]. Because of the disuniformity of substitution conditions for belief constructions one who has faith in „deep structural" methodology would rather speak of relative (to the speaker's beliefs) deep structure of belief sentences.

Among the claimed prerequisites for an utterance to be meaningful both linguists (e. g. Ch. Fillmore[12]) and philosophers (e. g. J. Searle[13]) cite the so-called felicity or happiness conditions. Speaker's knowledge of these conditions enables him to use the utterance „aptly". For example, the word „christen" as in „I here by christen ʀthis ship the Jackie Kennedy" has as felicity conditions that the subject of „christen" is empowered by an appropriate authority to bestow a name on the object of „christen" at the time of the act of christening, that the ship is present etc. It is argued sometimes that the relevant presuppositions of linguistic utterances follow not from any knowledge of the world but from the meaning of the utterance.

To appeal to one more consideration, taking linguistic utterances in isolation, sui generis, and ascribing to them one or another semantic structure does not make us any wiser in the problem of meaningfulness when that is brought to bear in the semantic analysis of discourse. There it is particularly clear that the notion of meaningfulness is of global (context-dependent) character. No theory of meaning would be of any use if having assigned semantic structures to linguistic utterances and thereby acknowledged them to be meaningful, it would turn incapable of semantically characterizing such pieces of discourse as „Do you like my car. I always wear a flower. The seats are lether", or „The Lone Ranger rode off into the sunset. He mounted his horse" or like the answer „I got a toothache" to the question „Where do you live?", which can be said to be meaningless in that the ideas the utterances (perfectly meaningful by themselves) express do not cohere together sufficiently unless the sentences in question are embedded in some wider and particular context

[10] Evaluation of such argumentation weighs heavily with extending the traditional notion of „logical form" to underlying structures and finally identifying them.

[11] See J. Hintikka, Models for Modalities, Dordrecht, 1969.

[12] Ch. Fillmore, Types of Lexical Information, — In: D. Steinberg..., pp. 371 — 392.

[13] J. Searle, Speech Acts, London, 1968.

which again seems to be always possible and which shows the relative validity of any formal constraints on meaningfulness[14].

Coherence considerations are especially relevant in solving ambiguity questions arising in utterances like „She fell while getting to the ball“, „John brought the letter to the post“, etc. Choosing the right, i. e. coherent with the rest of discourse interpretation of the utterances is clearly a matter of linguistitic or non-linguistic c o n t e x t and it may have the consequence of rendering the whole discourse meaningful or meaningless depending on interpretation[15].

The importance of an overall interpretation is seen not only in case of an isolated „meaningless“ utterance rendered meaningful when embedded in some particular context but in case of an unambiguous utterance by itself turning into ambiguous one when embedded in a certain context. The analysis of contexts involving logical modalities (adverbs like „necessarily“, „possibly“ etc.) or intensional verbs („believe“, „want“, „enjoy“ etc.) provides examples of that. In these cases in sharp contrast to the generative-transformational syntactic analysis the semantic analysis works „outside in“. We start with the outermost sentence and consider its semantics and interpret the semantics of the embedded sentence in light of this previously given information[16].

Now it is time to ask whether considerations relating to coherence of discourse can somehow be incorporated in the semantic theory of l a n g u a g e, for example, in the form of some „meaning postulates“ or „common sense rules“. The question amounts to asking what type of data a formal semantic theory should be expected to predict. It does not need a genius to answer this question, for it is clear as it is that the positive answer would amount to saying that a formal linguistic theory of semantics should include all the information human beings have about the world they live in. Linguistics, if it is really its business to account for native speaker's ability to understand a n y novel sentence (or even any of the old stuff), would perforce turn into some Universal Science, for to assign meaning fulness (well-formedness) to linguistic utterances it would have to know everything, including astronomy, law, human genetics and what not, provided we do not restrict its domain to linguistic everyday trivialities of the sort „I got a headache“ or „Tom

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[14] This seems to be exactly the conclusion W. H a a s came to in „Rivalry among Deep Structures“, Language, 49, 2, 1973, pp. 282—293.

[15] The relevance of coherence considerations is strongly argued for and an example of an analyses based on such considerations is given in Y. Willks, Grammar, Meaning and the Machine Analysis of Language, London, 1972.

[16] See J. Hintikka, Grammar and Logic, — In: J. Hintikka, D. Suppes (eds.), Semantics of Natural Language, Dordrecht, 1972.

lives next door", as some people think wise to do [17]. Otherwise linguistics faces a danger of trivial predications like „Every utterance is meaningful", „Every sort of discourse is meaningful", which is the other extreme.

To explicate the creative aspect of linguistic behaviour the author of this paper has been working out the „continuum hypotheses of meaning"[18] according to which the information an individual has about the world is represented in the continuous system of meanings, to be more precise, in the continuously expanding system of meanings. We have claimed that the system in question is of non-verbal origin, i. e. originally representing the information we get about the world through non-linguistic channels. These non-verbal meanings or rather a system of them provide the semantic basis for the interpretation of verbal expressions of a language in the process of its acquisition. For any new phenomena (linguistic objects including) to be interpreted in the given system it must provide the relevant combination of meanings, i. e. a context of the system continually connected with the rest of the system. Since the system incorporates information relating both to the actual and possible experiences of an individual due to combinatorial character of an overall system the interpretation capacity of the system is made to depend but on the „inner resources" of the system, i. e. on the possibility of constructing within it the relevant combination of meanings. In the light of these considerations it appears that meaningfulness of an expression is always relative to the possibility of constructing some combination of meanings in some particular system of meanings incorporating our ordinary, scientific and however fanciful conceptions of the world. Thus predictions as to meaningfulness of linguistic expressions do not fall within the domain of some linguistic theory of semantics but is rather a matter of interpretation capacity of one or another continuous semantic system. We sacrifice neither objectiveness nor generality of the theory in this shift from language into individual semantic systems. The effect of the shift is such that the objectives of semantics are put now on a more realistic basis, namely, that of explicating the general (universal) principles of individual semantic system construction, instead of lending existence to such ephemerial entities as the „semantic system of a language" which is in some unexplainable manner disconnected with our knowledge of the world.

Vilniaus V. Kapsuko
    universitetas
    Filosofijos katedra

[17] See А. Ветров, Методологические проблемы современной лингвистики, М., 1973.

[18] See R. Pavilionis, On the „Global" Conception of Meaning, — In: Kalbotyra, XXVI (3), 1974, pp. 29—42; „Значение как континуум", — In: Материалы симпозиума по логике, методологии и философии науки, Ереван, 1974.

APIE TIKRĄJĄ SEMANTIKOS OBJEKTŲ SRITĮ

Reziumė

Straipsnyje apžvelgiami šiuolaikinių formalių natūraliosios kalbos semantikos modelių privalumai bei trūkumai, sprendžiant kalbos išraiškų prasmingumo ir ypač samprotavimo prasmingumo nustatymo problemą. Teigiama, kad siūlomų literatūroje formalių kriterijų neadekvatumas išplaukia iš „kalbos semantikos" sąvokos neleistino absoliutizavimo, lingvistinio bei ekstralingvistinio konteksto ignoravimo ir ypač neatsižvelgimo į konceptualias kalbos vartotojų sistemas. Šie trūkumai, autoriaus manymu, nebūdingi reikšmės kontinuumo hipotezei.