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LOGICO-SEMANTIC ASPECTS OF TRUTHFULNESS

1. I shall begin with two theses neither of which is characterized by novelty or irrefutability.

The first one is that semantic investigations would enable the concretization of the theory of knowledge. The necessity for semantic analysis in the concretization of fundamental epistemological (and logical) problems and their interrelation is brought out in titles like “Meaning and Truth”, “Truth and Meaning”, “Semantics and Logic”, which have all found a place in the literature.

The second thesis is that two trends are usually distinguished in semantic theory – the theory of reference and the theory of meaning.

The theory of reference involves the relation between a sign and the object designated by it. Here problems like denotation, truthfulness, naming, extension, completeness, and logical sequence are analyzed.

In the theory of meaning the relation between a sign and the content expressed by it is investigated. Problems like meaning, synonymity, intensional context find their place here.

In what follows I shall try to show the interrelation between these two theses and some semantic paradoxes, their essence, and the attempts to resolve them.

2. The essence of semantic paradoxes. A semantical theory ought to be able to solve some difficulties (see [1] and [2]):

The first one is the problem of identity and the principle of interchangeability of names. B. Russell cites the following example: “George IV wished to know whether Scott was the author of Waverley” and if indeed Scott and the author of Waverley are one and the same person, then on interchanging the names, the statement becomes: “George IV wished to know whether Scott was Scott”;
The second problem is that of single negative existential statements. The statements “God does not exist” and "Pegasus does not exist", on applying logical quantification, becomes: “\(\exists x (\text{God}, \text{Pegasus}) \) (which \(x\) does not exist)”; 

The third is the problem of empty names and the applicability of the law of excluded middle. Is the statement “The present King of Prance is bald” true or false? And which of following two contradictory statements would be preferred as true; “The present King of Prance is bald” or ”The present King of France is not, bald”?

2.1. The paradox of interchangeability of identity names (antinomy of name-relation – in Carnap’s terms) – an instance of the identity paradox. A number of examples can be cited that show the antinomy of name-relation to be an instance of the identity paradox. This has already been stated, namely that the “paradox of analysis” (semantic analysis) is an instance of the paradox of identity (see [3]).

2.2. It can be noticed that there is a similarity between the rest of the semantic difficulties and this provides us with a basis to divide the paradoxes into two types:

(1) Paradoxes of identity and name-relation;
(2) Paradoxes connected with the use of “empty names”.

To the latter group belong:

(a) The paradox relating to quantification in logic
(b) The paradox relating to the use of factually empty names (e.g. “The present King of France”) – relating to the scope of applicability of the law of excluded middle;
(c) And here, too, belongs the paradox related to the case of logically empty names (e.g. “round square”). This paradox leads to a breach of the law of excluded middle and of the law of non-contradiction.

3. The theory of reference and the theory of meaning – an inseparable unity in solving problems in logical semantics. If the paradoxes mentioned above present difficulties which a semantic theory should be capable of solving, then developing the relatively differentiated two parts of logical semantics – the theory of reference and the theory of meaning would hardly be the means to achieve that purpose.
Solving a given problem in the theory of reference the relation “sign – object”) would inevitably be touching the theory of meaning (the relation “sign – information about the designated object).

Only an integrated approach to the two aspects of logical semantics mentioned above could possibly solve some semantic difficulties – in particular the ones connected with the naming relation.

In a weakened formulation, the paradox of the interchangeability of names receives a solution precisely by means of integrative treatment of the semantic features of the expressions – those of their extensional as well as those of their intensional characteristic, of their referents (the objects designated) as well as of their meanings (their senses, the information about the designated objects).

A logico-semantic analysis of linguistic expressions seems a reliable method, indeed, in coping with a great deal of the difficulties in interchanging names – by its requirement for all kinds of available semantic characteristic of the interchangeable expression to coincide – difference is only allowed with respect to the expressions (signs, names) used.

However, within the framework of a stronger formulation of the paradox of interchangeability of names, one in which it is more closely bound to the identity paradox, the integrative approach would not be capable of coping with the problem either.

The identity problem is as old as human knowledge based on similarities and differences in things. It is, above all, a problem of methodology, of epistemology, logic and mathematics – and only after that (and precisely for that matter) one of semantics. The occurrence of paradoxes concerning has always brought about difficulties in scientific knowledge. And the fact that the identity paradox emerges in the sphere of semantics as “a paradox of analysis” by no means provides the ground for it to be qualified as a semantic one (see [4]).

The identity paradox could occur anywhere including the domain of semantics, yet, this does not automatically render it a “semantic paradox”.

4. Just how semantic are semantic paradoxes? The second type of semantic paradoxes result from the use of “empty names” – names which do not denote real objects and the difficulties involve the application of logical quantification, the law of excluded middle, and the law of non-contradiction.
The problems of “empty names”, however, are in turn the regular consequence from purely logical difficulties about logical objects.

The problem of “concept” in logic, of its extension and intension, has its corresponding interpretation in the sphere of semantics – the extensional semantic featuring of the name is the class, and its intensional semantic characteristic is the attribute denoted by the name. Yet, the problem of objects does not become a semantic one for the mere reason that it is liable to semantic consideration as well. From a logical point of view, it is quite a reasonable position to relate the difficulties about objects to those involved in the validity of logical laws – which is in fact the case of the “semantic paradoxes” related to the “empty names”.

It is to be expected that extending the domain of objects admitted (including factually and logically empty objects) would entail either a limitation of the validity of logical laws, or changes in their interpretation making them more general but less rigid and informative.

But these are exclusively logical problems and it is not likely that semantical theory alone could cope with them.

5. Attempts at solving the “semantic paradoxes” related to the use of “empty names”. Current attempts to solve the two kinds of paradoxes related to empty names and logical laws have been carried on along the lines just described:

5.1. Restricting the domain of validity of logical laws is the approach suggested by A. Meinong (in defense of an extension of the domain of permitted objects). Strawson, Quine, and Austin, too, consider this to be the way out of the semantic difficulties (see [5]).

5.2. Logical laws remain applicable in difficult cases (paradoxical situations) but receive another interpretation. By means of various negations various interpretations of logical laws are achieved. The logical laws are valid but we are dealing with a particular case of False statement – a statement of false reference ([5]).

As we can see, the strategies for the solution of the so-called “semantic difficulties” are not in the least semantic even though they are traceable to the “semantic period” of logic (and of cognition).

The problems of logical objects, of quantification, of the laws of logic (their essence and domain of validity), of negation, are above all problems of logic.
So that if we are interested to know whether semantic theory is capable of coping with the so-called “semantic difficulties”, the answer is: “Yes, but with the help of logic”.

References


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