

ONTOLOGY, LANGUAGE AND LINGUISTIC THEORY

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1 From Language to Ontology: The Traps.

In a recent text [8], Achille Varzi discusses the traps that lie in the path connecting language to ontology. His initial question is “*Is there any way of telling what sorts of things there are, given the sorts of things we say*” and the answer he gives at the end of the text is a negative one.

The traps pointed out by Varzi consist either on thinking that all things we speak about exist in true statements (the ‘surface grammar’ trap) or on supposing that the linguistic analysis (the analysis based on Analytical Philosophy) would be able to exhibit the ‘real’ underlying form (the deep structure, the logical form) of the true statements, that would be metaphysically transparent (the ‘deep structure’ trap).

On the one hand, the fact we can speak about non-existing things such as *the present king of France* or assert of something that it does not exist, as in example (1), hinders the naïve assumption that all things denoted by linguistic expressions (specially by definite descriptions) exist in the world.

(1) The winged horse does not exist.

On the other hand, the linguistic analysis for underlying forms - ontologically transparent - capable of exhibiting the real meaning of linguistic expressions, which would be ‘systematically misleading’, as claimed by Ryle [7], is also a limited enterprise.

Let’s take a sentence like the one in (2), that asserts the existence of ‘cracks’, entities of questionable ontological status, to say the least.

(2) There is a crack in the vase.

However, one can assume that through linguistic analysis we can arrive at ‘ontologically neutral’ forms, in which there is apparently no ontological commitment to such entities. Thus, the underlying form in (2) could be (3):

(3) The vase is cracked.

But, as Varzi[8, p. 8]¹ tells us:

¹Numbers of pages correspond to the version presented on the site www.columbia.edu/~

Ontological parsimony would suggest that we take the paraphrase to reveal the deep structure of the initial statement. To say that there is a crack in a vase is to say something about the vase, namely, that is a certain shape or structure. So if (7) [= 2] is true, it is true because of how the vase is. But one may also reverse the order of the analysis. One may think that it is because there is a crack in it that the vase is cracked, in which case it would be (7) [= 2] that supplies a truly ‘ontologically transparent’ paraphrase of (7’) [= 3], not vice versa. And there may be good reasons for holding this view.

Then, we face a dilemma: we cannot either use the linguistic forms as criteria for establishing the ontology or assume that the linguistic analysis is capable of finding, for all expressions, underlying forms that serve as criterion for establishing the ontology. In other words, we can neither think that everything we speak about exists, nor can we think we can obtain underlying structures for all expressions we produce, so as to support ontology.

The conclusion Varzi draws [8, p. 14] is then that

There is, alas, no way of telling what sorts of things there are given the sorts of things we say. At most one can tell what sort of things we think there are, and one can tell that only if we tell them explicitly. The bridge between our words and the world out there is to be built from bellow, as it were. Ontology comes first, and depending of what we think there is, we must attach a meaning to what we say. Going the other way around is wishful thinking.

2 Language/world isomorphism.

I would like to agree with Varzi regarding the uselessness of looking at language for getting answers intended by ontology. On the other hand, I would like to go deeper into the reasons for such state of affairs.

It seems to me that the origin of the problems Varzi treats as ‘traps’ lies in the strong presupposition that says that there would be isomorphism between language and the world. This isomorphism could occur between surface structures and the world, which would lead us into the first trap; or the isomorphism would occur between the analyzed expressions (logical forms) and the world. In the latter case, we would be assuming a metaphysics such as that of the first Wittgenstein, for whom the complete analysis of a proposition would render it a reflex of the world’s structure. The non-plausibility of such enterprise, admitted by the second Wittgenstein himself, would lead us into the second trap.

Without abandoning the presupposition of isomorphism language/world, Varzi inverts the direction in which one must look for ‘*the bridge between our words and the world*’. If we cannot find out what sorts of things there are starting from the language, we must start from the ontology and attribute to the linguistic expressions the adequate referents.

av72/metaphysics/Readings/varzi.pdf.

What I intend to explore here is the possibility of abandoning the presupposition of language/world isomorphism.

3 Some relevant distinctions.

Before going any further, I believe it is important to establish some distinctions and make some methodological clarifications.

3.1 Metaphysics and Semantics.

First of all, I believe it is necessary to distinguish *metaphysics* from *semantics*. The ontological theories, developed by philosophers, are theories about *the nature of reality* whereas the semantic theories, developed by linguists, are theories about *the interpretation of linguistic expressions* (cf. [1]).

Metaphysical realism, for example, is a theory that claims that objects of the outer world exist by themselves, independent of the cognitive activity of any agent and that our experience with the outer world has these objects as its immediate cause.

Semantic realism, at its turn, claims that linguistic expressions somehow signify these objects independent from the mind and from the properties they have. In other words, all statements about the outer world are said to be true or false depending on how things are in relation to independently existing objects, without taking into account any thoughts, beliefs or experiences of a cognitive agent.

Now, it is clearly possible to maintain metaphysical realism and reject semantic realism. It is possible to maintain the existence of an outer world, independent from our cognitive activity, while simultaneously maintaining that not all expressions of our language speak about this world.

It is obvious - at least for linguists - that expressions in the language speak about things that do not exist, that they speak of things that exist only for speakers who share certain ideologies, and that such expressions are as true (or false) as any other expressions *within the realms of those discourses*.

When a religious person asserts the existence of miracles, in fact he/she believes that miracles are events in the world and his/her assertions must be understood as true or false in the realm of the religious discourse.

Let us suppose that there is no miracle and that, therefore, a realistic ontology does not shelter those events. I can say that the religious person's expressions are false and that terms such as 'miracle' do not denote anything in the world. What I cannot say is that language will be evaluated only in regard to this ideology-free outer world. In the context of a religious discourse, expressions signify, terms have denotations and sentences are true or false, exactly as if the world (ontology) contained miracles.

It is important to stress that I am not postulating here - at least for the time being - a relativistic position (not even a skeptic position). I am only saying that the interpretation of linguistic expressions takes place always the same way,

as if the world in which we interpret were the real world. In other words, what I am saying here is that for a semanticist, ontology may be irrelevant.

3.2 Language.

It is necessary to clarify further the notion of *language* we are adopting here. Likewise, we need to better investigate the notion of *reference*. Let us start with the notion of *language*.

In Chomsky [3], we find an important distinction between E-languages and I-languages.

An E-language is a kind of social object whose structures are presumably established by convention. The speaker-hearers present various degrees of competence in its use and knowledge.

An I-language, on the other hand, is a state of an inner system that is part of our biologic constitution. The properties of that system can be established independent of the environment in which the agent is inserted and, therefore, it must be crystal clear that I-languages have to be understood individually.

When we investigate the relationships between language and ontology, which type of language are we talking about?

I believe a considerable number of philosophers, unlike a considerable number of linguists, assume that the term *language* refers specifically to *public languages* (E-languages) and that the relationship between language and the world must be established for this type of language.

What Chomsky shows - since his early works, as far back as the 1950's - is that the theoretical interest on E-languages is very small for the linguist, insofar they are only the visible result of the functioning of I-languages. For Chomsky, the study of E-languages can be interesting for various reasons, but it is not important for the study of the nature of the inner functioning of language, the elected object for linguistic investigation.

It is important to point out that, although not all linguists share this understanding, most of the present linguistic studies have I-languages as their object.

3.3 Reference.

Let us now have a look at the notion of reference.

Peter Ludlow [6] considers 3 ways in which the term 'reference' has been used by linguists and philosophers: R_0 , R_1 , and R_2 .

R_0 understands reference as a relationship between linguistic expressions and inner representations. There is no relationship with the outer world. It is the sort of reference notion we can find in Jackendoff [5] and the like, for example.

R_1 understands reference as a direct relationship between a linguistic expression and the world (maybe between a linguistic expression and aspects of the world).

R_2 understands reference as a complex relation, a relation of at least four places, involving the speaker, the expression used, a context, and the world (or aspects of the world).

Many philosophers - and many semanticists - consider that R_0 makes a mistaken use of the term reference, and I am not saying anything else about this way of understanding the term.

The difference between R_1 and R_2 can be summarized the following way: in R_1 the linguistic expression refers, whereas in R_2 a speaker uses a linguistic expression to refer to certain aspects of the world under certain contextual conditions.

I believe most philosophers and linguists adopt R_2 , although we may often feel that R_1 is being used.

4 Language and Ontology.

Let us begin asking why we should be concerned about the relationship between language and ontology. Why should this issue be of any interest to linguists?

Ontology is truly an issue to the semanticist and, specially, to the semanticist engaged in some version of referential semantics (truth-value semantics).

It is also proper to ask what is expected of a referential semantics; what would be the aims of a truth-value semantics.

I offer here basically two answers: (i) it is proper of semantics to characterize the relationships between linguistic expressions and the world or (ii) it is proper of semantics to characterize the speaker-hearer knowledge about the relationships between language and the world. The first answer, so I believe, assumes R_1 and the second answer assumes R_2 .

The first answer presupposes two absolutes: language (understood as an E-language) and the world. It also presupposes, as its central idea, the language/world isomorphism.

I believe everyone that proposes this form of conceiving semantics ends up adopting some version of the presupposition that both language and the world are unchangeable (they are what they are). If our conception of the world undergoes changes in time, from the starting point of the development of science, it is because we had previously lived on false beliefs; if linguistic expressions can undergo changes of meaning, it is because the expressions are vague, or because ordinary speakers use expressions '*whose real meaning often eschew us*' and that can only be accepted as '*loose talk*', in Varzi's words [8, p. 11].

Even if we could carry out a complete linguistic analysis of a proposition (something I doubt, corroborating Varzi and his second trap), we would end up obtaining an outer language whose semantics would be completely determined by the world (that is what it is). But this picture is totally inadequate.

Somehow, the Portuguese language has served to, among other things, represent the world at least since the XIII century. Although we can say that the Portuguese language has changed a lot during the last 800 years (it has changed regarding its phonology, morphology, and syntax), I believe it has not

changed so much as far as the ‘world’ in which its expressions are interpreted is concerned.

In the XIII century, the Earth was the center of the universe; children were miniature adults; women did not have souls; illnesses were caused by ‘humors’; the stars, the Sun and the Moon spun randomly in the sky; time was cyclical; the conformation of stars forming constellations interfered in human issues; the existence of God and his power of intervening over human issues was unquestionable; etc. Today, the world is different. Earth is just one of the planets that spin around a small star in the periphery of a galaxy. The sky is not populated only by stars, the Sun and the Moon, but by a series of different celestial bodies, some of them just indirectly observed, such as the black holes. The list of living beings came to include viruses and bacteria. The notion of constellation was relativized to our point of view: for example, only if we observe the sky from the Earth can we state that the constellation of Orion exists. If formerly we used the word ‘constellation’ to designate an absolute entity, today we use the same word to designate a relative entity, which only exists if we assume a certain point of view. The Portuguese language, despite such changes, continues fulfilling the same functions it did before, in practically the same way.

In other words, even assuming that the meaning of natural language expressions results from the relation that realizes between an expression and a supposed state of affairs (or an entity) in the world, it would be naïve to think that the world in which things are interpreted is always the same, independent of time. The word is the same, but the world in which the word is interpreted is not.

The historicity of languages necessarily leads us to assume the existence of a semantic variation along with the phonological, morphological and syntactical variation. To suppose languages vary semantically implies supposing that the relationship established between language and the world varies. If expressions do not change, then it must be the world that changes. Going back to the term ‘constellation’, we can see that language did not change, but the world in which language is interpreted has changed.

Notice that I am not talking about the possibility of saying, today, that the term ‘constellation’ denoted entity x in time t_1 and that it came to denote entity y in time t_2 . I am saying that all expressions of the Portuguese language in the XIII century were interpreted in a world W_1 , consistent and complete, and that the same expressions came to be interpreted in a world W_2 in the XXI century, for example. In other words, I am somehow saying that the world that was relevant for the XIII century man was not the relevant world for the XXI century man, and that the true expressions for the XIII century man are not necessarily true for the XXI century man, although the language may be basically the same.

I must admit, to be in accordance with the realists, that the XIII century ‘world’ was construed based on ‘false’ beliefs and that it was the development of science that eliminated certain beliefs and introduced others. But such concession does not change anything for semantics.

There is an expression that says exactly what a large group of linguists thinks

of human languages: *language is a bunch of variation*. Phonetic-phonological, syntactic and especially semantic variation.

Let us now concentrate on the second of the alternative answers presented above: the one that says that the task of semantics is to characterize the speaker-hearer's knowledge of the relationship between language and the world.

The introduction of the speaker-hearer as the "*locus*" where the relationships between linguistic expressions and aspects of the world take place changes the picture sensibly. This way of facing semantics either can or cannot suppose there is isomorphism between language and the world.

We can characterize this speaker-hearer knowledge as a knowledge about the language/world isomorphism and thus we will have a universal semantics.

The great problem such enterprise faces can be represented by Chomsky's arguments against the current semantic theories. Let us have a look at some of them.²

Although it is not possible to assume any ontological commitment to entities such as 'The average family' or the '2.3 children', these expressions behave linguistically like any other expressions of the same class. We can, for example, anaphorically recapture them the same way we do with ontologically transparent terms, such as 'book' or 'table'. Consider the following examples:

- (5) a. The average family has 2.3 children.
b. Your report on the average family fails to make it clear that *it* has 2.3 children.
- (6) a. The red book is on the table.
b. Did you see a red book on the table? *It* belongs to John.

The attempt to offer alternative logical forms to terms whose ontological reality is questionable (like 'the average family') and to maintain the surface form of terms whose ontological reality is unquestionable (like 'book') would imply that the linguistic form could only be determined after we had the complete ontology.

I do not know whether this is what Varzi proposes when he says '*Ontology comes first, and depending of what we think there is, we must attach a meaning to what we say*', but the similarity is noticeable.

Chomsky's second argument is based on the apparent lack of symmetry between the type individuation that objects and substances intuitively have and the type individuation that a referential semantics usually attributes to them.

We propose here (following Ludlow's line) that it is possible to distinguish an I-substance from a P-substance. A P-substance would be the type of thing that could have some role in some theoretical physics (H_2O , for example) and an I-substance would be that thing we would be speaking about when we use language (the intuitive referent of 'water').

If 'water' refers to H_2O , the semantic theory should consider the P-substance

²This is based on Ludlow [6]. Chomsky's arguments may be found in Chomsky [4].

(H_2O) the semantic value of ‘water’. The problem is that we are not always referring to H_2O when we use the term ‘water’. Let’s think of the Tietê river. It is a *water* flow that crosses São Paulo. We can say things like ‘As *águas* do Tietê invadiram as pistas das marginais’ (‘Tietê’s *waters* flooded the riverside road’). However, we can hardly say that what exists in the Tietê is H_2O . On the other hand, potable liquids like chamomile tea, for example, which chemically speaking are closer to H_2O than water from the Tietê, would never be called ‘water’.

In Ludlow’s words [6, p. 150]:

What we are talking about when we use the term “water” - the I-substance - depends upon the social setting in which we find that substance. But according to referential semantics, the meaning of the term is supposed to depend upon the chemical composition of the substance referred to - it’s supposed to be a P-substance. Conclusion: referential semantics (if respecting the LWI [language/world isomorphism] hypothesis) will not track the intuitive notion of meaning.

In order to account for the intuitive notion of meaning, we could even postulate the notion of S-substance, which would be the individuated substances according to the community standards.

Chomsky [2, p. 203] also adds the fact that even the understanding about being in front of a unique object or a collection of objects depends on a certain number of social and institutional conditions. A baby crib mobile is understood as a unique object, whereas the set of leaves on a tree is not. In other words, it seems unreasonable that even elementary semantic concepts, like individual and collection, could correspond to P-substances.

Although not all Chomsky’s arguments have the same force - and maybe they can be refuted - the question that poses here is that of the possibility of building a referential semantics without the presupposition of the language/world isomorphism, working with the idea that the language that interests the semanticist is the I-language.

5 Referential Semantics.

I shall try to present here some proposals on how a referential semantics could work for an I-language. It is important to stress that I do not intend to present a semantic proposal that specifically fits the chomskian Generative Grammar, since I do not feel totally committed to Chomsky’s thoughts. I believe there is a possibility of postulating I-languages, besides Chomsky’s proposal.

The chomskian I-language is basically innate. Somehow, even in the chomskian proposal, the lexicon must be acquired. In other words, even assuming the existence of I-languages - individuated and mostly innate - we need to propose mechanisms that may guarantee the adequate acquisition of lexical items (*words*, to simplify).

Word acquisition does not happen in pure syntax, that is, a child in the process of acquisition will not simply be acquiring linguistic expressions, detached from any use or any reference. When acquiring a word, a child also acquires a ‘cut of the world’ or, if we wish, a rule of usage.

What I am trying to say is that in the process of acquisition, a child not only learns words, but he/she simultaneously learns a certain way of organizing the world (I am here assuming the existence of a world that is metaphysically realistic, whose existence does not depend on any process of acquisition; I am not assuming that the organization of this world realized by the process of acquisition is identical to the realistic world).

Words and their meanings, therefore, are acquired simultaneously, and in the same process. As Ernesto Perini Santos says in his abstract of yesterday’s lecture, ‘*To learn a word is no different from learning to select objects in, and to perceive different possible construals of a given situation*’.

Therefore, we cannot assume that speakers use linguistic expressions to denote P-substances, things as they are defined in the context of the scientific research (in spite of being useful and important, *scientific theories are not the arbiters of what is real*, as Ludlow puts it). We must say that speakers use expressions to denote I-substances (inner forms of S-substances), that is, they denote substances that are individually cut and present in his/her linguistic competence, despite being individuated according to the community standards (and constraints).

As there are many communities, the world in which those linguistic expressions are interpreted is also plural. What really exists is the idiolect (the I-language of each speaker).

But this does not constitute a problem for referential semantics. Language is a *calculus*. And we shall have as many interpretation models as are the forms the world assumes.

Insofar the same word can be interpreted differently in different models, we do not need to assume the isomorphism language/world any longer.

Referências

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