

Symposium *Natural Language Ontology*

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Natural Language Ontology: Ontology as Grammar?

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1. Introduction

Aims of the talk

1. Clarify what natural language ontology is and how it relates to philosophy and linguistics
 2. Propose a way of understanding its subject matter, as the ontology a speaker chooses by way of using the language.
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2. Natural language ontology as a discipline

The subject matter of natural language ontology

The ontology *implicit* in natural language, not an ontology that can be described *by using* natural language

Two related notions of natural language ontology

- [1] an emerging discipline that is part of linguistics and philosophy
- [2] a practice throughout the history of philosophy

My view: [1] should be viewed as continuous with [2], not as a separate project

2.1. Natural language ontology as a practice in philosophy throughout history

Using natural language data for the purpose of clarifying *metaphysical intuitions*

Example 1

The statue and the clay (Fine 2005)

(1) a. *The statue is impressive / new / nice.*

b. *The clay is impressive / new / nice.*

(2) a. *The statue no longer exists.*

b. *The clay no longer exists.*

Example 2

Events and material objects

exist vs happen, occur, take place, go on; spatial and temporal location (Fine 2003)

(3) a. *The rain is still going on.*

b. ??? *The rain still exists.*

(4) a. *The destruction of the temple really occurred / ??? really existed.*

b. *The temple really existed / ??? occurred / ??? took place / ??? happened.*

(5) a. *The vase still exists.*

b. ??? *The vase exists in that room.*

c. *The attack took place / happened / occurred in Paris.*

Example 3

Events and facts (Vendler 1967)

(6) a. *The speech lasted two hours / triggered an applause.*

b. ?? *The fact that John spoke lasted two hours / triggered an applause.*

Example 4

Mental and illocutionary acts or states vs their products or corresponding attitudinal objects

(Twardowski 1911)

(7) a. *The promise was fulfilled*

b. ?? *The act of promising was fulfilled.*

(8) a. *The claim was correct.*

b. ?? *The act of claiming was correct.*

2.2. Natural language ontology as an emerging discipline

First suggestion of an emerging discipline

Bach (1986) 'Natural Language Metaphysics'

Bach (1986), Fiorin/Delfitto (2021):

Natural language ontology (NLO) just part of linguistics

The aim of NLO:

Positing semantic values as part of compositional semantics and capturing ontologically relevant properties and relations as determined by linguistic meaning.

Agnosticism about the ontological and cognitive status of the semantic values and their properties and relations

Issues for the view

[1] The need to relate the linguistically determined ontology to the ontology philosophers argue for.

[2] The need to integrate NLO with the philosophical practice of using natural language to clarify metaphysical intuitions

Natural language ontology cannot be pursued without philosophy

[1] Natural language gives only a partial specification of an ontology

[2] NLO cannot do without the use of ontological notions already understood in a particular way, e.g. notions like ‘event’, ‘trope’, ‘fact’, ‘situation’, ‘world’ (and sometimes the philosophical understanding has to be revised in view of the linguistic facts).

Conclusion

NLO should be part of both linguistics and philosophy, as a linguistically informed development of descriptive metaphysics.

2.3. Descriptive vs revisionary metaphysics, naïve vs foundational metaphysics

Descriptive metaphysics (naïve metaphysics (Fine 2007))

Aims to uncover the ontology reflected in our ordinary judgments or metaphysical intuitions, whether real or merely apparent.

Contrast with foundational metaphysics, the metaphysics of what there really is

Strawson’s original distinction

Descriptive metaphysics aims to uncover our ‘shared conceptual scheme’ (Strawson’s Kantian background); revisionary metaphysics aims to propose a ‘better’ ontology (‘better’ in what sense?)

The indispensable role of descriptive metaphysics (Fine 2007):

The aim of descriptive metaphysics is to clarify the notions presupposed by foundational metaphysics, notions that foundational metaphysics must take as its starting point.

Natural language ontology as a development of descriptive metaphysics

NLO should take into account the full range of linguistic facts and theories made available by contemporary semantics and syntax.

What sorts of facts?

Not just ranges of referential NPs and the predicates they may take, but also:

- Other syntactic categories, e.g. quantifiers, pronouns
- Syntactic constructions as analysed within a particular syntactic theory
- Silent elements
- Functional elements and syntactic features
- Syntactic positions
- Crosslinguistic generalizations

Some examples where syntactic research has become relevant

[1] Number reference

(9) *The number of planets is eight.*

Not an identity statements involving number-referring terms (Frege), but a specificational sentence conveying a question-answer relation (Higgins, Romero 2005, Moltmann 2013)

[2] *That*-clauses

Emerging view is that they are not referential terms, but act as predicates of content-bearers (Arsenijevic, Kayne, Elliott, Kratzer, Moulton, Moltmann)

The subject matter of natural language ontology (1)

The ontology reflected in metaphysical intuitions with their more complex linguistic manifestations

Experimental philosophy

Intuitions as the subject of empirical study, with their potential interpersonal inconsistencies

The subject matter of natural language (2)

The *ontologies* implicit in natural languages with their potential crosslinguistic differences

The generative linguistic perspective

Pursuit of a universal ontology that goes along with universal grammar

3. Natural language ontology and folkmetaphysics

Natural language ontology is not folkmetaphysics ('naïve' metaphysics)

Examples of divergences

- Unrestricted sum formation with plurals and conjunctions, but not for the ordinary ontology of folkmetaphysics (*the things in my room, Quine and the Eiffeltower*)
- The verb *exist* applies only to enduring and abstract objects, the noun *existence* may convey a univocal notion, which arguably is part of folkmetaphysics.
- The mass-count distinction does not generally reflect the distinction between stuff and objects, but is better viewed as a matter of 'grammaticized individuation' (Rothstein):
clothes – clothing, shoes - footwear, Engl. pasta – French pâtes

Folkmetaphysics would take metaphysical assertions account, but not NLO (Section 5).

4. The ontology of natural language and reality

A common view

The ontology of natural language consists of merely conceived entities, 'things we talk about as if there were' (Bach 1986).

Chomsky

The ontology of natural language would at best constitute another level of syntax.

Standard views about semantics

- Giving truth conditions is a fundamental aim of semantics.
- Truth conditions require referentialist semantics.
- Compositionality requires objects, involves application of predicates of objects.

Distinction needs to be made between entities that turn out to be merely conceived and entities intended to be merely conceived;

Intentional verbs (*think about, conceive, imagine, talk about*) permit the latter; all other predicates permit only the former.

How should reality itself be understood?

Conceptions of reality

- Reality as consisting just in what is fundamental
 - Reality as a mind-independent realm of objects
 - Reality as ordered by relations of relative fundamentality or ontological dependence so to include derivative entities
 - Reality as comprising ordinary objects, with their partly mind-dependent individuation
 - Reality as permissive or maximalist: a plentitude of just anything conceivable that meets the conditions for its existence (Eklund 2008, Schaffer 2009)
- Ontology as a matter of choice rather than of the discovery of what there really is
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5. The data relevant for natural language ontology and the core-periphery distinction

5.1. What sorts of linguistic data are indicative of the ontology implicit in natural language?

Not metaphysical assertions, but presuppositions:

(10) a. *There are events.*

b. *There are abstract objects.*

c. *The demonstration occurred / ??? existed.*

Referents of NPs, implicit arguments of predicates,

(11) a. *wisdom, Socrates' wisdom, John's walking, the number of planets*

b. *John buttered the toast with a knife.*

5.2. The distinction between core and periphery of language

Further general observation

Philosophers and semanticists engaged in natural language ontology do not take certain sorts of expressions or uses of expressions into account.

[1] Technical expressions:

The nothing, to nothing (Heidegger)

Essence, ontological dependence, the fundamental, the part-of-relation, possible world, sum

[2] Non-ordinary, philosophical uses of expressions

Proposition, existence, property, object, group

[3] Certain types of expressions or constructions, e.g. reifying terms

Reifying terms

(12) a. *the truth value true*

b. *the number eight*

c. *the proposition that it might rain*

d. *the event of raining*

e. *the sum of John and Mary*

Some observations about reifying terms in the literature

- The existence of the term *the truth value true* was not used by Frege to motivate truth values as objects,
- Frege did not motivate numbers of objects on the basis of terms like *the number eight*, but on the basis of *the number of planets* and *eight*
- Propositions are generally not motivated by appealing to *the proposition that S*
- Davidson argued for events on the basis of inference patterns with adverbials, not on the basis of terms like *the event of raining*
- Link did not motivate sums of individuals as part of the ontology of natural language on the basis of terms like *the sum of John and Mary*, but on the basis of the semantic behavior of plurals and conjunctions (*the students, John and Mary*).

Generalization

Philosophers and semanticists made tacit use of a distinction between core and periphery of language: only the core, not the periphery, reflects the ontology of natural language.

The (ontological) periphery of natural language

Expressions or uses of expressions that are not indicative of the ontology of natural language: ‘philosophical’, technical expressions, expressions whose use requires ‘ontological reflection’ and non-ordinary, ‘philosophical’ uses of expressions

5.3. Challenges for the core-periphery distinction

5.3.1. How can the core-periphery distinction be characterized content-wise?

The contrast that is somehow involved:

Intuition vs inferential belief or acceptance, reasoning, reflection

What is not involved is a distinction in the nature of the ontology itself:

An ontological notion that is arrived at through reasoning and acts the intended meaning of a peripheral expression may turn out to be part of the core.

Hypothesis about reifying terms (Moltmann 2013, chap. 6)

The structure of reifying terms:

(13) *the* - sortal noun – nonreferential expression or use of an expression (quotational use)

Reifying terms involve an operation of abstraction or something-from-nothing transformation from a nonreferential expression or use of an expression.

This along with form of inferential or derivative acceptance of entities

5.3.2. Is the core-periphery distinction grounded in grammar?

Division between the lexical and the functional part of grammar

Does not quite match the core-periphery distinction: the example of *exist* vs *existence*

But the lexical-functional divide plays a role perhaps along the following lines:

The core includes the functional part of language,

The periphery includes all nouns with their lexical meanings

Relation to Chomsky's (1981, 2006) core-periphery distinction?

Very roughly, the core of the syntactic system of a language represents universal grammar and the periphery exceptions and outside influences.

(14) Characterization of the ontology of natural language (1)

The ontology of a natural language is the ontology a speaker *implicitly accepts* by way of using the *core* of the language.

6. Ontology as grammar

Observations

[1] The ontology of natural language does not permit rejection:

Even when a speaker rejects upon reflection an ontological notion conveyed by an expression or construction in the core of language, she will automatically be committed to it when she uses the language.

[2] The core of language does not permit non-ordinary, 'philosophical' use.

Example 1

Pluralities do not carry properties of size:

(15) *The children are large.*

Impossible for a speaker to use (15) having a notion of plurality in mind (sum, set) that has properties of size.

Example 2

Bare nouns cannot be used to refer to possibly uninstantiated properties, rather than (instantiated) qualities.

(16) a. *Wisdom exists.*

b. *The property of being wise exists.*

Impossible for a speaker to use *wisdom* in (16a) having in mind the notion of a property referred to in (16b).

Example 3

The verb *exist* does not permit a 'philosophical' use conveying a univocal notion of existence:

(17) a. ??? *The rain still exists.*

b. ??? *The protest existed (yesterday).*

Rejection of the non-univocal notion of existence (as endurance) conveyed by *exists* in favor of a univocal notion of existence is impossible.

The impossibility of rejection is not tied to the implicitness of acceptance:

The notion of acceptance of the ontology of natural language must be distinct from the implicit acceptance or bias in ethics, which does allow for rejection

What notion of acceptance is involved in the ontology implicit in natural language?

Perhaps not acceptance at all, but a relation on a par with *knowledge* of language (grammar): namely knowledge of the selection of the ontological structure that goes along with the core of language, given a permissive (plenitudinous) ontology

This means that the ontology associated with the core of language is part of grammar.

(18) Characterization of the ontology of natural language (2)

The ontology of a natural language is the ontology a speaker *chooses* by way of making use of the core of the language.

Further issue

The acceptance of the permissiveness of the ontology

The permissiveness of ontology cannot be rejected. However, distinctions among ontologies or ontological levels are possible.

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