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# The Ontology of Natural Language

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## 1. Natural language ontology as a practice and a discipline

### The view

Natural language involves its own ontology (ontological categories and structures), an ontology that may be different from the one a philosopher may be willing to accept or that would be needed for particular sorts of purposes, such as the development of particular scientific theories.

### Terminology

Natural language ontology or natural language metaphysics:

the discipline whose aim is to uncover the ontological categories and structures implicit in natural language

The ontology of natural language:

the ontological categories and structures implicit in natural language

Natural language ontology contrasts with:

- Ontology for a particular purpose or the ontology involved in a particular scientific theory
- Foundational ontology: the ontology of what there 'really' is, the ontology that involves fundamental ontological categories and structures

### Strawson (1959)

Descriptive metaphysics: aims to uncover our shared conceptual scheme, or better the ontological categories and structures as we implicitly or ordinarily conceive of them

Revisionary metaphysics: aims to conceive of a 'better' ontology, for particular purposes

Fine (ms):

Shallow metaphysics, naïve metaphysics: the metaphysics of appearances, reflected in language, or otherwise in our not language-driven judgments

Foundational metaphysics: the metaphysics of what there 'really' is

A common view about the ontology of natural language

Natural language involves a wealth of referential terms permitting reference to a great range of abstract, minor, and derivative objects, many of which are unacceptable or at least problematic philosophically.

Reactions:

- reject (part of) the ontology of natural language
- consider the contested entities to be 'language-created' or 'pleonastic' entities
- properly analyse natural language and arrive at a different view of the ontology natural language involves
- accept and make sense of the rich ontology of natural language

Other purposes of natural language ontology

Support of a philosophical view:

- Medieval philosophers when arguing for nominalist / platonist views
  - Twardowski when arguing for a cognitive notion of a truth bearer
  - Frege when arguing for numbers as objects or for propositions
  - Many philosophers of language or mind today when arguing for propositions
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## **2. How to characterize the ontology of natural language**

First proposal

The ontology accepted by 'ordinary' speakers

No:

Ordinary speakers may engage in reflections upon what there is and the nature of things and accept ontological views not compatible with the one reflected in natural language.

Better

The ontology implicit in natural language, i.e. presupposed by the use of natural language.

(1) The ontology of natural language

The ontology a speaker accepts *when* using natural language.

Note:

The ontology of natural language may stay neutral on various issues in metaphysics, e.g. fundamentality, personal identity, the existence / nature of good etc.

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### 3. What data should natural language ontology take into consideration?

#### 3.1. Presuppositions vs assertions

Statements that natural language ontology should not take into consideration:

- (2) a. There are propositions.
  - b. Events are property instances.
  - c. Numbers are objects.
- (3) a.. That 2 is prime is a proposition.
  - b. John's arrival is an event.
  - c. Three is a number.

#### Criterion 1

The ontology of natural language is reflected in presuppositions, not asserted contents of commonly used sentences (sentences not uttered as a result of philosophical reflection).

#### Examples of ontologically relevant presuppositions

Lexical presuppositions, semantic selectional requirements

#### Existence predicates

Events vs objects (Cresswell 1986, Fine 2006, Moltmann 2013c):

- (4) a. John's arrival *took place* yesterday.
  - b. ??? John's arrival *existed* yesterday.
- (5) a. ??? The building *took place* last year.
  - b. The building *existed* last year.

#### Other predicates

Actions vs products (Twardowski 2012, Moltmann 2013b, 2014, to appear):

- (6) a. John's claim is true.  
       b. ??? John's speech act is true.
- (7) a. John kept / broke his promise.  
       b. ??? John kept / broke his speech act.

Facts vs events (Vendler 1967, Asher 1993)

- (8) a. John observed Bill's arrival.  
       b. ??? John observed the fact that Bill arrived.

Lexical presuppositions are important for identifying and characterizing ontological categories that are part of the ontology of natural language.

### 3.2. Identity statements

Frege

Terms standing for objects have the ability of 'flanking the identity symbol'

Identity statements assert, rather than presuppose the identity of objects by the two terms

#### Relevant identity statements

- (9) a. The number of planets is eight. (Frege)  
       b. John's belief is that 2 is prime.
- (10) a. ??? John's remark is his belief. (Moltmann 2013b)  
       b. ??? The number of planets is the number nine. (Moltmann 2013a, b)

#### Irrelevant identity statements

- (11) a. The number nine is the number nine.  
       b. The proposition that it is raining is the proposition that John believes.
- (12) a. The number nine is nine.  
       b. The proposition that S is what John believes.

#### Criterion 2

The ontology of natural language is reflected in judgments regarding identity statements not involving technical terms or more generally terms in *the periphery of language*.

Less relevant for the ontology of natural language:

#### Sentences with 'technical' or 'quasi-technical' terms

- (13) a. the number nine  
 b. the concept horse  
 c. the truth value true  
 d. the direction north

The construction of ‘reifying terms’ (Moltmann 2013a, b)

definite determiner – sortal – nonreferential material

as a quotational construction in (13) and below?

- (14) a. the word ‘nine’  
 b. the noun ‘horse’  
 c. the adjective ‘true’
- (15) a. the proposition that S  
 b. the fact / possibility that S

Periphery vs core of language

Reifying terms as terms in the periphery, not the core of language

Criterion 3

The ontology of natural language is reflected in the *core* of language, not its *periphery*.

However, somehow the possibility of using the periphery of language, extending natural language with the use of philosophical terms, must also be accounted for.

### **3.3. Sortal predication**

Less relevant data

- (16) a. That it is raining is a proposition.  
 b. John’s arrival is an event.  
 c. Wisdom is a property.  
 d. Socrates’ wisdom is a trope.

Problem: Sortal predication is asserted rather than presupposed

Somewhat relevant data:

- (17) a. Wisdom is a property few people have.  
 b. John’s arrival is an event that almost did not take place.  
 c. That S is a proposition few people believe.

Predicate-initial content is background and thus presupposed, rather than focused and thus asserted as the subsequent material

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#### **4. Ways objects are involved in the semantic structure of natural language: referential and quantificational terms**

##### **4.1. Referential terms**

###### (18) Frege's criterion of objecthood

An object is what a referential term stands for.

Some plausible criteria for referential terms (e.g. Hale 1983):

- Being an NP, possibly with a definite determiner
- Support of anaphora
- Replaceability by quantifiers
- Ability to occur with extensional predicates (including identity predicate)

##### **4.2. Quantification**

Ordinary and special quantifiers

(19) a. Socrates is wise.

b. Socrates is something admirable.

(20) ??? Socrates is some admirable property.

*Something admirable*: special quantifier

*Some admirable property*: ordinary quantifier

##### **4.3. The Meinongian claim: referential terms and quantification are not ontologically committing**

Problematic data -- statements of a philosophical view:

(21) There are things that do not exist.

Relevant data:

(22) a. The building mentioned in the guide does not exist. (Moltmann 2016)

- b. There is a building mentioned in the guide that does not exist.
- c. ?? There is a building that does not exist.

### Conclusion

Reference and quantification are ontologically committing only with existence-entailing predicates.

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## **5. Other ways for entities to be involved in the semantic structure of sentences**

### **5.1. Implicit arguments**

Davidsonian event semantics: events as implicit arguments of verbs

Events as semantic values of referential terms: nominalizations of verbs

- (23) a. John walked slowly.  
 b. John's walk was slow.

Tropes as implicit arguments of adjectives and semantic values of adjective nominalizations:

- (24) a. John was extremely happy.  
 b. John's happiness was extreme.

Degrees, contextual standards as implicit arguments of adjectives

### **5.2. Contextual parameters of evaluation**

Times, worlds, situations, taste parameters etc

Different sorts of semantic involvement reflect differences in degree of objecthood?

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## **6. How the ontology of natural language may be special**

### **6.1. Language-created objects: pleonastic entities (Schiffer 1996, 2003)**

'Something-from-nothing inferences' create new entities:

- (25) a. Socrates is wise.  
 b. Socrates has the property of wisdom.

(26) a. 2 is prime.

b. (The proposition) That S is prime is true.

(27) a. John walked slowly.

b. John's walk was slow.

Good candidates for the pleonastic view: reifying terms

## 6.2. Discourse-driven ontology

Discourse referents (Karttunen 1976, Edelberg 1986)

Information-based part structures of pluralities and quantities (Moltmann 1996)

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## 7. The importance of natural language ontology

### 7.1. Rectify philosophical prejudices regarding natural language

#### A common view

Natural language allows for reference to a wealth of abstract objects: properties, propositions, numbers, degrees, word types.

#### But

A more thorough and deeper analysis of natural language indicates that the view is fundamentally mistaken.

#### Moltmann (2013b)

The ontology of natural language is much more particularist. In its core, natural language does not permit reference to abstract objects, but only reference to particulars:

- Tropes or trope-like objects (including quantitative tropes, number tropes),
- Pluralities of particulars (including modalized pluralities or kinds),  
e.g. *wisdom* is a term standing for a the plurality of (possible) wisdom tropes  
*the number of planets* stands for a manifestation of 'being eight' in the planets

Moreover many occurrences of expressions are wrongly considered referential:

- Quotations are generally nonreferential,
- Predicative and sentential complements (and subjects) are nonreferential



- Moltmann (2014, to appear): More generally, sentences are not terms for propositions, but predicates of modal or attitudinal objects

### The nominalization analysis of special quantifiers

Special quantifiers (and pronouns):

*something, everything, nothing, several things, something nice, the same thing, that*

Special quantifiers and pronouns are nominalizing devices and do not stand for objects that are arguments of the predicate

### Observation

Special quantifiers can take the place of nonreferential (occurrences of) expressions as long as the position permits NPs:

Predicative position

- (28) a. Socrates is wise.  
 b. Socrates is something admirable.  
 c. ??? Socrates is some admirable thing.  
 d. ??? The property of being wise is admirable.  
 e. Wisdom is admirable.

Complement of an intensional transitive verb

- (29) a. John needs an accommodation  
 b. John needs something important.  
 c. The property of being accommodation is important.  
 d. John's need / the thing that fulfils John's need is important.

- (30) a. John saw a ghost.  
 b. John saw something frightening.  
 c. ??? There is a ghost John saw.

Clausal complement:

- (31) a. John imagined that S.  
 b. John imagined something interesting  
 c. ??? The proposition that S is interesting.  
 d. John's imagination is interesting.
- (32) a. John demanded to be promoted.  
 b. John demanded something impossible to fulfill.  
 c. That's something impossible to fulfill.  
 d. ??? The proposition that John is promoted is impossible to fulfill.

Contexts that do not permit NP

- (33) a. What did John walk?  
 b. How did John walk.  
 c. In what way did John walk?

**-way** as another nominalizing device

The syntactic function of *like*: enabling nominal replacement (Hellie 2007)

- (34) a. How / ??? What does Mary look?  
 b. What does Mary look like?  
 (35) a. How / ?? What is Bill?  
 b. What is Bill like?  
 (36) a. What is it like to feel pain?  
 b. How does one feel pain?

The purpose of natural language ontology

Clarify what the ontology of natural language really involves before rejecting it!

## 7.2. Further purpose

Provide accurate analyses of linguistic data when those are taken to motivate a philosophical view

### Example 1

The relational analysis of attitude reports:

*that*-clauses as referential terms providing a propositional argument for an attitudinal relation?

Various views in philosophy of language and mind are based on that view of the logical form of attitude reports

But the logical form of attitude reports may be a very different one, involving sentences predicated of attitudinal objects.

### Example 2

Some apparent identity statements are better considered as specificational sentences (Higgins 1973)

Specificational sentences express question – answer relation, not identity among objects

- (37) a. What John is is happy.

b. 'What is John' – 'John is happy'.

Applications:

(38) a. The number of planets is eight

b. What number of planets is there? -- There are eight planets'. (Moltmann2013a)

(39) a. John's belief is that S.

b. 'What does John believe' – John believes that S.

(40) a. The reason is that S. (Pryor)

b. What reason is there – the reason that S.

### 7.3. Yet another purpose

The ontology of natural language may for some areas be the right one -- perhaps for propositional attitudes and the ontology and more generally the ontology of the mind

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