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**Natural Language Ontology and Semantic Roles**

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

Natural language ontology or natural language metaphysics:

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

The ontology of natural language: the ontological categories, notions and structures implicit in natural language

Natural language ontology as part of descriptive metaphysics

The branch of metaphysics that gives priority to what is reflected in natural language (but is not only based on what is reflected in natural language).

Natural language ontology vs *ordinary language philosophy* (Wittgenstein, Ryle, Austin, etc)

For ordinary language philosophy, language was the *method* not the *subject matter*: pointing out *ordinary uses* of language that do not give rise to philosophical, ‘metaphysical’ problems.

However common connections: focus of ordinary use of language

Appeal to natural language by philosophers throughout the history of philosophy

- Medieval philosophers when arguing for nominalist or platonist views of universals

- Twardowski when arguing for a cognitive notion of a truth bearer (rather than an abstract proposition)): thoughts, judgments, beliefs, decisions, claims, requests

- Frege when arguing for numbers being objects

- Vendler when arguing for a distinction between facts and events and many other things

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**2. The *ontology of natural language* and the *reflective ontology* of speakers**

The emerging view

Natural language involves its own ontology (ontological categories, notions, and structures), an ontology that may be different from the one a philosopher may be willing to accept, or a non-philosopher when thinking about what there is.

Cases of discrepancy

Existence (Hacker 1982, Cresswell 1986, Fine 2006, Moltmann 2013b):

(1) a. The house still exists.

 b. The largest prime number does not exist.

(2) a. ??? The protest still exists.

 b. ??? The cat’s death existed yesterday.

 c. ??? The birth of Venus did / does not exist.

(3) a. The protest is still taking place.

 b. The cat’s death occurred yesterday.

 c. The birth of Venus did not occur / happen.

Existence predicates

A predicate that can gives a true sentence with an empty subject and negation (when sortally suited for the sort of thing the subject would stand for).

The nominalization *existence*:

nonrelational: univocal notion, the reflective notion of existence (‘everything has existence’)

relational: conveys endurance (??? *the existence of the cat’s death* / *of the protest yesterday*)

Other existence predicates

*obtain, hold, is valid, present oneself* (for cases)

Variable objects (Fine 1999, Moltmann 2013a, to appear a)

(4) a. The president of the US is elected every four years.

 b. The water in the container has increased.

 c. The height of the water level has increased.

 d. The quality of her writing has improved.

 e. The book John needs to write must be short.

Criteria for referential NPs (terms), occurrences of expressions that stand for objects

anaphora support, replaceability by (ordinary) quantifiers, application of predicates

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**3. Situating natural language ontology within metaphysics**

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’s (2017) distinction between naïve and foundationalist metaphysics

Naïve metaphysics

the *metaphysics of appearances*, reflected in language or otherwise in our not language-driven common sense judgments

‘Naïve’ is misleading:

Not the ontology the speakers accept when naively reflecting upon what there is (‘folk metaphysics’) But ordinary speakers may engage in reflections upon what there is and the nature of things and accept ontological views not compatible with that reflected in natural language. The distinction between implicit and explicit acceptance of an ontology is important.

Foundational metaphysics:

the metaphysics of what there ‘really’ is / of what there is fundamentally.

Fine’s point

Foundational metaphysics presupposes naïve metaphysics, must take naïve metaphysics as its starting point. Naïve metaphysics should be pursued without considerations of foundational metaphysics.

Perhaps not strictly so

Natural language ontology cannot be pursued without considerations of what judgments / sentences are true and what sorts of features of reality contribute to them being true.

Characterization of the ontology of natural language

 (5) a. First proposal

 The ontology of natural language is the ontology accepted by ‘ordinary’ speakers

 (nonphilosophers).

 b. Second proposal

 The ontology of natural language is the ontology speakers implicitly accept.

 c. Third proposal (Moltmann 2017a, to appear b)

 The ontology of natural language is the ontology a speaker implicitly accepts *when*

using natural language.

Why relativization to language

[1] Part of the ontology of natural language may be driven by the meaning or use of natural language itself.

Examples:

* definite NPs that define variable objects
* mass-count distinction (*the rice - the rice grains - the heap of rice*)
* nonworldly facts (that S *or* S’, …)
* Schiffer (1996, 2003)’s notion of a pleonastic entity and related views

[2] Different languages may have different ontologies -- either reflecting the Sapir-Whorf Hypothesis or because they set ontological ‘parameters’ differently (for something like a shared set of parameters in Chomsky’s 1981 sense).

[3] The ontology implicit in natural language may be driven by language-specific conditions, rather than general cognitive conditions, just like the rest of language according to Chomsky.

Natural language ontology as a branch of both metaphysics and linguistics/cognitive science

Philosophical importance of natural language ontology (NLO)

- Rectify philosophical views that may have been based on a mistaken, naïve linguistic analysis

- Fulfill the aim of conceptual analysis, but even more than that: NLO may uncover implicit notions in natural language constructions or categories, not just predicates

- Uncover philosophical views, right or wrong, that are implicit in language.

- Natural language may display the right ontology philosophical view about certain topics, e.g. attitude reports, the ontology of the mind

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**4. What sorts of linguistic data reflect the ontology of natural language?**

**4.1. Ontological assertions do not count**

E.g. assertions explicitly involving the ontological category (sortal) itself

Sortal quantification

(6) a. There are propositions.

 b. There are events.

Sortal predication

(7) a. Numbers are objects.

 b. Three is a number.

 c. John’s arrival is an event.

Data that may count:

Specific quantification (over noun or verb denotations)

(8) a. There is a war in this country.

 b. John arrived yesterday.

Specific identity statements

 (9) a. The number of planets is eight. (Frege)

 b. John’s belief is that 2 is prime.

(10) ??? John’s remark is his belief. (Moltmann 2013a)

Lexical presuppositions reflecting ontological categories

- Semantic selectional requirements of existence predicates

Predicates distinguishing facts and events (Vendler 1967)

(11) a. John observed Bill’s arrival.

 b. ??? John observed the fact that Bill arrived.

Predicates distinguishing actions and products (attitudinal objects) (Twardowski 1912, Moltmann 2013a, 2017b):

(12) a. John’s claim is true.

 b. ??? John’s speech act is true.

(13) a. John kept / broke his promise.

 b. ??? John kept / broke his speech act.

Other ways in which ontological categories are (may be) reflected in natural language: syntactic categories, classifiers, functional elements

**4.2. The core-periphery distinction**

Irrelevant identity statements

(14) a. The number nine is the number nine.

 b. The proposition that it is raining is the proposition that John believes.

(15) a. The number nine is nine.

 b. The proposition that S is what John believes.

‘Reifying’ derivative terms do not (Moltmann 2013a)

Technical terms or predicates or non-ordinary uses of terms or predicates

Distinguish periphery and core of language (analogous to that of Chomsky (1986) for syntax)(Moltmann 2013a, 2017, to appear b)

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

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

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**5. The ‘ontology of appearance’**

The domain of the ontology of natural language consists of *conceived objects*, not *conceptions* of objects; entities that have properties of objects, not representations

Conceived objects may turn out to be *real objects*, *derivative objects grounded in features of reality*, and *merely conceived objects* (intentional, nonexistent)

The ontology of NL also includes objects acknowledged as potentially merely conceived objects by the speaker.

In that sense, the ontology of natural language in *Meinongian*: referential and quantificational NPs in natural language are not as such ontologically committing.

Linguistic support:

Problematic data -- statements of a philosophical view:

(17) There are things that do not exist.

Relevant data:

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

 b. There is a building referred to by Joe that does not exist.

(19) a. ??? The building does not exist.

 b. ?? There is a building that does not exist.

*Compositional semantics* of NPs modified by relative clauses with intentional verbs requires merely conceived objects as semantic values (Moltmann 2016).

Restrictions on the semantic roles of intentional objects

1. act only as semantic values of (quantificatonal or referential) NPs, not as implicit arguments

2. require implicit or explicit reference to pretend or unsuccessful referential acts (quasireferential acts)

Support for the view of intentional objects as *abstractions from quasi-referential acts* (Moltmann 2016)

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**6. Objects and semantic roles**

Semantic roles of objects besides that of being semantic values of referential NPs (terms)

**6.1. Implicit arguments**

Davidsonian event semantics: events as implicit arguments of verbs

Events as semantic values of referential terms: nominalizations of verbs

(20) a. John walked slowly.

 b. John’s walk was slow.

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

(21) a. John was extremely happy.

 b. John’s happiness was extreme.

- Degrees, contextual standards as implicit arguments of adjectives

- Modes of presentation as implicit arguments of attitude verbs, of referential NPs

- Situations as implicit arguments of referential or quantificational NPs (domain restrictions as on various situation-based approaches; situated part structures for mass and plural NPs, cf. Moltman 1996)

**6.2. Contexual parameters of evaluation**

Common view:

Worlds, times, standards etc as parameters of evaluation (of the truth of the sentence or the proposition it expresses) are mere posits of the semanticists, involve no ontolological commitment of the object language.

**6.3. Alternatives (alternative semantics)**

Generally under association with focus:

(22) John ate only the bread.

**6.4. Semantic values of non-nominal anaphora**

*That happy*, tense*, would, …*

**6.5. Semantic values of non-nominal complex constructions**

e.g. propositions as semantic values of *that*-clauses

**6.6. Truthmakers (on Fine’s truthmakjer semantics)**

Sentence meanings as sets of exact truthmakers – actual and possible situation wholly relevant for the truth of the sentence (Fine to appear)

Truthmaker theory as part of naïve metaphysics, natural language ontology

**6.7. Worlds, situations as part of the ontology of natural language?**

General constraint

Posit entities in *any* semantic role only if they are truly part of the ontology of natural language

Best reflection of entities in the ontology of natural language: as semantic values of referential terms of the core of language.

Why: act of reference? Count category? (Implicit) Sortal?

Application

Attitude reports without propositions, based Twardowskian (1912) attitudinal objects instead (Moltmann 2017b)

Application to worlds, situations

*Worlds*: not reflected in the core of language, as referents of non -nominal anaphora: *would, then* etc?

*Situations*: not reflected in the ordinary use of the noun *situation* (special constraints); instead perhaps in *those circumstances*, the classifier (light noun): *time(s)* (Kratzer 2014)

Reflection of situations as truthmakers and as alternatives in *case*-constructions:

(23) a. three cases in which a student failed the exam

 b. the two cases in which John wins the race or Mary does

(24) a. ??? We discussed the case in which John returned yesterday.

 b. The case in which John might have returned yesterday could not be ruled out.

(25) a. ??? John came to the party. In that case, Mary came to the party too.

 b. If John came to the party, I am happy. In that case, Mary came to the party too.

(26) a. John hopes that Mary has won the race. In that case, he wants to celebrate.

 b. ??? John believes that Mary has won the race. In that case, he wants to celebrate.

Existence predicates:

(27) Der Fall, in dem Hans gewinnt, ist nicht eingetreten / ??? ist nicht passiert / ??? existierte

 nicht.

 The case in which Johnwins did not present itself / did not happen / did not exist.

Conclusion

Situations as truthmakers and alternatives are overtly reflected in the core of language.

 Difference in degrees of objecthood associated with different semantic roles?

* entities that are semantic values of referential terms
* entities that are only implicit arguments
* entities that are only parameters of evaluation

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