Philosophy of Language: Natural Language Ontology

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Handout 2

Reference and Predication

1. Introduction

1.1. Summary of last time

-   Natural language ontology as a <u>subdiscipline</u> *of both philosophy and linguistics*:
metaphysics that gives priority to intuitions reflected in natural language.
- Choice of 'ontology' rather than 'metaphysics' in order to talk about the *subject matter* of
natural language ontology ('the ontology of natural language') and to be able to use the *plural*
for the subject matter of ontology ('ontologies of different languages', …)
- Involvement of ontology in *semantics* in many ways
- Lots of connections between *syntax and ontology*
-   <u>An important issue</u>
Is natural language ontology problematic by making ontological claims that may be
incompatible with what many philosophers accept? Is natural language ontology *overall in
error* or is it in fact not ontology, but *syntax* in some sense (as Chomsky would say)?
Proposed strategy to pursue: <u>two-level ontology</u>
1. Ontology reflected in linguistic intuitions
2. Ontology of the fundamental
-   Not all linguistic data reflect the ontology implicit in natural language:
Not data from the 'periphery' of language, but only its 'core'

1.2. Today's topic

The semantics of simple subject-predicate sentences:

(1) a. Mary is happy.

   b. The person in the car is happy.

<u>The simple analysis</u>

(2) a. happy(Mary)

   b. happy(the x[person(x) & in(x, the car)]

2a: Speaker refers to an individual with the utterance of 'Mary' and attribute a property of the individual.

2b: Speaker refers to whatever individual meets the property of being a person in the car, presupposing that there is a unique such individual.

<u>Elaboration of the view</u>

- How do names, definite DPs, demonstrative DPs etc refer, possibly with the help of the linguistic / nonlinguistic context?

- The meaning of predicates: recent views of verb meanings and adjective meanings, as involving implicit events and implicit modes (tropes).

<u>Remark</u>

The semantic and especially philosophical literature has focused on these questions, rather than the challenges to the simple analysis.

<u>Challenges to the simple analysis</u>

- The *substitution problem,* which identifies a range of nonreferential complements

- Challenges to the notion of *singular reference*:

Plural reference, kind reference, (mass reference)

- Challenges to the *referent-identifying role* of DP modifiers:

Reference under a perspective or *reference to qua objects* with DPs modified by *as*-phrases and part structure modifiers

- *Individuating descriptions,* rather than referent-identifying descriptions ('individuating reference')

Reference to proposition-like entities

Reference to entities obtained by abstraction: Kimean events

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2. The notion of a referential NP (DP)

2.1. Role of referential NPs in philosophy

Philosophical terms (generally borrowed from logic)

'Singular term', 'referential term', older:' name'

Philosophers' criteria for singular termhood

Frege:

A singular term is what can flank the identity sign (and involves the definite determiner)

Bob Hale:

A singular term is a term that can be replaced by a quantifier (of sorts)

(3) a. The Fregean view of the function of referential DPs in a sentence:

  The function of a singular term in a sentence is to stand for an object.

 b. The Fregean criterion of objecthood

  An object is what can be semantic value of a singular term.

2.2. Predictions of the simple semantics of subject-predicate sentences

Substitution of coreferential DPs salva veritate

(4) a. Mary is happy.

 b. Mary is John's neighbor.

 c. John's neighbor is happy.

Problems for substitutivity

The informativeness of identity statements (Frege)

(5) a. The evening star is morning star.

 b. The evening star is the evening star.

No substitutivity in intensional contexts, e.g. attitude reports

(6) a. The ancients believed that the evening star is not the morning star.

 b. The ancients believed that the evening star is not the evening star.

2.3. The NP – DP distinction

Determiners: *the, that*

Determiners as head (Steven Abney,… the widely accepted view in syntax today)

(7) a. That man is a man.

   b. [$_{DP}$ That [$_{NP}$ man]] [is [$_{NP}$ a man]].

2.4. Syntactic criteria for referential DP

The name constraint (Guéron and May)

A name (referential DP) cannot contain a variable

(8) a. Who did John write a book about e?

   b. Who did John read every biography of e?

(9) a. * Who did John read that book about e?

   b. Which book did John read the first chapter of e?

(10) a. John read the first chapter of every book I gave him.

   b. * John read that chapter of every book I gave him.

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3. Predication

3.1. Predicating a property?

Recent views of the meaning of verbs (Davidson 1967)

As predicates of events:

(11) a. John walked slowly

   b. ∃e(walk(e, John) slowly(e))

Recent views of the meaning of adjectives

Adjective as predicates of modes (tropes, particularized properties) (Moltmann 2013)

(12) a. Mary is profoundly happy

   b. ∃t(happy(t, Mary) & profoundly(t))

Another view;

Adjective as predicates of states (Parsons)

3.2. Taking into account the copula

(13) John is / remained / became happy.

<u>Categorematic and syncategorematic analysis of copula verbs</u>

(14) a. John became happy.

    b. become(John, the property of being happy)

    c. $\exists\, t < t_0 \exists\, t' < t_0 (t < t' (\neg\, happy_t(John)\ \&\ happy_{t'}(John))$

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4. Challenges for the simple analysis of subject-predicate sentences

<u>The simple analysis</u>

Subject just contributes an individual (in one way or another).

Predicate contributes a property ascribed to the individual or a relation relating the individual to the event or mode (trope) described by the predicate.

4.1. Nonreferential arguments

Failure of substitution of apparent coreferential subjects or complements

<u>Predicative complements</u>

(15) a. John became happy / a sailor

    b. ??? John became the property of being happy / the property of being a sailor

Problem for the categorematic analysis of *become*

<u>Clausal complements</u>

(16) a. John thought that it would rain.

    b. John thought something.

    c. * John thought the proposition that

    d. * John though a thing / an entity.

(17) a. John fears that.

    b. John fears something.

    c. ??? John fears the proposition that it will rain.

    d. ??? John fears an entity / a thing.

<u>Approaches</u>

- Predicates do not syntactically admit full DP, but only special DPs (light DP)
- *That*-clauses are not referential terms, but predicates of content bearers
- *That*-clauses contribute higher-order entities
- *That*-clauses contribute entities related to Davidsonian events by different thematic relations than full DPs

NP-complements of intensional verbs

(18) a. John is looking for a unicorn.

   b. John is looking for something.

   c. ??? John is looking for the property of being a unicorn.

   d. ??? John is looking for some individual.

Direct quotes as complements

(19) a. John screamed 'help'.

   b. John screamed something.

   c. John screamed ? the word / ??? the expression 'help' / ??? verb 'help'.

(20) a. 'Rouge' means 'red'.

   b. 'Rouge' means something.

   c. * Rouge' means the concept red / property of redness

Observation

 Word-NPs are special, across languages!

Measure phrases as complements

(21) a. John weighs 50 kilo.

   b. John weighs something.

   c. ??? John weighs an entity / a certain thing.

Single explanation of the failure of substitutivity of such complements

All those complements do not have the function of singular terms providing an argument for the predicate (Moltmann, 'Abstract Objects and the Semantics of Natural Language').

The remaining challenge

Unified semantics of noreferential complements?

4.2. Plurals

Problem for definite plurals standing for sums (Link 1983) or sets:

(22) a. John and Mary met.

     b. ??? The sum / set of John and Mary met.

     c. The group of John and Mary met

(23) a. John and Mary are two.

     b. ??? The sum / set of John and Mary is two.

     c. ??? The group of John and Mary is two.

A possible solution

Plural reference (McKay, Yi, Oliver and Smiley):

John and Mary does not stand for a single thing that is a sum (or set), but stands for several things at once: John as well as Mary.

The students: stands for each individual student at once.

Plural predication

(24) *John and Mary met* is true iff *met* holds of John and Mary at once.

4.3. Kind reference

(25) a. Giraffes are tall.

     b. ??? That kind is tall.

(26) a. John owns giraffes.

     b. ??? John owns that kind / an entity.

(27) a. John is looking for Giraffes.

     b. John is looking for that kind for an entity.

Kind terms in Carlson's (1977) sense do not act as referential terms.

Possible solution (Moltmann 2013)

Modalized plural reference

Bare plurals plurally refer to all the actual and possible instances of the kind.

4.4. Nonreferential uses of number words

Number words as determiners or as adjectives:

(28) a. Two children came.

    b. The two children came.

Some empirical observations in Moltmann (2013)

(29) a. Two and two is four.

    b. ??? The number two and the number two is the number four.

(30) a. ??? John thought about two.

    b. John thought about the number two.

Hofweber (2016) and Moltmann (2013): 'the Adjectival Strategy'

Number words in argument position retain the meaning they have as determiners or adjectives.

Requires correponding meaning shift for mathematical predicates and functors.

Meaning shift not applicable to non-mathematical predicates.

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5. Non-referent-identifying contributions of modifiers

As-phrases

(31) a. I like John as teacher, but not John as a neighbor.

    b. John as a salesperson makes a lot of money, John as a teacher does not.

Two approaches

1. *The perspectival approach*

As-phrases set up a perspective under which the individual is being referred to and influences the way the predicate is understood.

2. *The ontological approach*

As-phrases define a *qua object* (Fine 1982):

John qua teacher is distinct from John qua salesperson.

Qua objects defined in terms of the way they inherit properties from their base:

John qua teacher inherits just those properties from John that John has while being a teacher / in virtue of being a teacher.

Part-structure modifiers (see my 1997 'Parts and Wholes in Semantics')

(32) The collection as a whole is expensive.

(33) The whole collection is expensive

Two meanings: 'as a whole' or 'all the parts of'

(34) a. The individual students wrote essays.

    b. The students wrote essays.

    c. (?) The students as individuals wrote essays.

<u>The same two approaches</u>

1. *The perspectival approach* (Moltmann 1997)

Whole sets up a situations in which the referent is not a 'whole' or is a 'whole'.

Individual sets up a situation in which the plurality consist only of individuals, not subgroups.

<u>Disadvantage</u>

Exceptional involvement of situations:

- as parts of DP-referents

- as parts of arguments of predicates

2. *The ontological approach* (Moltmann 2021)

Pluralities as 'configurations'

Whole$_1$: maps a plurality onto a collection that is a whole

Whole$_2$: maps an individual onto the plurality of its parts

Individual: maps a plurality onto a configuration in which only individuals are parts of the plurality.

<u>Disadvantage</u>

Too permissive an ontology?

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6. Individuating reference

<u>'Individuating reference'</u>

The descriptive content of the referential term serves to *individuate* the referent, not just to *identify* it.

The nature of the referent is reflected in the content and structure of the individuating referential term.

Already discussed in the middle ages (14th century)

Complexe significabile : Adam von Wodeham, Gregor von Rimini

Sentences denote complex entities, *complexe significabile*, states of affairs, not reducible to any of the other ontological categories.

Controversy whether such complexe significabile are 'something' or 'nothing'

Two contemporary views:

1. The structured-propositions view of the denotation of *that*-clauses (Lewis 1972, Cresswell 1985)

That-clauses denote structured propositions.

Structured propositions reflect the syntactic structure of sentences as well as the lexical words occurring in them.

Structured propositions as n-tuples of consisting of properties and objects:

(35) a. that John loves Mary.

    b. <the property of loving, John, Mary>

Reference to facts and possibilities (as qua propsositions)

(36) a. the fact that John loves Mary

    b. <the property of loving, John, Mary> qua being true

(37) a. the possibility that John loves Mary

    b. <the property of loving, John, Mary> qua being possibly true

2. Entities introduced by abstraction

The Kimean conception of events (Kim 1976)

For objects o, o', properties P, P', and times t, t':

(38) a. $F(o, P, t)$ exists iff o has P at t.

    b. $F(o, P, t)$ is identical to $F(o', P', t')$ iff $o = o'$, $P = P'$, $t = t'$.

This means that all of the descriptive content used in the event description is event-individuative.

Problem

Non event-indviduative modifiers:

(39) a. John's walk = John's slow walk

    b. John's walk = John's walk to the house

Two readings for *slow*?

(40) a. John's slow walk made him relax.

    b. John's slow walk was the cause of the delay.

Kim's solution

Event-individuative and event-characterizing modifiers.

(41) a. [*John's walk*] = the e[e = f(John, walk, t) & slow(e)]

    b. [*John's walk*] = the e[e = f(John, [*slow walk*], t)]

General problem for Kim's account of events

Assimilates events to facts:

The property P can be quantificational and disjunctive, but there are no quantificational or disjunctive events.

(42) a. the fact that a student failed the exam

    b. the fact that the event will be on a Monday or a Tuesday

P can unspecific, but events are fully specific.

(43) the fact that the sweater is red (whatever shade of red)

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7. Summary

Three challenges to the simple analysis of subject-predicate sentences

1. Subject (object) is not referential and does not serve to provide an argument of the property of relation expressed by the predicate

2. Plural rather than singular reference

3. Modifier contributes to a perspective or situation and the predicate applies not just to an individual, but to an individual in a situation or under a perspective

4. Description does serve not to identify referent, but to constitute or individuate it

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