*Language and Ontology*

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Handout 11

**The Standard Notion of a Proposition and its Problems**

**1. The notion of a proposition in contemporary philosophy of language and linguistic semantics**

**1.1. The roles of propositions in philosophy of language and semantics**

- primary bearers of truth values

- the meanings of sentences and embedded clauses

- the shareable contents or ‘objects’ of propositional attitudes and illocutionary acts

Propositions are primarily characterized by their roles

**1.2. Propositions and the logical form of attitude reports**

The Relational Analysis of attitude reports

- *That*-clauses are referential terms and provide propositions as arguments of the relation expressed by the verb.

- Attitude verbs and illocutionary verbs express dyadic relations between agents and propositions.

(1) a. John thinks that Mary is happy.

 a’. think(John, [*that Mary is happy*])

 b. John asked to leave the country.

 b.’ ask(John, [*to leave the country*])

 c. John said that Mary is happy.

 c’. say(John, [*Mary is happy*])

**1.3. Propositions and the semantics of special quantifiers and pronouns**

Special quantifiers and pronouns: quantifiers and pronouns that can take the place of predicative, intensional and clausal complements

In English: *everything, something, nothing, several things, the thing that, that, what*

The Propositional Analysis of special quantifiers in sentential position

*Everything, nothing, something*: quantify over propositions;

*That, what John said* etc stands for a proposition

Propositions as semantic values of special quantifiers or pronouns are needed to account for the validity of the inferences in (2a, b) and sentences such (2c, d) (Schiffer 2003).

(2) a. John thinks that Mary is happy.

 John thinks *something*.

 b. Mary believes *everything* Bill believes.

 Bill believes that it is raining.

 Mary believes that it is raining.

 c. John claimed that it was raining. Mary claimed *that* too.

 d. John said that it is raining. *What* John said is true.

**1.4. The nature of propositions**

Properties of propositions

- have truth conditions (essentially)

- are abstract: not in time and space

- are mind- and language-independent

Formal conceptions of propositions

[1] Sets of circumstances (or functions from circumstances to truth values)

Stalnaker, Lewis, Montague, most semanticists

Circumstances: possible worlds, situations

(3) a. [*Mary is happy*] = {w| Mary is happy in w}

[2] Structured propositions

Carnap, Cresswell, Lewis, Soames (previously), King

(3) b. [*Mary is happy*] = <HAPPY, Mary >

Structured propositions require additional specification of truth conditions:

 c. <HAPPY, Mary > is true in w iff Mary ∈ HAPPYw

Connectives not syncategprematic expressions , but exress relations among propositions:

 d. Mary is happy and Bill is satisfied

 e. <AND, p, q> is true at w iff <p, q> ∈ ANDw iff p is true at w and q is true at w.

[3] Propositions as primitives (Thomasson 1980)

**1.5. A bit on the history of the notion of a proposition**

Bolzano (1837)

‘[By] a *proposition* [*Satz an sich*] I understand any statement [*Aussage*] that something is or is not; *whether this statement is true or false; whether someone has put it in words or not; indeed whether it has been thought in one’s mind or not*.’ (Bolzano 1837 I, 77.)

On the lack of explicit proposition-referring terms in natural language:

‘No other words of German come to mind which are to some extend suited for this purpose than: *sentence*, *judgment*, *statement* and *assertion*. The all have the defect that they convey the additional conception of something that came into being and has come into being in virtue of the activity of a thinking being. […] When understanding the words “a *judgment*”, “a *statement*” “an *assertion*” we think certainly nothing else but something that has been produced [hervorgebracht] by *judging*, *stating* and *asserting*.’ (Bolzano 1837 I, 81-82)

Frege (1918/9)

Propositions (‘thoughts’) belong to a ‘third realm’, as mind-independent abstract objects

Propositions are the primary bearers of truth and falsehood.

Propositions are the meanings of sentences and referents of *that*-clauses.

Propositional attitudes are dyadic relations between agents and propositions.

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**2. Recent criticisms of the notion of a proposition**

Jubien (2001), Soames (2010), Hanks (2007, 2015), Moltmann (2003, 2013)

[1] The problem of graspability and understanding

How can an abstract object be grasped by an agent and act as the content of a mental state or act?

[2] The problem of truth-directedness

How can an abstract object -- a set, a function or an n-tuple -- be true or false?

Abstract propositions fail to account for the intimate connection between truth and intentionality, or more generally representation and intentionality: no truth / representation without the intentionality of an agent.

[3] The problem of the unity of propositions

How can a structured proposition, an n-tuple, have the particular truth conditions it is supposed to have? Why should <HAPPY, Mary> be true just in case HAPPY holds of Mary, rather than HAPPY does not hold of Mary, or HAPPY is distinct from Mary?

The problems of the unity of propositions, like the problem of the truth-directedness of propositions, is a problem of the interpretation of a structured proposition, namely how to interpret the relation among the propositional constituents, so as to identify its truth conditions on the basis of its constituents and the relations among them. It is a problem because a structured proposition does not have inherent truth conditions; rather the truth conditions of the structured proposition need to be externally imposed. Whatever external conditions one might impose, the choice of such conditions remains arbitrary.

[4] The problem of arbitrary identification

Why should the proposition that Mary is happy be one formal object rather than another if the two objects would equally fulfill the roles that propositions should play?

Benaceraff’s (1965) problem regarding natural numbers in the context of the philosophy of mathematics: the identification of the number two with either {{}} or {, {}} is arbitrary. Similarly, the choice of a formal object to be identified with a proposition is, to an extent, arbitrary.

- Why identify propositions with sets of circumstances rather than with functions from circumstances to truth values? Both could fulfill the roles of propositions equally well.

- Why identify the proposition that Mary is happy with the pair <HAPPY, Mary> rather than the pair <Mary, HAPPY> ? Either pair could fulfill the relevant conditions.

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**3. Criticisms of the Relational Analysis of attitude reports**

**3.1. General objections**

[1] The distinction between objects and contents of attitudes

Propositional attitudes are not attitudes towards propositions, rather a proposition provides the content of the attitude. This is not captured by the Relational Analysis.

Note, though, that there can be attitudes towards propositions:

John likes the proposition that S, John understands the proposition that S, John proved the proposition that S etc.

[2] The Underspecification Problem

Clausal complements may underspecify the content of an attitude. There are a range of difficulties arising if the missing elements need to be made part of the meaning of the clause, that is, of the proposition it expresses.

Examples:

Modes of presentation

(4) a. Pierre believes that London is pretty.

 b. Pierre does not believe that London is pretty. (Kripke)

The nature and identity of modes of presentations is far from clear.

Underspecified truth or satisfaction conditions

(4) c. Fiona wants to catch a fish. (Fara Graff 2014)

An agent may understand and use (4c) without knowing the exact completion of the satisfaction conditions of the reported desire.

**3.2. Linguistic problems for the Relational Analysis**

[1] The Objectivization Effect

(5) a. valid: John believes / proved that S.

 John believes / proved the proposition that S.

 b. invalid: John regrets that S.

 John regrets the proposition that S.

 c. invalid: John fears that S.

 John fears the proposition that S.

Potential explanation (Parsons, Asher 1993, King 2014)

Some attitude verbs select not propositions, but rather facts, or perhaps possibilities (or perhaps states of affairs) and *that*-clauses may instead stand for facts or perhaps possibilities.

(6) a. valid: John regrets that S.

 John regrets the fact that S.

 b. valid: John fear that S.

 John fears the possibility that S.

Problem

Many attitude verbs do not accept explicit fact-referring terms or possibility-referring terms either:

(7) a. invalid: John claims that S.

 John claims the proposition that S / the fact that S / the possibility that S.

 b. invalid: John knows that S.

 John knows the proposition that S / the fact that S / the possibility that S.

 c. invalid: John expect that S.

 John expect the proposition that S / the fact that S / the possibility that S.

 d. invalid: John imagined that S.

 John imagined the proposition that S / the fact that S / the possibility that S.

A further problem

If *that*-clauses can characterize propositions, facts, or possibilities, they can do so only in virtue of the syntactic / lexical context and cannot do so as (independent) referential terms.

(7’) a. That Mary is American is strange.

Only fact-reading, not possibility- or proposition-reading

(7’) b. John fears that it is raining.

No proposition reading available.

The Unique Determination Property of clauses (Moltmann 2003)

In a given syntactic context, a *that*-clause never has the choice of characterizing a proposition, a fact or a possibility, but rather there is only a single type of entity it characterizes.

Consequence:

*That*-clauses could not be referential terms referring to propositions, facts, or possibilities.

Generalization underlying the Objectivization Effect (Moltmann 2003, 2013)

In general, a full NP complement of an attitude specifies the object the attitude is about or directed toward, whereas a clausal complement specifies the content of the attitude.

[2] Substitution problems with clausal complements

Except with a few verbs (*believe, assert, prove*), *that* S does not permit substitution by *the proposition that* S and thus do not act like a proposition-referring term (Prior 1971, Bach 1997, Moltmann 2003, 2013, Chap 4 etc):

(8) a. John thought that S / ??? the proposition that S.

 b. John hoped that S / ??? the proposition that S.

*Think* and *hope* accept NPs namely special quantifiers and pronouns

(8) c. John thought the same thing as Mary.

 d. John hoped what Bill hoped.

General observation

Special quantifiers do not give rise to the Objectivization Effect and the Substitution Problem:

(11) a. John claims / knows / fears something.

 b. John imagines / expects that.

 c. John claims what Mary claims.

Attitude verbs that exclude NPs syntactically, including special quantifiers and pronouns: *remark, complain*

(9) a. John remarked that S.

 a’. \* John remarked something / that / what Mary remarked

 b. John complained that S.

 b’. \* John complained something / that / what Mary complained.

Other contexts where substitution is excluded for syntactic reasons:

The complement position of adjectives:

(10) a. John is happy that S.

 b. \* John is happy the proposition that S / the fact that S.

 c. John is happy about the fact that S.

Why do *believe, assert, prove* allow for substitution?

Those verbs are polysemous: one of their meanings is a dyadic relation between agents and propositions (perhaps in the sense of a philosopher’s abstraction). The inference involves a switch from one meaning to another.

[3] Problems for the Propositional Analysis of special quantifiers and pronouns:

Restrictions on special quantifiers are not generally predicates of propositions:

(12) a. John said something nice (namely that S).

 a’. ??? The proposition that S is nice.

 b. John thought something very daring (namely that S).

 b’. ??? The proposition that S is daring.

 c. John imagined something exciting.

 c’. ??? The proposition that S is exciting.

 e. John said something that made Mary very upset.

 e’. ??? The proposition that S made Mary very upset.

Special quantifier restrictions target other than propositions:

(13) a. John’s claim / remark is nice.

 b. John’s thought is daring.

 c. John’s imagination is exciting.

 d. John’s remark made Mary very upset.

[2] Problems with the view that special quantifiers and pronouns stand for shareable contents across different attitudes:

 ‘What is believed may be doubted, denied, disproved, or merely imagined’ (Soames 2010))

Not obvious:

Data from Moltmann (2003b, 2013, Ch 4):

(14) a.. ?? John imagined what Mary believes, that he would become king.

 b. ?? John thought what Bill denied, that Mary is happy.

 c. ?? John hopes what Mary mentioned, namely that Bill will win the election.

 d. ?? John expects what Mary believes, namely that Sue will study harder.

 e. ?? John said what Mary observed, namely that it will rain.

Improvement with focus and adverbial modifiers:

(14) f. Mary firmly believes what Bill only suspects, namely that Joe is guilty.

 g. Mary finally said what so many people believe, namely that Joe is guilty.

 h. Bill demanded what Mary asked for, that everyone be treated equal.

Matches unacceptability of identity statements with nominalizations:

(15) a. ?? John suggested what Mary believes, namely that Bill was elected president.

 b. ?? John expects what Mary believes, namely that Sue will study harder.

 c. ?? John said what Mary believes, namely that it will rain.

 (16) a. ?? John’s suggestion was Mary’s belief.

 b. ?? John’s expectation is Mary’s belief.

 c. ?? John’s claim was Mary’s belief.

**3.3. Further important properties of clauses**

Nonattitudinal predicates *is true, is correct, is possible, is likely* etc

The Substitution Problem with nonattitudinal predicates

(17) a. valid: That grass is green is true.

 The proposition that grass is green is true.

 b. invalid: That grass is green is correct.

 The proposition that grass is green is correct.

 c. valid (?): That grass is green is true / correct.

 The claim that grass is green is true / correct.

 d. invalid: That the sun is shining is possible.

 The proposition that the sun is shining is correct.

Acceptable substitutions

Emotive factives

(18) a. valid That Mary is happy is surprising.

 The fact that Mary is happy is surprising.

 b. valid That the sun is shining shocked Mary.

 The fact that the sun is shining shocked Mary.

Response-stance verbs

(19) a. valid (?) John repeated that grass is green.

 John repeated the claim that grass is green.

 b. valid (?) John confirmed that the sun is shining.

 John confirmed the claim that the sun is shining.

 c. valid (?) John agreed that S.

 John agreed with the claim / utterance that S.

Nominal constructions with clauses:

(20) a. the fact that grass is green

 b. \* the fact the proposition that grass is green

(21) the view / proof / idea / hypothesis that 2 is prime

No Relational Analysis applicable

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