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**Semantics of Attitude Reports Based on an Ontology of Attitudinal Objects**

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1. **Introduction**

Overal aim of the talk

Outline a semantics of attitude reports based on a novel ontology of attitudinal objects.

* Motivate and elaborate the ontology
* Show some of the semantic applications of the approach
* Indicate the syntactic analysis that may go along with the semantics of attitude reports
* Point out the importance of empirical and theoretical linguistic research research for philosophical issues

What are attitudinal objects?

Intuitively, things we refer to as claims, requests, thoughts, assumptions, beliefs, judgments, desires, intentions, decisions, hopes, impressions, guesses.

The standard view

Propositional attitudes (beliefs, hopes, desires) are relations between agents and propositions, abstract, shareable truthbearers that are also meanings of sentences (sets of worlds, structured propositions (sequences of properties and objects))

The new view

Attitudinal objects take on the role of propositions, but in somewhat different ways.

The nature of the novel ontology:

* well-reflected in natural language: overtly in DPs, but also in syntactic constructions
* Cognitively realistic ontology: attitudinal objects should play a central role in our mental life and in communication

The ontology of attitudinal objects naturally extends to a larger category of objects:

* modal objects (semantics of modals): needs, obligations, permissions, abilities
* intensional objects (for intensional transitive verbs): searches, debts, perceptions

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1. **The standard view of the semantics of attitude reports**

The standard view about the ontology involved in attitude reports

Two sorts of objects associated with propositional attitudes:

[1] Mental acts or states and illocutionary acts

[2] Propositions as the objects/contents of mental attitudes or illocutionary acts

Ad [1]:

* Illocutionary acts are the subject matter of speech act theory.
* Events in current formal semantics are generally taken to be implicit, Davidsonian arguments of verbs

As [2]:

* Propositions are abstract objects that are truthbearers, sharable contents, and meanings of sentences.
* Different conceptions of propositions: sets of worlds or situations, structured propositions

The Relational Analysis of attitude reports

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

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

c. ∃e(think(e, John, [*that Mary is happy*])

Apparent support for the Relational Analysis

1. ‘Special’ quantifiers and pronouns in sentential position:

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

John thinks *something.*

2. Reports of sharing:

(2) b. Mary believes *what* Bill believes.

Bill believes that it is raining.

Mary believes that it is raining.

Difficulties for the Relational Analysis

Conceptual problems

1. Propositions are treated as the objects of attitude, not the contentsof attitudinal objects.

2. How can abstract objects be true or false and have the particular truth conditions they are meant to have?

3. We never refer to propositions explicitly in natural language, except with uses of technical terms (*proposition*).

Empirical problems

1. The substitution problem and the objectivization effect

(3) a. \* John thought the proposition that S.

b. ?? John fears the proposition that S.

2. Special quantifiers and pronouns do not stand for propositions:

(4) a. John claimed *something* shocking.

b. ??? John claimed what Bill expects, that it will rain.

3. The choice of modals and mood may depend the embedding verb (Portner, Safir)

4. Syntactic arguments that *that*-clauses are not (generally) referential: relative clauses?

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1. **Attitude reports with attitudinal objects**

The view

Attitudinal objects, not propositions, play the central role in the semantics of attitude reports

**3.1. What are attitudinal objects?**

Intuitively, the things we refer to with nominalizations of attitude verbs and related nouns:

claims, requests, beliefs, judgments, assumptions, intentions, decisions, fears, hopes, assumptions, desires, impressions. hypotheses, guesses

Distinctions among attitudinal objects

[1] Act-related attitudinal objects:

- cognitive and illocutionary ‘products’*:* assumptions, decisions, claims, requests, promises

- ‘results’: conclusions, recognitions, persuasions

[2] State-related attitudinal objects:

- beliefs, desires, hopes, fears, intentions

Standard view

Nouns are polysemous, denoting either events or propositions.

The present view

Nouns have a single meaning, they stand for a third category of object that are neither events nor states: attitudinal objects

Some evidence

Predicates (or predicate readings) that are inapplicable to events and propositions, but applicable to attitudinal objects.

Predicates of correctness:

(5) a. John’s claim / belief / guess was correct. (correctness = truth)

b. John’s speech act / belief state / guessing was correct.

(correctness = action-guiding norm).

c. ??? The proposition that it is raining is correct.

Predicates of satisfaction:

(6) a. Mary’s request / desire was fulfilled

b. ?? Mary’s speech act / mental state / requesting was fulfilled

c. ?? The proposition that Mary should be invited was fulfilled.

Twardowski’s (1911) distinction between actions and products

claiming – claim, requesting – request, deciding – decision, believing - belief

Attitudinal objects are non-enduring, nonphysical products.

Better:

Sometimes the distinction between an act and a non-enduring, nonphysical artifact applies.

Crosslingustic and cognitive perspectives regarding attitudinal objects

[1] Expected crosslinguistic generalization

Nouns that correspond to attitudinal predicates generally stand for attitudinal objects, not propositions or events.

[2] Expected cognitive role of attitudinal objects

Attitudinal objects, not propositions play no role in our mental life.

We remember thoughts, desires, experiences, not propositions.

Desires, intensions, decisions play a causal role, not propositions.

**3.2. The properties of attitudinal objects**

Three content-related properties that together distinguish attitudinal objects from both propositions and events (acts, states):

[1] Truth- and satisfaction conditions

(7) a. John’s claim that S is true .

b. ?? John’s claiming that S is true.

c. ?? John’s speech act (of claiming) is true.

(8) a. John carried out the decision.

b. ?? John carried out the act of deciding.

c. ?? John carried out the proposition that S.

[2] Similarity relations based on sameness of type and shared content only

(9) a. John’s thought is the same as Mary’s.

b. ??? John’s thought is the same as Mary’s claim.

c. John’s thinking is the same as Mary’s.

(10) a. John’s hope is the same as Mary’s hope.

b. ??? John’s hope is the same as Mary’s claim.

[3] Part-whole structure based on partial content

Parts of attitudinal (and modal) objects are always partial contents, never temporal parts

‘Part of John’s claim’ vs ‘part of the speech act of claiming’

‘Part of John’s decision’ vs ‘part of the action of deciding’.

‘Part of John’s belief’ vs. part of John’s belief state (???)

Properties of concreteness

(11) a. John’s claim surprised us.

b. I overheard Bill’s remark.

c. John’s request yesterday

**3.3. The semantics of simple attitude reports with attitudinal objects**

Semantic function of *that*-clause complements of (simple) attitude verbs

Predicates of the attitudinal object ‘associated with’ the attitude verb, specifying its satisfaction condition or content (roughly, the set of situations or actions that make it true)

[the claim that it is raining] = the d [claim(d) & [it is raining](d)]

Status of attitudinal objects wrt. to the attitude verb

Arguments of the attitude verb?

- Attitudinal objects are not Davidsonian events.

- Implicit internal arguments?

The Kratzer / Moulton view: Clausal complements are predicates of implicit content bearer arguments of attitude verbs:

(12) a. John claims [ N that S]

b. claim(j, d) & [that S](d)

The present approach: focus on complex attitude predicates (light verb – noun)

(13) a. John claims that S.

b. John makes the claim that S.

c. ∃d(make(John, d) & claim(d) & [*that* S](d)

Derive the syntactic structure of ‘simple’ attitude reports from attitude reports with complex predicates (Arsijeneviç 2009)

Semantics of special quantifiers/pronouns

Special quantifiers and pronouns stand for attitudinal objects or kinds of them:

(14) John claimed *something* shocking.

Restrictions on reports of a shared content of different attitudes

(15) a. ?? John expects *what* Mary claims, namely that Sue will study harder.

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

Towards an analysis:

(16) a. John made some [claim – thing shocking].

b. John has expectation that ~~expectation~~ Mary has ~~expectation~~

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**4. Extending the semantics by extending the range of objects**

**4.1. Modal objects and the semantics of modals**

What are modal objects?

The things we intuitively refer to as needs, possibilities, obligations, permissions, laws, rules, abilities, potentialities? …

Modal objects can be non-physical enduring products, e.g. laws are products of acts of passing them

Properties of modal objects

Same three content-related properties:

Satisfaction conditions, part structure based on partial content, similarity relations based on content and type.

The semantics of modal sentences based o modal objects:

Alternation with complex predicates:

(17) a. John needs to leave.

b. John has a need to leave.

c. ∃d(have(d) & need(d) & [*John to leave*](d))

Syntactic analysis: derive simple modal predicates from complex modal predicates (Harves / Kayne 2012).

**4.2. Facts and states of affairs**

(18) a. John regrets that S.

b. John regrets the fact that S.

c. John regrets partly (Nfact that S).

- Substitution permitted

- Referential (DP) status of factive complements (Kastner 2015)

Other roles of clauses

(19) a. That S is unexpected.

b. the unexpectedness (of the fact) that S

(20) a. That S is likely.

b. the likelyhood (of the situation in which) (that) S

Facts and states of affairs as modal objects

The fact that S:

the modal object whose satisfiers are just the actual situations that make S true.

The states of affairs in which S:

The modal object whose satisfiers are just the situations that make S true.

**4.3. Contextually given attitudinal objects: response stance verbs (Cattel 1978)**

(21) a. John repeated (the claim) that it will rain.

b. John confirmed / denied (the suggestion) that it was raining.

c. John agreed (with the claim) that Bill is lazy.

Same DP status as factive complements (Kastner 2015)

(22) a. John repeated [N that S].

b. ∃e(repeat(e, John, dc) & [*that* S](dc))

**4.4. Intensional objects**

Intensional transitive verbs: *look for, buy, hire, owe, recognise*

Intensional objects: searches, purchases, hirings, debts, recognitions

Belong to the same class as attitudinal and modal objects:

share the same characteristic features realization or representational adequacy conditions…

Satisfaction of the intensional object by objects-in-situations:

(23) John bought a bottle of wine on the internet.

Satisfaction by a bottle of wine that John has as a result of the purchase.

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**5. Conclusion**

* Attitudinal, modal and intensional objects form an ontological category distinct from events, states and propositions.
* Attitudinal objects are extremely well-reflected in European languages and play a central role in the semantics of attitude reports.

Prospects for further empirical work based on the ontology of attitudinal objects:

* Lexical, syntactic, typological and psychological research

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