*[Cognitive Structures: Linguistic, Philosophical and Psychological Perspectives](https://cognitive-structures-cost18.phil.hhu.de/)*

[Duesseldorf](https://cognitive-structures-cost18.phil.hhu.de/), September 14, 2018

**Attitude Reports Based on Attitudinal Objects**

Friederike Moltmann

CNRS - New York

**1. The traditional view**

**1.1. Ontology involved in attitude reports**

There are two sorts of objects associated with propositional attitudes

[1] mental acts or states and illocutionary acts

[2] propositions.

The role of propositions in philosophy of language and semantics

- primary bearers of truth values

- the meanings of sentences / embedded sentences

- the shareable contents or ‘objects’ of propositional attitudes

**1.2. Logical form of attitude reports**

The Relational Analysis

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

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

Apparent support for the Relational Analysis

Special quantifiers in sentential position:

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

John thinks *something.*

Reports of sharing:

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

Bill believes that it is raining.

Mary believes that it is raining.

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

- Propositions should not be treated as the objects of attitudes, but as their contents

- The problem of how propositions can be grasped, can act as the content of mental attitudes

- The problem of the truth-directedness and the unity of propositions

- The problem of arbitrary identification

Jubien (2001), Soames (2010), Hanks (2007), Moltmann (2003a, 2013, 2017)

Recent alternative conception of propositions

Propositions identified with cognitive act types (of predicating a property of an object) (Hanks 2007, 2011, Soames 2010)

Problems for cognitive act types

- Bearers of truth values?

- What makes up the relevant types?

General problems for the relational analysis remain

----------------------------------------------------------------------------------------------------------------

**2. The new view**

**2.1. The ontology**

The semantics of attitude reports is based on a third category of objects:

*attitudinal objects*, which consist in

[1] *cognitive and illocutionary products* (judgments, decisions, claims, requests, promises) (in the sense of Twardowksi’s 1911 notion of a (non-enduring) product)

[2] *mental states* (beliefs, desires, hopes, etc)

Similarly, the semantics of *modal sentences* is based on a category of *modal objects*:

obligations, permissions, needs, abilities, essences, etc. , which share relevant features with attitudinal objects

Attitudinal objects (and modal objects) share characteristic properties that together distinguish them from both

- propositions and

- acts or events as well as states in a certain sense (as entities with temporal parts)

**2.1.1. Linguistic reflection of attitudinal objects**

[1] the semantics of nominalizations

[2] the semantics of special quantifiers (‘nominalizing quantifiers’): *something, everything* etc

Nominalizations

*Nominalizations* of attitude verbs generally stand for attitudinal objects, whose ontology is thus reflected in the semantic behavior of such nominalizations.

(3) a. John’s thought that Mary like Bill

b. John’s claims that Mary likes Bill

Properties of acts: features of concreteness

(4) a. John’s claim caused astonishment.

b. John’s claim yesterday was astonishing

Properties of propositions:content-related features

(5) a. John’s claim is true.

b. John’s claim implies that S.

Standard view: ambiguity / polysemy: reference to event or reference to proposition

Alternative: thoughts, claims and promises as objects sui generis: ‘attitudinal objects’ (Moltmann 2003, 2004, 2014, see also Ulrich 1979)

**2.1.2. Three important characteristic properties of attitudinal (and modal) objects**

Not strictly tied to nominalizations: same properties are characteristic of laws and rules

[1 ] Truth- and satisfaction conditions

(6) a. John’s claim that that S is true / false.

b. ?? John’s claiming that S is true / false.

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

(7) a. John’s request to be promoted was fulfilled.

b. ?? John’s act of requesting was fulfilled.

(8) a. John’s command that people leave the building was executed.

b. ?? John’s act of commanding was executed.

Acton-related predicates of satisfaction:

(9) a. John followed Mary’s advice.

b. ? John followed Mary’s activity of advising.

(10) a. John complied with the instruction.

b. ? John complied with the act of instructing.

[2] Similarity relations based on shared content only

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

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

(12) a. John’s speech is the same as Mary’s.

b. John’s speaking is the same as Mary’s.

(13) a. ??? John’s thought that it will rain is also his remark that that it will rain.

b. ??? John’s discovery that it will rain is his hope that it will rain.

c. ??? John’s desire to leave is his decision to leave.

(14) a. John’s thought that it will rain is John’s thought that it will rain.

b. ??? John’s thought that it will rain is Mary’s thought that it will rain.

[3] Part-whole structure based on partial content

Parts of products:

‘Part of John’s decision’ cannot be ‘part of the action of deciding’.

‘Part of John’s claim’ cannot be ‘part of the speech act of claiming’.

‘Part of John’s answer’ cannot be ‘part of John’s answering’.

Parts of products: partial content

Parts of actions: temporal parts

Parts of states

Part of John’s belief: partial content

Part of John’s belief state ???

Parts of modal objects: always partial contents

Part of John’s obligation / the offer

Part of the rule / law requirement

Part of John’s need / John’s ability

**2.2. The new logical form of attitude reports**

Davidsonian event semantics

Actions as Davidsonian implicit argument of attitude verbs.

Function of *that*-clause complements of attitude verbs:

predicates of the product of the Davidsonian event argument

(15) a. John thought that S.

b. John has the thought that S.

c. ∃e(think(e, John) & [*that* S](product(e)))

Mental state verbs:

(16) a. John believes that S.

b. John has the belief that S.

c. ∃e(believe(e, John) & [that S](product(e))), where product(e) = e.

**2.3. Philosophical motivations for the analysis**

[1] Propositions are no longer treated as the *objects* of attitudes; rather sentential contents serve to characterize the *contents* of attitudinal objects

Having an attitude means being in a state or having produced a product with a content as given by the *that*-clause

[2] Intentionality, the ability of represent, is treated as a property of *mental entities* (states, products) only, rather than of *abstract meaning objects*

Therefore:

- no issue of the truth-directedness of an abstract object

- no issues of the unity of the proposition (the truth conditions of a complex abstract objects)

- no issue of arbitrary identification (of an abstract meaning object)

**2.4. Linguistic motivations for the analysis**

Special (nominalizing) quantifiers range over attitudinal objects (or kinds of them)

(17) a. John claims / knows / fears *something.*

b. John imagines / expects *that.*

c. John claims *what* Mary claims.

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

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

(19) John said something that made Mary very upset.

Restrictions on reports of shared content of different attitudes

(20) a. ?? John screamed 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.

(21) a. ?? John’s scream was Mary’s belief.

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

c. ?? John’s claim was Mary’s belief.

The logical form of attitude reports with special quantifiers

(22) a. John thought something nice.

b. ∃e ∃e’(think(e, John) & nice(e’) & e’ = product(e))

(23) a. John thought what Mary thought.

b. ∃e e’e’’(think(e, John) & e’ = product-kind(e) & think(e’’, Mary) & e’ = product-

kind(e’’))

**2.5. The semantic role of modal objects**

The logical form of modal sentences

(24) a. John needs to leave.

b. John has a need to leave.

c. ∃d(need(d) & [*John to leave*](d))

(25) a. John is permitted to leave.

b. John has permission to leave.

c. ∃d(is permitted(d, John) & [*John to leave*](d))

-----------------------------------------------------------------------------------------------------------

**3. How can clauses act as predicates of attitudinal and modal objects?**

**3.1. Possible-worlds-based account**

Attitudinal (and modal) objects d are associated with a set of alternative worlds f(d):

(26) [S] = λd[∀w(w ∈ f(d) 🡪 S is true in w)]

The difficulty

The account cannot apply to *modal objects of possibility*

(27) a. John is obliged to leave.

b. John is allowed to leave.

Problem also arises for attitude reports, i.e. illocutionary act reports:

(28) a. John asked Mary to leave.

b. John gave Mary permission to leave.

Make sentential content ambiguous?

(29) [S’] = λd[∃w(w ∈ f(d) & S is true in w)]

Bad move: means noncompositional semantics

Also *difficulties for possible worlds-account* as such:

inapplicable to explicit permissions (*John gave Mary permission to leave*)

**3.1.Truthmaker semantics**

Sentence-based truthmaker semantics: Fine (2017)

Object-based truthmaker semantics: Moltmann (2018)

Exact truth-making/satisfaction

A situation or action s is an *exact truthmaker/satisfier* of a sentence S or attitudinal object d (s ╟ S / s ╟ d) iff s is a truthmaker/satisfier of S/d and wholly relevant for the truth/satisfaction of S / d.

Truthmaking conditions for complex sentences:

(30) a. s ╟ S *and* S’ iff for some s’ and s’’, s = sum(s’, s’’) and s’ ╟ S and s’’ ╟ S’.

b. s ╟ S *or* S’ iff s ╟ S or s ╟ S’.

c. s ╟ ∃x S iff s ╟ S[x/d] for some individual *d*.

Truthmaker semantics assigns sentences both exact truthmakers (verifiers) and exact *falsifiers*, situations or actions that are falsemakers of a sentence and wholly relevant for the sentence being false.

Truthmaking for negations:

(30) e. s ╟ *not* S iff s ╢ S.

Also *complex sentences* are assigned both truthmaking and falsemaking conditions:

(31) a. s ╢ S *and* S’ iff s ╢ S or s ╢ S’.

b. s ╢ S *or* S’ iff for some *s’* and *s’’*, s = sum(s’, s’’) and s’ ╢ S and s’’ ╢ S’.

Fine (2017): A sentence S has as its meaning a pair <*pos(S),* *neg(S)*> consisting of a *positive denotation*, the set *pos(S)* of verifiers of *S*, and a *negative denotation*, the set *neg(S)* of falsifiers of *S*.

Straightforward notion of partial content, as defined below (Yablo 2015, Fine 2017a):

(32) For sets of situations or actions A and B, B is a *partial content* of A iff every satisfier of

A contains a satisfier of B and every satisfier of B is contained in a satisfier of A.

Object-based truthmaker semantics

Difference between obligations and permissions:

Obligations have both satisfiers and ‘violators’; permissions have only ‘satisfiers’

(33) Sentence meanings as properties of attitudinal and modal objects of either modal force

[S] = λd[pos(S) = pos(d) & neg(S) = neg(d) in case neg(d) ≠∅]

**3.2. Underspecification of the content of attitudinal objects by the clausal complement**

Underspecification of the satisfaction conditions of desires, hopes, and needs:

(34) a. Fiona wants to catch a fish (that she can eat). (Fara 2007)

b. John hopes to get a coat (that keeps him warm).

c. Bill needs to hire an assistant (that speaks French)

No such underspecification for ‘truth-directed’ attitudes:

(35) a. John claimed that Fiona caught a fish (claim is true if she caught any fish whatsoever)

b. Mary said that Bill got a coat (true if Bill got any coat whatsoever)

c. Mary heard that Bill hired an assistant (true if Bill hired any assistant whotsoever).

What feature distinguishes the two classes of attitude / modal verbs?

*direction of fit* (Searle 1969):

World-word/mind direction of fit: clausal complement gives partial specification of satisfaction conditions

Word/mind direction of fit: clausal complement gives complete specification of truth conditions (setting aside ‘unarticulated constituents’).

Romance languages: the two clausal complements distinguished in terms of mood

For the time being:

Distinguish two different clausal contents:

(37) Sentence meanings applied to objects with world-word/mind direction of fit

[S’] = λd[pos(S) is a partial content of pos(d) & ∀s(s ╢ S → s ╢ d) in case neg(d) ≠∅]

-----------------------------------------------------------------------------------------------------------------

**4. Verbs of saying**

Mismatches with reports of sharing

Illocutionary verbs and the verb *say*

(38) a. ??? John asserted what Mary said.

b. John asserted that Bill won the race.

c. Mary said that Bill won the race.

(39) a. ??? John demanded what May said.

b. John demanded that Bill should leave.

c. Mary said that Bill should leave.

(40) a. ??? John promised what he said.

b. John promised that he would help Mary.

c. John said that he would help Mary.

The verb *say* and verbs of manner of speaking

(41) a. ??? John said what Mary whispered.

b. ??? John said what he screamed.

Mismatches in physical realization

(42) a. John whispered that Bill won the race.

b. Mary screamed that Bill won the race.

c. John said the same thing as Mary.

Austin’s (1962) distinction between linguistic acts

*Locutionary acts*

- phonetic and phonetic acts

- rhetic acts: acts of referring to things and saying something about them: referential and predicational acts

*Illocutionary acts* : making assertions, demands etc

Locutionary products play the role in the semantics of *say* and *verbs of manner of speaking* that illocutionary products play in the semantics of illocutionary verbs:

Clausal complements of *say* and verbs of manner of speaking characterize locutionary products, not illocutionary products.

*Say*:

Involves locutionary product only, is neutral regarding force

Manner of speaking verbs:

Involve locutionary + phatic product

How do *that*-clauses characterize locutionary products?

Based on syntactic structure, *that*-clauses can specify locutionary products as composed of smaller, referential and predicational products

(43) a. ∃e(say(e, John) & [that S ]rhet(product(e)))

b. ∃e(whisper(e, John) & [that S]locut(product(e)))

--------------------------------------------------------------------------------------------------------------

**5. Response-stance verbs**

Further evidence against the relational analysis:

(44) a. John partly ate the chicken.

b. ??? John partly thinks that S. (volunteered-stance verb, cf. Cattell 1978)

Response-stance verbs (Cattell 1978) behave differently:

(45) a. John partly denied that the students failed the exam.

b. John partly agreed that Bill is lazy.

Also substitution:

(46) a. John partly denied the claim that S.

b. John partly agreed with the claim that S.

The clausal complement of response-stance verbs serves to characterize a contextually given claim dc as well as the content of the reported attitude:

(47) a. John agreed that S.

b. ∃e(agree(e, John, dc) & [that S](product(e)) & [that S](dc))

--------------------------------------------------------------------------------------------------

**6. Factive verbs**

Factive verbs pattern with response-stance verbs (Cattell1978),

also with respect to *partly*:

(48) a. John partly recognizes that he failed.

b. John partly acknowledges that he made serious mistakes.

(49) John partly recognizes / acknowledges the fact that S.

Clausal complements of factive verbs also have a double function:

- They characterize the described cognitive product / epistemic state

- They give the content of a fact

What does this mean in terms of truthmaker semantics?

How can a fact that a complement of a factive verb stands for be conceived in terms of truthmaking?

Facts as sets of actual truthmakers – the positive (actual) extension of S?

Better:

Make use of facts as nonworldly facts.

Such facts themselves have ‘truthmakers’: actual situations wholly relevant for their obtaining

Nonworldly facts: sentences qua being true

Clausal complements of factive verbs can then apply with the same meaning to such nonwordly facts:

(50) ∃e(recognize(e, John, S qua being true) & [that S](product(e)) & [that S](S qua being

true))

------------------------------------------------------------------------------------------------

**7. Conclusion**

- The non-relational semantics of attitude reports that is based on attitudinal avoids the philosophical issues for standard proposition-based relational analyses.

- Attitudinal (and modal) objects are well-reflected in natural language, and for some of them we have robust language-independent intuitions.

- The semantics based on attitudinal objects naturally goes along with truthmaker semantics, when extended to truthmaking applying to attitudinal objects themselves.

- Verbs of saying involve locutionary, rather than illocutionary products, objects below the level of attitudinal objects.

- Attitudinal objects may play different roles in the semantics of different attitude verbs and clausal complements of attitude verbs may be predicated of several objects at once.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**References**

Austin, L. (1962): *How to do Things with Words?.* Harvard UP, Cambridge, MA.

Cattell, R. (1978): ‘On The Source of Interrogative Adverbs’ Language 54, 61-77.

Graff Fara, D. (2013): ‘Specifying Desire’. *Noûs* 47(2), 250--272.

Fine, K. (2017): *Truthmaker Semantics*. *Blackwell Philosophy of Language Handbook*.

Moltmann, F. (2013): *Abstract Objects and the Semantics of Natural Language*. Oxford

UP, Oxford, Chapter 4.

----------------- (2014): ‘Propositions, Attitudinal Objects, and the Distinction between

Actions and Products’.  *Canadian Journal of Philosoph*y, supplementary volume on

propositions, ed. by G. Rattan and D. Hunter, 43.5-6, pp. 679-701.

----------------- (2017 a): ‘Cognitive Products and the Semantics of Attitude Reports and

Deontic Modals’. In Moltmann / Textor (2017).

----------------- (2017b): ‘Levels of Linguistic Acts and the Semantics of Saying and

Quoting’, In S.L. Tsohatzidis (ed.): *Interpreting Austin: Critical Essays*. Cambridge UP.

-------------------- (2017c): '[Partial Content and Expressions of Part and Whole. Discussion of Stephen Yablo: *Aboutness*](http://friederike-moltmann.com/uploads/Yablo%20discussion-proofs-2016(1).pdf)'. *Philosophical Studies* 174(3), 2017, pp. 797-808.

----------------- (2018): '[An Object-Based Truthmaker Theory for Modals](http://friederike-moltmann.com/uploads/Truthmaker%20Semantics%20for%20Modals-June%202018(2).docx)'. *Philosophical*

*Issues* 'Philosophy of Logic and Inferential Reasoning', edited by C.F. Juhl and J.

Schechter.

Moltmann, F. / M. Textor (eds.) (2017): *Act-Based Conceptions of Propositions:*

*Contemporary and Historical Contributions.* Oxford UP, Oxford..

Thomasson, A. (1999): *Fiction and Metaphysics.* Cambridge UP, Cambridge.

Twardowski, K. (1911): ‘Actions and Products. Some Remarks on the Borderline of

Psychology, Grammar, and Logic’. In J. Brandl/J. Wolenski (eds.): *Kazimierz*

*Twardowski. On Actions, Products, and Other Topics in the Philosophy*. Rodopi,

Amsterdam and Atlanta, 1999, 103-132.

Searle, J. (1969): *Speech* Acts. Cambridge UP, Cambridge.

Ulrich, W. (1976): ‘An Alleged Ambiguity in the Nominalizations of Illocutionary Verbs’.

*Philosophica* 18.2., 113-127.

Yablo, S. (2014): *Aboutness*. Princeton University Press.