**Chapter 1**

**A New Approach to the Semantics of Attitude Reports and Modal Sentences**

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**1. The ontology of attitudinal and modal objects in the context of descriptive metaphysics**

This book develops a novel semantics of attitude reports and modal sentences based on an ontology of what I call ‘attitudinal’ and ‘modal objects’. Attitudinal objects, intuitively, are the sorts of things we refer to as claims, judgments, beliefs, assumptions, hopes, requests, decisions, desires, and intentions. Modal objects are entities like obligations, permissions, laws, rules, offers, invitations, abilities, strategies, options, abilities, dispositions, and, perhaps essences. Attitudinal and modal objects are sharply distinguished from the sorts of entities that play a central role in standard semantic analyses of attitude reports and modal sentences, namely propositions (or sets of worlds) on the one hand and events (including actions and states) on the other hand.

The project of this book is undertaken within a particular methodology, namely that of

descriptive metaphysics. The point of departure is to make use of ontological categories that are reflected in our general intuitions and in natural language in particular, while setting aside philosophical or other preconceptions of what categories there are. Specifically, the ontology used in the semantic analysis of attitude reports and modal sentences will match an ontology that is implicit in natural language itself, rather than being an ontology adopted through philosophical preconceptions of what there is. The book pursues the view that ontological intuitions that natural language helps us uncover enable us to understand key notions in the metaphysics of the mind and language. The standard view of attitude reports takes the technical notion of a proposition to be the central notion, without concern as to whether there are referential terms in the core of language that describe propositions.[[1]](#footnote-1) By contrast, the present approach is based on an ontological category of attitudinal and modal objects about which we have strong intuitions, reflected in language and language-independently.

Attitudinal objects play an important role in our mental life and in communication, as concrete bearers of content, that is, of truth or satisfaction conditions. We communicate by making assertion as well as hearing and understanding claims, and our mental life consists, in part, in having thoughts, remembering ideas, adopting beliefs, having intentions, making decisions, making plans, remembering decisions, changing decisions, etc. Attitudinal objects are mind-dependent particulars that come with a content (truth or satisfaction conditions). At the same time, attitudinal objects display features of concreteness. They generally have a limited lifespan; they enter causal relations, in particular the relation of content-based causation; and they can act as objects of perception.

Modal objects also come with a content (that is, satisfaction conditions), and they may display some features of concreteness as well, such as having a limited lifespan and triggering memories and fears. Modal objects may bear a close connection to particular attitudinal objects. Someone makes a promise and hence is under an obligation to fulfill it; someone makes an assertion and puts herself under a commitment to maintaining its content. Modal objects play obvious roles in our social life, as laws, permissions, abilities, dispositions.

Attitudinal and modal objects do not just form a list of entities; rather they share characteristic properties that jointly distinguish them from other, related types of entities, in particular propositions and events (including actions and states). Attitudinal objects come with characteristic content-related properties: having truth - or satisfaction conditions, having a part structure strictly based on partial content, and entering similarity relations based on shared content only. Moreover, attitudinal objects (and to an extent modal objects) come with properties of concreteness that still relate to their content, such as entering relations of content-based causation, content-based perception, content-based evaluation, and content-based memory.

Attitudinal and modal objects have not generally been recognized as an ontological category in philosophy or linguistics. Instead the categories of propositions and events (actions and states) are generally taken for granted of in metaphysics, philosophy of mind, and the philosophy of language when discussing propositional attitudes. But modal and attitudinal objects play an important role in our mental life and in social ontology, and they are extremely well-reflected in natural language and thus our linguistically manifest intuitions. We also have robust intuitions about attitudinal and modal objects that do not strictly depend on expressions in a particular language, entities like ideas, hypotheses, and artifacts like laws and poems (which themselves are just attitudinal objects of a more complex sort).

Attitudinal objects such as claims, judgments, and beliefs share with propositions their status of truth bearers. But unlike propositions attitudinal objects are mind-dependent concrete entities, rather than abstract entities in a ‘third realm’ (Frege 1922), in their role as sharable mental and linguistic contents. Though attitudinal and modal objects, at first sight, look like events or states, they are in fact sharply distinguished from events and states ontologically, which is manifest in the sorts of properties they can bear. Most importantly, unlike events and states, modal and attitudinal objects come with a content, that is, truth or satisfaction conditions. There is no intuitive basis, linguistic or otherwise, for events, acts, or states being bearers of truth or satisfaction. Having a content is also the basis for other differences between attitudinal and modal objects and events. For example, attitudinal and modal objects have a part structure based on the notion of partial content only, whereas events have a temporal part structure.

There is one philosopher in the history of philosophy that in a way recognized attitudinal objects, namely Twardowski (1911). Twardowski noticed various differences in the types of properties that entities such as claims and requests and entities such as (acts of) claiming and requesting can bear, including that of bearing truth or satisfaction conditions. For him the distinction was that between actions and products, understood in particular way (to be discussed in Chapter 2). For Twardowski only products are bearers of content and are the entities relevant for philosophy of language, logic and the humanities in general. The present project shares the recognition of the importance of attitudinal objects or what Twardowski took to be products. But it does not follow Twardowski’s particular way of drawing and of conceiving of the distinction (see Chap. 2).

By entering relations of content-based causation, attitudinal objects play a central role in our mental life and in communication, as concrete bearers of truth or satisfaction conditions. Being mind-dependent particulars; attitudinal objects permit avoiding notorious conceptual problems of propositions: the problem of the graspability of propositions, the problem of the truth-directedness of propositions, the problem of the unity of the proposition, and the problem of arbitrary identification, problems, which I will come to shortly. However, attitudinal objects will not play the same semantic roles as propositions on the standard, relational of attitude reports, namely as referents of *that*-clauses and as arguments of attitude verbs.

There is another major difference between attitudinal objects and propositions. Attitudinal objects, unlike propositions, bear an important connection to normativity, which underlies the application of the predicate *correct* as well as the choices of particular satisfaction predicates with different attitudinal objects. In particular, truth and correctness coincide for attitudinal objects of the sort of claims and beliefs, but not so for propositions, which do not reflect a normative notion.

Modal objects can be abstract objects, and they may be abstract artifacts of the sort of laws, commitments, offers, and invitations, entities that may endure past the act that has produced them. This may even hold for certain attitudinal objects, for example claims, which may endure past the act of assertion even if its features of concreteness are limited to the period the act (Chap. 2).

**2. Concurrences with recent research in philosophy and linguistics**

The overall view pursued in this book concurs with recent directions in semantics of attitude reports and modal sentences.

First of all, it concurs with recent directions in philosophy of languages that replace the notion of an abstract proposition with cognitive notions of truth bearers, allowing truthbearers to be graspable causally efficacious. Various philosophers, most notably Soames (2010) and Hanks (2015), have recently proposed cognitive notions of a propositions based on cognitive, truth-directed acts of predication. While the present project concurs with a view that replaces propositions by cognitively graspable particulars that may play causal roles, it does not take acts to be truthbearers, but rather assigns attitudinal and modal objects that role. Moreover, it assigns attitudinal and modal objects very different roles than cognitive, act-based propositions. The latter are compositionally determined semantic values of sentences and embedded clauses. Attitudinal and modal objects, by contrast, are the things embedded clauses may be predicates of.

This relates to another convergence with recent research. The project concurs with recent developments in syntax and the syntax-semantics interface, on which *that*-clauses do not act as referential terms, at least not generally, but rather have a function on which they can serve as predicates of content bearers (for example by being relative clauses) (Moltmann 1989, Kayne 2005, Arsijenevic 2007, Harves and Kayne 2012, Elliott 2017, Moulton, 2009, 2015). The present view takes clauses to express properties of attitudinal and modal objects specifying their truth or satisfaction conditions, rather than denoting abstract propositions that serve as arguments of the embedding predicate.

The present project also concurs with recent directions in the semantic analysis of modality, which do not start out with sets of possible worlds, but take a localized approach to the semantics of modals, tracing the source of modality to particular objects or features of objects. One such approach is Fine’s (1994) theory of essence, which makes use of an object-dependent operator, rather than a quantifier ranging over worlds, to represent metaphysical modality. Another such approach is Vetter’s (2015) semantics of circumstantial modality based on the notion of potentiality as a property of objects. In linguistics, an event-centered approach to modality has been taken by Hacquard (2010). On the present approach, the semantics of modals (of any sort) is based on modal objects, which may depend on a particular individual and may have been produced by a particular act. (The focus, though, will be on deontic modals, with its distinction between light and heavy modals.)

The present project also concurs with recent hyperintensional approaches to semantic content, namely the truthmaker semantics of Fine (2017a, b, c). Truthmaker semantics was originally developed for sentences, identifying the content of a sentence not with a set of worlds, but rather with a pair consisting of a set of situations or actions that are its verifiers and a set of situations or actions that are its falsifiers. Not only does his semantics provide a sufficiently fine-grained notion of content in general that would be suited for the content of attitudinal and modal objects as well; there are also specific reasons to adopt truthmaker semantics for attitudinal and modal objects, as we will see.

**3. Responses to recent challenges to the notion of a proposition**

**3.1. Propositions and their problems**

The project of this book responds to challenges that have been at the center of recent philosophical and linguistic debates about propositional attitudes and modality.

After having situated the present approach within recent directions of research in philosophical semantics, in what follows I will elaborate on of the most important point, the overall view of the semantics of attitude reports against the background of the standard view of propositional attitudes as two-place relations between agents and propositions, including the more recent variant of that view that replaces abstract propositions by types of acts of predication.

**3.1.1. The standard view of propositional attitude reports and its motivations**

The view of propositional attitudes that this project develops differs fundamentally from the standard views in philosophy and formal semantics, which centers on the notion of a proposition. Propositions, since Frege (1922) (and Bolzano 1837), have been taken to be mind- and language-independent objects that are functionally defined: they serve the roles of shareable contents of attitudes and illocutionary acts, of truth bearers, of the meanings of sentences (relative to a context), and of the denotations of propositional anaphora and propositional quantifiers.[[2]](#footnote-2) Propositions, as entities characterized in terms of those roles, are generally identified either with sets of circumstances (possible worlds) or structured propositions. On the standard Relational Analysis of attitude reports, (1a) has the logical form in (1b), where [*Mary is awake*] stands for the proposition denoted by *Mary is awake*:

(1) a. John claims that Mary is awake.

b. claim(John, [*Mary is awake*] )

The availability of apparent propositional anaphora and quantifiers such as *that, something*, and *everything* as well as free relatives like *what Mary claims* in place of *that*-clauses seems to confirm the status of *that*-clauses as referential terms and thus the objectual status of propositions:

(2) a. John claimed something, that Mary is awake.

b. John claims what Bill claims, that Mary is awake

c. John claims that Mary is awake. Bill claims that too.

Propositions are standardly taken to be separate from force: different illocutionary act types involving different forces can have the same propositional content, as can different propositional attitudes involving different attitudinal modes. The illocutionary verbs *assert* and *request* both take *that*-clauses in English and thus appear to be able to take the same propositional argument while conveying different forces. The attitude verbs *believe* and *desire* both take *that*-clauses in English and thus appear to be able to take the same propositional argument while conveying different attitudinal modes.

There are serious problems, however, with the notion of a proposition as an entity fulfilling the various roles, and there are difficulties treating propositional attitude verbs as denoting two-place relations between agents and propositions. Finally, the view that quantifiers like *something*, pronouns like *that*, and free relatives like *what John claims stand* for propositions cannot be right given their actual semantic behavior.

**3.1.2. Conceptual for propositions**

In the following, I will very briefly review the philosophical and linguistic problems for propositions as abstract objects, problems which for the most part have been discussed in the literature in greater detail.

The philosophical critique of propositions concerns the following issues:[[3]](#footnote-3)

[1] The Problem of the Graspability of Propositions

How can propositions as abstract objects be grasped, and thus act as the contents of mental attitudes?

[2] The Problem of the Truth-directedness of Propositions

How can propositions, as abstract objects of any sort, be true or false?

[3] The Problem of the Unity of the Proposition

How can propositions have the particular truth conditions they are meant to have, if they are identified with structured propositions (n-tuples consisting of a property and n-1 objects, say).

[4] The Problem of the Content-Object distinction

How can propositions count as the contents, rather than the objects, of attitudes when propositional attitudes are taken to be relations between agents and propositions?

[5] The Problem of Arbitrary Identification

How can proposition be considered identical to one particular formal object rather than another, e.g. a set of worlds rather than a set of singleton sets of worlds, or a particular n-tuple rather than an n-tuple in reverse order? [[4]](#footnote-4)

[6] The Problem of Content-based Causation

How mental and linguistic contents take part in causal relations when they are identified with propositions as abstract objects?

How do these problems arise? They arise because of three roles propositions are supposed to play at once, together with the assumption that clausal complements act as singular terms providing an argument of the relation expressed by verb. Being shareable contents of attitudes that are denoted by sentences (or *that*-clauses) requires propositions to be abstract, or so Frege thought.Being semantic values of clausal complements of attitude verbs requires propositions to be arguments of a relation expressed by the attitude verb.

**3.1.3. Empirical problems for the relational analysis of attitude reports**

There are also linguistic difficulties for the standard view, in particular the Problem of Substitution and the related issue of the Objectivization Effect and the actual semantic behavior of special quantifiers.

[1] The Substitution Problem and the Objectivization Effect

The Substitution Problem consists in the unacceptability of replacing a clausal complement of an attitude verb by an ordinary proposition-referring noun phrase, as in (3b) as an inference from (3a): [[5]](#footnote-5)

(3) a. John claimed that Mary is awake.

b. ??? John claimed the proposition that Mary is awake / some entity, some thing.

There are only few verbs that permit such an inference, *believe, reject, deny, accept* and *prove* among them. On the Relational Analysis the inference should go through with all attitude verbs.

The Objectivization Effect consists in the change in the reading of the complement with certain verbs like *fear:* whereas the *that-*clause complement provides the content of the attitude, as in (4a), an ordinary NP-complement denotes the object of the attitude, what the attitude is directed toward, as in (4b):

(4) a. John fears that Mary is awake.

b. John fears the proposition that Mary is awake / some proposition / some thing.

[2] The Semantics of Special Quantifiers

Quantifiers like *something* and pronouns like *what* and *that* do not lead to the Substitution Problem or the Objectivization Effect:

(5) a. John claimed / feared something.

b. Mary claimed / feared that too.

Such quantifiers can thus be called ‘special quantifiers (Moltmann 2013a). Philosophers generally take special quantifiers in place of *that*-clauses to range over propositions and likewise pronouns like *that* and free relatives *what Bill claimed* to stand for propositions.[[6]](#footnote-6) However, this is problematic. Special quantifiers take (first-order) restrictions that are not predicates of propositions, but rather of attitudinal objects

(6) a. John claimed something that caused consternation.

b. John thought something daring.

Claims and thoughts can cause consternation or be daring, but not propositions. Moreover, special free relatives like *what John claimed* and *what Mary thinks* can be arguments of (first-order) predicates that are not applicable to propositions, but only things like claims and thoughts:

(7) a. I like what John claimed / John’s claim / ??? the proposition John asserted.

b. What Mary thinks / Mary’s thought / ??? That proposition is disturbing.

Moreover, reports on the sharing of contents of different attitudes using special quantifiers impose restrictions that are entirely unexpected if such reports were about the sharing of a proposition:[[7]](#footnote-7)

(8) a. ?? John claimed what Mary thought, that Bill is awake.

b. ?? John claimed what Bill suspected, that Mary is awake.

However, the restrictions follow if such reports are about the sharing of attitudinal objects or rather kinds of them: (8a) and (8b) are unacceptable because a claim is not a thought or a suspicion. Special quantifiers do not constitute arguments in favor of propositions. Rather, the predicates and restrictions applicable to them indicate that they range over attitudinal objects or kinds of them.

**3. 1.4. Cognitive propositions and their problems**

The problem and graspability as well as the truth-directedness and the unity of the propositions problem have been addressed by recent proposals that replace abstract propositions replaced by types of cognitive acts (Soames 2010, Hanks 2015, 2018). On those proposals, propositions are identified with types of acts of predication. Acts of predication of a property of an individual are taken to be constitutive of the unity and truth-directedness of the proposition. Grasping a proposition means performing a mental act of predication of the type that is that proposition. One crucial premise of that view is that acts are truthbearers, with propositions as types of acts inheriting their truth conditions from the acts that are their instances. The present project shares some similarities with the view endorsed by Hanks (2015, 2018), on which propositions are conceived as types of acts of predication which come with an assertoric, directive, or interrogative force. The present approach shares with that approach, the use of types or kinds of cognitive particulars for the role of propositions as truthbearers and shareable content bearers. This accounts for one difficulty for the standard notion of a proposition as abstract objects, its graspability. Moreover, it makes use of entities that come with a force, displaying various sorts of satisfaction conditions (such as conditions of truth and of fulfillment). However, the present approach differs from that view in two important respects.

First of all, attitudinal objects are not acts. Acts do not have truth or satisfaction conditions, but attitudinal do.[[8]](#footnote-8) In addition the present project makes use of modal objects which play no role in Hanks’ or Soames theories. In fact, it is very unclear how their view could extend to sentences embedded under modal predicates.

Second, the present approach does not .share Soames’s and Hanks’ assumption, that propositions are compositionally determined meaning objects that sentences, in particular embedded clauses, stand for. The problems of the truth-directedness and of the unity of the proposition arise only under that assumption. The problem of how propositions as abstract meaning objects can be truthbearers arises only on the assumption that there such things as propositions. On the present view, sentences act as predicates of mind-dependent objects that by nature are bearers of satisfaction conditions. The unity of the proposition problem arises when propositions are taken to be structured propositions (say sequences of an (n-1) place property and individuals). Only then does the question come up how such a sequence can be true or false and have the particular truth conditions it is meant to have. On Soames’ and Hank’s proposals it is predicative acts that provide the unity of the propositions and its truth or satisfaction conditions. However, acts just do not come with truthconditions and are unsuited to provide the ‘glue’ that unifies a structured proposition.[[9]](#footnote-9)

Finally, the act-based view still endorses the logical form of attitude reports on the standard view, which means it still faces the problem of the object/content distinction, the Substitution Problems, and the problem of the actual semantics of special quantifiers.

**3.2. Attitudinal-objects semantics for attitude reports**

The present view does away with propositions and makes use instead of attitudinal objects for the semantics of attitude reports. This is what I will call ‘attitudinal objects semantics’.

Attitude reports such as (1a) repeated below as (9a) seem to bear the Relational Analysis as in (9b) (=1b) on their sleeve:

(9) a. John claims that Mary is a genius.

b. claim(John, [*Mary is a genius*] )

There are a range of reasons, however, for an alternative semantics of attitude reports, in which attitudinal objects play a central role.

One reason for an analysis in which attitudinal objects play a central role is the existence of complex attitude reports as below:

(10) a. John made a claim that S.

b. John has the belief that S.

Complex attitude reports involve explicit reference to attitudinal objects and no reference to propositions. Sometimes, in a particular language, complex attitude reports are variants of simple attitude reports (*John claims that* S, *John believes that* S), sometimes they are the only options (*have the impression that* S, *have the premonition that* S). Complex attitude predicates consist of a light verb (*make, have*), a noun for an attitudinal object (*claim, belief*), and a *that*-clause modifying the noun. The compositional semantics of complex attitude reports such as (8a) is straightforward. Here the clausal modifier is predicated of the attitudinal objects that the sentence existentially quantifies over:

(11) ∃d(make(John, d) & claim(d) & prop([*that* S])(d))

In (11), prop([*that* S]) stands for the property (of attitudinal and modal objects) conveyed by *that* S. This property (which will be spelled out in Chapter 3) consists in a truthmaker-based content, which, when predicated of an attitudinal or modal object, gives its truth or satisfaction conditions, that is, the conditions under which a possible situation or action satisfies (or violates) the attitudinal or modal object.

Not only should a semantics of attitude reports be able to also handle complex attitude reports. Following recent syntactic research, I will endorse the view that complex attitude reports display the semantics of simple attitude reports overtly and that simple attitude reports are in fact derived syntactically from complex attitude reports. This means that simple attitude reports can be interpreted on the basis of the complex version.

The semantics of special quantifiers such as *something* and free relatives like

*what John claims* further support attitudinal-objects semantics. Special quantifiers will be analysed as ‘nominalizing’ quantifiers ranging over the same attitudinal objects (or kinds of them) that the noun corresponding to the attitude verb would stand for. Thus *something* in (6a) will range of claims and in (6b) over thoughts. (7a) is unproblematic if *what John claimed* stands for John’s claim and *what Mary thought* for Mary’s thought. (8a) and (8b) are impossible because claims are not thoughts or suspicions. Again, this will be based on a complex-predicate analysis of the attitude verbs.

Attitudinal objects permit dispensing with propositions as truth bearers. Attitudinal objects furthermore come in kinds based on a shared content and as such can dispense with propositions as shareable content bearers. Unlike propositions, attitudinal objects do not act as the meanings of sentences. Attitude reports are about attitudinal objects, but without attitudinal objects being the semantic values of *that*-clauses. Clausal complements of attitude verbs instead act semantically as predicates of the reported attitudinal object, specifying its truth or satisfaction conditions.

This has important consequences regarding notorious problems for propositions. Only if propositions are conceived as abstract objects that are both meanings of sentences and objects of attitudes does the question of the truth-directedness and of the unity of the proposition arise (provided propositions are conceived as structured). Attitudinal objects are mind-dependent particulars, which means that their ability to represent (the fact that they come with truth- or satisfaction conditions) can be attributed to the intentionality of the mind itself. It is no longer the job of the semanticist or philosopher of language to worry about that. Only abstract-meaning objects give rise to the problem of the truth-directedness and (if they are structured) the problem of the unity of the proposition.

If the content bearers involved in attitude reports are conceived as mind-dependent, it will just be a matter of the philosophy of mind to account for the intentionality of the mental, not of semantics. The source of the problem of the unity of the propositions resides in the view that propositions are entities that are both the meanings of sentences and truth bearers, a view that is problematic both philosophically and linguistically.

The view developed in this book does away with propositions as entities. Sentences still have a truth conditional content, but that content does not have the status of an entity in the semantics of natural language (at least not the core of language, which excludes philosopher’s technical usage of *proposition*). The propositional content of a sentence does not serve the role of a referent of a *that*-clause, of an argument of an attitudinal relation, or being part of the domain that quantifiers *something* and free relatives like *what John believes* range over. On that view, there are no entities fulfilling the various functions of propositions at once. Truth bearers are no longer treated as the objects of attitudes. Rather having a propositional attitude means engaging (as agent or experiencer) in an attitudinal object whose truth or satisfaction conditions are given by the complement clause. Having a propositional attitude thus does not mean standing in an attitudinal relation to something that is both a meaning object and a bearer of truth conditions.

The semantics of attitude reports along the lines of (9) can be carried over to modals. However, modals less often come with complex-predicate versions. One modal verb that does is the verb *need*, as in (12a), which alternates with *have (a) need*, as in (12b) (and which Harves and Kayne (2012) argue underlies syntactically the simple verb *need*). Based on (12b) the semantics of (12a) will be as in (12c), where the clausal modifier (*John to work*) serves as a predicate of the described modal object, giving its satisfaction conditions:

(12) a. John needs to work.

b. John has a need to work.

c. ∃d(have(John, d) & prop([ *John to work*])(d))

The main idea for the semantics of modals is that the prejacent, complement clause, or clausal subject of a modal acts as a predicate of the modal object. This applies to modals of the various flavors and forces and means that modals of necessity and of possibility lead to the very same logical form. Thus the logical form of (13a) will be that in (13b):

(13) a. Mary has permission to work.

b. ∃d(have(Mary, d) & permission(d) & prop([*Mary to walk*])(d))

The difference in modal force between will then be entirely a matter of the nature of the modal object, its satisfiers and possibly violators.

Attitudinal-objects semantics also applies to independent sentences, which will act as predicates, giving the satisfaction conditions of the assertions, request, promises or other attitudinal objects meant to be produced by the utterance of the sentence.

With the category of attitudinal and modal objects the question of priority arises with respect to the category of events.[[10]](#footnote-10) In particular, should attitudinal objects that are related to acts, such as claims and judgements be taken to be dependent on the corresponding acts (of claiming and judging), say as products or perhaps aspects of those acts? When it comes to propositional attitudes, attitudinal objects actually seem to take priority over the acts described by the corresponding attitude verbs. An act of judging is not prior to the judgment: does not itself produce the judgment and the judgment can hardly be an aspect of an act of judging. Rather a judging is an act that results in a judgment, that is, it is an act of judging is the making of a judgment. It is what constitutes the ‘making’ that produces or triggers the judgment, not the making of the judgment, the judging, itself. Likewise, a claim is not an aspect or a product of an act of claiming; rather an act of claiming, is individuated in terms of the claim that is its aim: it is the making of a claim. This is what in fact conceptually justifies the decompositional analysis of attitude verbs, on which (9a) is interpreted on the basis of an underlying structure as in (10a). This constitutes a confusion that can be found in Twardowski (1911) and some of my earlier papers.[[11]](#footnote-11)

**4. Summary**

To sum up, the starting point of this project is a novel ontology, pursued within a version of metaphysics that gives particular importance to linguistically reflected intuitions. Together with a different semantics than the standard semantics of attitude reports and modal sentences, the ontology of attitudinal and modal objects avoids serious problems for the traditional notion of a proposition and the corresponding analysis of attitude reports, and it opens up new perspectives on the semantics of modals.

1. The absence of a noun for propositions in the core (non-technical part) of natural language, as opposed to terms for attitudinal objects, has been noted already by Bolzano. Bolzano, when trying to find terms for propositions, says: ‘No other words of German come to mind that are suited for this purpose than *sentence,* *judgment*, *statement*, and *assertion*.They all have the defect that they carry with them the secondary concept of something that became and that became in virtue of a thinking being … When understanding the words *a judgment*, *a statement*, *an assertion* we think certainly of nothing else but something that has been produced by judging, stating, and asserting’. (Bolzano 1837, I, 81-82, translation by Mark Textor) [↑](#footnote-ref-1)
2. For the standard view of propositions see also Stalnaker (1979), Schiffer (2003), Richard (1990), Bealer (1998), King (2007), Merricks (2015). Frege uses for the notion of a proposition the noun *thought*, which is actually a noun for attitudinal objects (or kinds of them). But thoughts for Frege are meant to be abstract, sharable contents of sentences and attitudes. [↑](#footnote-ref-2)
3. See Jubien (2001) for problems [1]-[5], Soames (2010), Hanks (2007), Moltmann (2003a, 2013a).Devitt (1994, 2013). [↑](#footnote-ref-3)
4. Propositions as such need not be identified with particular abstract objects, which may be a way of avoiding [5]. An alternative that one might pursue is to take them to be primitives, in their roles as contents of attitudes and truthbearers, and as such just represented by the particular mathematical objects that are compositionally determined meanings of sentences. See Schiffer (2016) for such an approach. [↑](#footnote-ref-4)
5. For the Substitution Problem and Objectivization Effect see Moltmann (2003a, b, 2013), as well as already Vendler (1967), Prior (1971), Bach (1997), among others. [↑](#footnote-ref-5)
6. See Horwich (1990), Schiffer(2003), Bealer (1998) among others for that view. The critique holds both for the view on which special quantifiers are first-order quantifiers and higher-order quantifiers ranging over propositions. The view that special quantifier are higher-order quantifiers goes back to Prior (1971). [↑](#footnote-ref-6)
7. Such restrictions are discussed in detail in Moltmann (2003a, b, 2013a). [↑](#footnote-ref-7)
8. See also Davis (2021) for a critique of propositions as types of acts and for an alternative cognitive conception of propositions. [↑](#footnote-ref-8)
9. The structured-propositions view has also been motivated by the need to have a more fine-grained notion of content than the possible-worlds-based one. On the present view, truthmaker-based approach, content is fine-grained and a structured notion of content is not needed. [↑](#footnote-ref-9)
10. Given Davidsonian event semantics (Davidson 1967), events should be implicit arguments of attitude verbs. Of course, Davidsonian events and attitudinal objects have independent semantic motivations: events in their roles as implicit arguments of verbs are meant to be the objects to which adverbials apply, whereas attitudinal objects are the entities that nominalizations of attitude verbs stand for and as such are mind-dependent entities that are bearers of truth or satisfaction conditions. Events are not bearers of truth or satisfaction conditions or other content-related properties. [↑](#footnote-ref-10)
11. See Davis (2020) on this point. [↑](#footnote-ref-11)