**Truth Predicates, Truth Bearers, and their Variants**

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**Abstract**

Theories of truth can hardly avoid taking into account how truth is expressed in natural language. Existing theories of truth have generally focused on *true* occurring with *that*-clauses. This paper takes a closer look at predicates of truth (and related notions) when they apply to objects as the referents of referential noun phrases, focusing on what I call the ‘core’ of language. It argues that truth predicates and their variants, predicates of correctness, satisfaction, and validity, do not apply to propositions (not even with *that*-clauses), but to a range of attitudinal and modal objects, objects we refer to as ‘claims’, ‘beliefs’, ‘judgments’, ‘demands’, ‘promises, ‘obligations’ etc. As such natural language reflects a notion of truth that is primarily a normative notion conveyed by *correct*, though not as a notion that is action-guiding, but rather one that is constitutive of representational objects independently of any actions that may go along with them. The paper furthermore argues that the predicate *true* is part of a larger class of satisfaction predicates (*satisfied, realized, taken up* etc). The semantic differences among different satisfaction predicates, the paper will argue, are best accounted for in terms of a truth maker theory along the lines of Fine’s (to appear a) truthmaker semantics. Truthmaker semantics also provides a notion of partial content that carries over to attitudinal and modal objects, which may exhibit partial correctness, partial satisfaction, and partial validity.

**Introduction**

Natural language bears on a range of philosophical issues, and it fails to bear on others. The notion of truth is certainly one on which natural language bears a lot. Many theories of truth are focused on the way truth is conveyed in natural language, on the syntactic status of *true* as a predicate, connective, or operator or other linguistic ‘device’, as well as the sorts of objects that *true*, if considered a predicate, applies to, whether it is a proposition, an utterance, an act, or some other kind of object. Theories of truth generally address the issue of the sorts of expressions *true* goes along with: *that*-clauses, referential NPs, quantifiers, and pronouns. Thus, a focus on *true* with *that*-clauses has given rise to views according to which *true* does not act as a predicate or expresses a property, but rather has the status of a connective or operator (Mulligan 2010), an anaphoric device (Grover/Camp/Belnap 1975), or a semantically empty predicate, which may just enable the use of propositional quantifiers or pronouns (Ramsey 1927, Horwich 2010, Kuenne 2003 among others). Clearly then a closer look at the way the expression *true* actually applies in natural language can be very important for the philosophical debate itself. This paper argues that a closer look at both semantic and syntactic aspects of language is very important for three issues regarding the notion of truth:

[1] the nature and range of truth bearers

[2] the relation of truth to normativity and the broader notion of satisfaction

[3] the actual semantics of truth predicates with *that*-clauses.

Whereas most work on the expression of truth focuses on *true* with *that*-clauses, this paper focuses on *true* as a predicate that clearly applies to objects, objects that are the referents of referential noun phrases. Moreover it focuses on the fact that there is not a single truth predicate *true*, but a range of predicates that convey truth or a truth-related notion. Truth-related predicates are predicates of correctness, of satisfaction, and of validity.

Truth-related predicates, including *true,* are not predicates of a single kind of object, say propositions. Rather, in the way they are used in natural language, they act as predicates of a great range of what I call *attitudinal objects*, entities that we refer to as claims, judgments, beliefs, as well as requests, promises, decisions, intentions, desires etc. Some truth-related predicates also apply to *modal objects*, which are entities like obligations, permissions, as well as laws and rules. Attitudinal (and modal) objects are neither propositions nor actions, but entities of a third kind. Neither propositions nor actions share the range the truth-related predicates applicable to attitudinal and modal objects nor do they share other characteristics of attitudinal and modal objects, such as having a part structure strictly based on partial content. Attitudinal objects are agent-dependent and have features of concreteness, though they also come in kinds. Some attitudinal objects are mental states (beliefs, intentions, desires), others are the nonenduring products of actions in the sense of Twardowski (1911) (claims, promises, requests).

*Correct* conveys truth (and just truth) with a range of attitudinal objects, as a norm associated with representational objects, rather than one that guides cognitive or illocutionary acts. The range of attitudinal objects with which *correct* conveys truth, it turns out, is greater than the one that *true* can apply to, which shows a surprising discrepancy between the philosophical notion of truth and the semantic content of the English expression *true*.

. Predicates of satisfaction (*is satisfied, is fulfilled, is taken up, is implemented, is executed*) are on a par with truth predicates, applying to particular types of attitudinal and modal objects. But different satisfaction predicates impose different conditions on the attitudinal and modal objects and their satisfiers, conditions which are best understood in terms of a truthmaker approach along the lines of Fine (to appear a). As outlined in Fine’s (to appear a) work for the semantics of sentences, such an approach is will also be able to account for the part structure of attitudinal and modal objects, which is based on partial content and underlies notions of partial truth, partial satisfaction and partial validity.

Note only truth predicates with referential noun phrases apply to attitudinal (and modal) objects, but also truth predicates with *that*-clauses, which apply to a contextually given claim or suggestion. This view, which was outlined in Moltmann (2015a), will be elaborated further, and additional arguments will be given against a deflationist or minimalist account of *true* with *that*-clauses.

**1. Attitudinal objects**

Philosophical theories of truth generally focus on *true* when it occurs with a *that*-clause as in (1a) or else consider *true* applying to sentences or propositions as in (1b, c):

(1) a. That Paris is the capital of France is true.

b. The sentence ‘Paris is the capital of France’ is true.

c. The proposition that Paris is the capital of France is true.

One important aim of this paper is to pay much closer attention to what sorts of objects *true* actually applies to in natural language when it does not occur with a *that*-clause, but takes a referential noun phrase (NP). (1c) is the hardly revealing in that respect. In fact, philosophers arguing for propositions being truth bearers generally do not point to sentences like (1c), but rather to sentences with simple *that*-clauses as in (1a) (Section 7). *The proposition that* S is a quasi-technical term aiming to make explicit (or thus perhaps reifying) what *that*-clauses are supposed to stand for. As such they belong to what one may call the periphery, not the core of language and would not be indicative of what sorts of objects *true* actually applies to in natural language (Moltmann to appear c). With referential NPs that are part of the core of language, *true* applies to a range of objects, for example those below:

(2) a. John’s belief that S is true.

b. John’s judgment that S is true.

c. John’s claim / assertion is true.

A common view is that nouns like *judgment* and *claim* are ambiguous between standing for mental events or speech acts and propositions (Pustejovsky 1995). That is because on the one hand, they allow for predicates such as *true* (which could apply to propositions), and on the other hand they allow for predicates of concreteness, specifying a temporal duration or causal relations. However, there is compelling evidence that such nouns are univocal and stand for entities of a third kind, what I call ‘attitudinal objects’ (Moltmann 2013, 2014, to appear a). One piece of evidence is that they permit at once predicates of concrete objects and truth predicates:

(3) a. John remembered his false judgment that S.

b. Mary overheard John’s true claim that S.

Another reason is the applicability of predicates of satisfaction to attitudinal objects like requests and promises, predicates that could apply neither to propositions nor events (e.g. *satisfy, fulfill, break*) (Section 3) (Ulrich 1976, Moltmann to appear a).

Attitudinal objects are concrete, can enter causal relations, and are dependent on an agent, and they generally do not last longer than the act that established them (Twardowski 1911, Moltmann 2014, to appear a). Despite being concrete particulars, attitudinal objects, just like artifacts, have important content-related features. Attitudinal objects rather than actions are carriers of representational or normative properties. Attitudinal objects come with essential satisfaction conditions, which may involve various conditions, including a direction of fit.[[1]](#footnote-1) As such attitudinal objects do not involve a separation of content and force. Moreover, they exhibit two characteristics that acts and propositions do not have.

First, they have a part structure based on partial content. This also distinguishes them from states, on the standard understanding according to which states have temporal parts. A part of a belief, judgment, claim, or assertion is a partial content, not the temporal part of a state or act. All part-related expressions, not just *part of* behave that way (*most of, to some extent, partially* etc). *Part of* does not really apply to propositions:[[2]](#footnote-2)

(4) ??? Part of the proposition that John came and that Mary left is that John came.

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I will come to the notion of partial content later in Section 5.

Second, attitudinal objects enter similarity relations strictly on the basis on being the same in content, provided they are of the same type (Moltmann 2014, to appear a). This is reflected in the way *is the same as* and *partly the same as* applies:

(5) a. John’s claim was the same as Mary’s.

b. John’s claim was partly the same as Mary’s.

(5a) can only state the sharing of content, not the sharing of a way of performing a speech act. (5b) similarly can only be about sharing of a partial content.

Thus attitudinal objects have features of concreteness, truth or satisfaction conditions, a part structure based on partial content, and similarity relations driven by content rather than shared features of a performance. While particular attitudinal objects, which depend on particular agents, cannot be shared, they come in kinds, which exhibit the very same representational properties. *John’s claim that* S in (6a) stands for a particular attitudinal object and *the claim that* S in (6b) stands for a kind of such objects:

(6) a. John’s claim that S is true.

b. The claim that S is true / is widely believed / have been maintained.

Kinds of attitudinal objects are equally well-reflected in natural language, and they need not have actual instances.

While attitudinal objects are hardly recognized in contemporary metaphysics, they are clearly part of the ontology of natural language (Moltmann to appear b). Natural language generally displays a wealth of (nontechnical) terms for attitudinal objects, especially ordinary nominalizations of attitude verbs such as *claim, thought, judgement, decision* etc, and these terms are associated with stable intuitions displaying the sorts of properties attitudinal objects can have. Attitudinal objects differ thus from propositions, for which there are generally no non-technical terms in natural language. I will later (Section 7) argue that attitudinal objects are even involved in the semantics of truth predicates with sentential subjects (*that*-clauses).

Attitudinal objects divide into mental states (beliefs, intentions, desires), cognitive products (decisions, judgments, thoughts), and illocutionary products (claims, requests, promises) in roughly the sense of Twardowski’s (1911) distinction between actions and products. According to that notion of a product, a claim is the nonenduring products of an act of claiming, and a judgment the (nonphysical) product of an act of judging. To use Thomasson’s (1999) term, the judgment is the ‘abstract artifact’ that results from an act of judging, the sense of ‘abstract’ as ‘lacking a physical realization’ (Moltmann 2014, to appear a). As in the case of artifacts, it is the product, not the act which is the carrier of representational and relevant normative properties.

Attitudinal objects are central for the notion of truth that is reflected in natural language truth predicates, as well as their variants: predicates of correctness, satisfaction, and validity, as we will see in the following.

**2. *True* and *correct* as truth predicates**

**2.1. Correctness and the norm of truth**

An important observation is that the truth of attitudinal objects can also be conveyed by *correct* (and *right*), which thus acts as a *normative truth predicate*

(7) a. John’s belief is correct.

b. John’s judgment that S is correct.

c. John’s claim that S is correct.

In natural language *correct* when applied to a belief or an assertion conveys just truth, whether or not the belief or assertion is justified or warranted. This is an important fact. Even if some philosophers (such as Williamson 2000) impose further conditions on the correctness on beliefs or assertion, this could not influence the application of *correct*, which could not convey more than truth when applied to beliefs, judgments, and assertions.

Like *true,* *correct* can also be predicated of sentences:

(8) This sentence is correct.

However, when predicated of sentences, *correct* evaluates grammaticality rather than truth. Here the more general normative meaning of *correct* is at play, where *correct* holds of an object *o* just in case *o* fulfills the norm that is associated with *o* or that is relevant in the context. The norm associated with a syntactic object such as a sentence is grammaticality rather than truth. Other kinds of norms are associated with other types of objects that *correct* may apply to. A choreography may be the norm for a dancer’s movement as in (9a), a logic that for a proof or conclusion as in (9b) and (9c), and laws or moral values for punishments in (9d):

(9) a. The dancer’s movements were correct.

b. The proof was correct.

c. The conclusion that Mary is guilty is correct.

d. John’s punishment was correct

For the application of *correct*, as for other truth-related predicates, the distinction between actions and their products is an important one. When a conclusion is correct, the act of concluding itself need not be, it may go against a contextually given demand, just in the way a signature may be correct, but not the act of signing. This also holds for assertions and judgments. While (9b) and (9c) may be true, (10a) and (10b) need not be, and vice versa:

(10) a. John’s making a judgment / John’s judging was correct

b. John’s making a claim that S / John’s claiming that S was right.

*Correct* in (9b) and (9c) conveys truth; in (10a, b) it conveys the fulfillment of what may just be a contextually given norm, a requirement, expectation, instruction, or purpose. An act of judging or asserting may be correct because it follows an instruction or order, not because it captures a truth. Assertions, judgements and beliefs, by contrast, are not evaluated as correct according to some contextually relevant norm. Rather they are intrinsically associated with a norm, the norm of truth, but not so for mental and illocutionary acts. Acts of judging and asserting may aim to produce a product that is intrinsically associated with the norm of truth, quite independently of what norms the acts themselves may aim to satisfy.

In the philosophical literature, normativity generally is generally linked to actions. Thus there are proposals according to which truth is constitutive of the norm associated with believing, along the lines of ‘if one ought to believe p, then p’ (Boghossian 2003, Gibbard 2003). But such conditions on adopting or maintaining a belief are generally problematic (Gluer/Wikforss 2009). Truth is not the aim of believing in the sense in which the fulfillment of moral values is what certain types of actions and decisions should aim for. In fact, the norms for actions of adopting or maintaining a belief may simply be contextually given norms of some sort or another. Truth as a norm is not action-guiding, but rather is solely associated with the representational object, as its ‘telos’ (Jarvis 2012). As a teleological norm, truth is associated with mental states such as beliefs as well products of mental or illocutionary acts such as judgments, assertions, and requests. Mental states such as beliefs need not have been produced by any mental act at all, but may be prior to intentional acts (Searle 1983).

*Correct,* one can then say, applies to an object with a single reading just in case the object is intrinsically associated with a particular norm. *Correct* applies to beliefs, judgments, and claims with a single reading conveying truth because beliefs, judgments, and claims are intrinsically associated with the norm of truth. This association is quite different from the contextually given norm that actions like claiming and judging, and adopting or maintaining a belief are associated with.

The ability to convey truth (and only truth) with beliefs and assertions does not seem to be a peculiarity of English *correct*. Other normative predicates in English exhibit the same two readings, for example *right* and *wrong*, as do corresponding predicates in other European languages.[[3]](#footnote-3) German *stimmen*, for example, is a predicate that expresses a more restricted notion of correctness, relating to norms of the sort of prescriptions and rules, but not moral values, illustrated in (11a); yet it conveys truth (and only truth) with assertions and suppositions, as in (11b) (Moltmann 2015a):

(11) a. Der Tanzschritt / ??? Die Bestrafung stimmt.

‘The dance step / The punishment is correct’

b. Die Aussage / Die Annahme stimmt.

‘The claim / The supposition is correct’.

In fact it is likely a crosslinguistic universal that predicates of correctness convey truth and just truth when applied to objects like beliefs, judgments and claims.

Propositions hardly allow for the application of *correct*, in marked contrast to beliefs and assertions:[[4]](#footnote-4)

(12) ??? The proposition that Mary left is correct.

If propositions are reified meanings of sentences, their ability of being truth bearers should be derivative and not due to the truth norm that is constitutive of the intentionality of beliefs and products of mental and illocutionary acts. The representation-related notion conveyed by *true* when predicated of sentences and abstract propositions will then be accounted for in terms of the primary notion of truth that is part of the notion of correctness. Roughly*, true* will hold of a proposition or sentence in virtue of that proposition or sentence being able to characterize a (potential) belief or claim that fulfills its norm.

**2.2. Correctness and the reflective notion of truth**

There is another important point that the actual semantic behavior of *correct* makes. With a range of attitudinal objects only *correct* is applicable, not *true*, even if those attitudinal objects would be regarded as truth bearers, given our reflective (and not just philosophical) notion of truth.

First, attitudinal objects with a merely speculative force allow for *correct*, but generally resist *true*:

(13) a. John’s speculation was correct.

b. ?? John’s speculation was true.

(14) a. The calculation that she would be home by then was correct.

b. ?? The calculation that she would be home by then was true.

(15) a. John’s guess that S is correct.

b. ?? John’s guess that S is true.

(16) a. John’s hypothesis is correct.

b. ? John’s hypothesis is true.

(17) a. The suspicion that S is correct.

b. ?? The suspicion that S is true.

Corresponding judgments from other European languages (such as French, Italian, and German) confirm the generalization. In fact, the judgments from German appear even sharper, clearly excluding *wahr* ‘true’ from speculative attitudinal objects:

(18) a. Die Ueberlegung, dass S, ist richtig / ??? wahr.

‘The calculation that S is correct / true.’

b. Die Hypothese, dass S, ist richtig / ??? wahr.

‘The hypothesis that S is correct / true.

c. Die Vermutung, dass S, ist richtig / ??? wahr.

‘The guest that S is correct / true.’

d. Der Verdacht dass S, ist richtig / ??? wahr.

‘The suspicion, that S, is correct / true.’

Furthermore, cognitive products that result from perception do not allow for *true*:

(19) a. Mary’s impression was correct.

b. ??? Mary’s impression was true.

(20) a. Mary’s observation that S is correct.

b. ??? Mary’s observation that S is true.

Again German confirms the generalization:

(21) a. Maria’s Eindruck ist korrekt / ??? wahr.

‘Mary’s impression is correct / true.’

b. Die Beobachtung, dass es regnet, ist richtig / ??? wahr.

‘The observation that it is raining is correct / true.’

Also future-oriented attitudinal objects do not go with *true*, but may go with *correct* instead, though they may allow for *become true*:

(22) a. The prediction / hope that it would rain yesterday was correct.

b. ??? The prediction that it would rain yesterday was true.

c. The prediction that it would rain yesterday had become true.

Recollections may be put on a par with products of perception, as products of introspections. They also do not accept *true*, but only *correct*, in English and German:

(23) a. ??? Mary’s recollection that it had rained on her birthday a year is true.

b. Mary’s recollection that it had rained on her birthday a year ago is correct.

(24) Maria’s Erinnering ist richtig / ?? wahr.

‘Mary’s recollection is correct / true.’

*True* unlike *correct* requires an intentionally maintained or produced attitudinal object with a certain strength of truth-directed force. *True* thus carries a significant presupposition that *correct* lacks. *True* then does not actually convey the reflective or philosophical notion of truth. Only *correct* does, and only when applied to objects intrinsically associated with the norm of truth, attitudinal objects ranging from beliefs and assertions to speculations, suggestions, and impressions.

There is thus a discrepancy between a philosophical or reflective notion and the notion conveyed by the corresponding natural language expression. Such a discrepancy appears elsewhere too, for example, with the notion of existence. The notion of existence in contemporary philosophy is generally considered a univocal concept that trivially applies to all actual entities of whatever sort, whether existence is viewed as existential quantification or a property. By contrast, the predicate *exist* in English (and it is syntactically a predicate) applies only to enduring and abstract objects. *Exist* in particular fails to apply to events (which rather ‘happen’, ‘take place’, or ‘obtain’) (Cresswell 1986, Moltmann 2013c). The linguistic intuitions are uncontroversial, and they hold, it seems, across languages for corresponding predicates, indicating a division of ‘existence’ into different space-time-related modes of being. The philosophical or reflective notion of existence (the one that a philosopher or even nonphilosopher may accept when thinking about ‘what there is’) thus diverges from the one that is implicit in the semantics of natural language and part of the metaphysics of natural language. Discrepancies of this sort require acknowledging two layers of judgements: that of linguistically reflected intuitions and that arising from a shared philosophical or reflective notion. Both types of judgment of belong to the subject matter of ‘descriptive metaphysics’, to use Strawson’s (1959) term, or ‘naïve’ metaphysics, the ‘metaphysics of appearances’, to use Fine’s (to appear b) terms.

*Correct* rather than *true* is also what is to be chosen with truth bearers like explanations and answers, which require particular presuppositions to be fulfilled. Again the judgments are somewhat sharper for the German translations in (25b) and (26b):

(25) a. The explanation that Mary was not informed was correct / ?? true.

b. ‘Die Erklaerung, dass Maria nicht informiert war, war richtig / ??? wahr.

(26) a. The answer that Paris is the capital of France is correct / ? true.

b. Die Antwort, dass Paris die Hauptstadt von Frankreich ist, ist richtig / ??? wahr.

For an explanation to be a correct or incorrect explanation, it does not suffice for its content to be true; it also needs to explain what it is to be explained. Similarly, an answer needs to respond to the question for it to be correct or incorrect.

**3. Predicates of satisfaction**

Truth is part of another more general notion, namely satisfaction. Various types of attitudinal objects do not have truth conditions, but rather satisfaction conditions, or in fact satisfaction and violation conditions. Satisfaction (and violation) conditions in turn divide into different sorts, expressed by different natural language predicates. Thus, illocutionary products that are requests, demands, promises, pieces of advice, or permissions cannot be said to be ‘true’. But they can be said to be ‘satisfied’, ‘fulfilled’, ‘complied with’, ‘kept’, ‘followed’, or ‘taken up’. Moreover, a demand and promise cannot be ‘false’. A demand can be ‘ignored’ or ‘contravened’ and a promise ‘broken’.[[5]](#footnote-5) Similarly, cognitive products like decisions cannot be said to be ‘true’, but rather would perhaps be ‘implemented’ or ‘executed’. Finally, mental states such as desires and intentions could not be said to be ‘true’, but they can be ‘fulfilled’ or ‘realized’. What is special about all these attitudinal objects is that they come with a ‘world-word/mind-direction of fit’, rather than a ‘word/mind-world direction of fit’, to use Searle’s (1969, 1983) terms. They require the world to fit the representation, rather than the representation fit the world. This means that they are satisfied by actions, rather than made true by world states, or rather states of affairs. Satisfaction conditions in fact go along best with a truthmaker approach along the lines of Fine (to appear a). This means that not entire worlds stand in the satisfaction relation to a request, promise, intention, or decision, but rather actions. Actions as satisfiers of a request, promise, intention, or decision are entities that are wholly relevant for the satisfaction of the request, promise, intention, or decision. Applied to truth-directed attitudinal objects, situations will be the truthmakers of a belief, judgment or claim if they are wholly relevant for the satisfaction of the belief, judgment or claim. In Fine’s (to appear a) truthmaker semantics, where the notion of exact satisfaction or truthmaking plays a central role, exact satisfaction or truthmaking is applied to declarative and imperative sentences, but the notioncarries over straightforwardly to attitudinal objects. A rudimentary truthmaker view of intentionality can also be found in Searle (1983).

Further support for making use of a truthmaker approach comes from the fact that for products of directive illocutionary acts, satisfaction (or violation) may also be conveyed by agentive verbs, with the *by-*locution describing a particular action as the satisfier (or violator) of the attitudinal object:

(27) a. John fulfilled the demand by handing in the paper in time.

b. John followed / ignored the advice by staying home.

There are also attitudinal objects with a word/mind-world direction of fit that have satisfaction conditions, rather than truth conditions. In particular, nonfactive future-oriented emotive attitudinal objects are of that sort. Hopes and desires cannot be said to be true or false, but they can be fulfilled or unfulfilled, at least if they are future-oriented.

(28) a. John’s hope / desire / prediction that he would win yesterday was fulfilled.

b. ??? John’s hope that he had locked the door was fulfilled.

Interestingly, a future-oriented hope can ‘become true’, though a present-oriented hope can neither ‘be true’ nor ‘become true’:

(29) a. John’s hope that he would win became true.

b. John’s hope that the key remained in the lock was fulfilled / ??? was true /

??? became true.

By contrast, predictions, which can only be future-oriented, can always be fulfilled or become true (though, again they could not ‘be true’).

There is another type of object beside attitudinal objects that displays satisfaction conditions. These are what I call *(deontic) modal objects*.[[6]](#footnote-6) Modal objects (of the deontic sort) are entities like obligations, needs, permissions, offers, and invitations. They also include (abstract) artifacts like laws and rules. Like a request or command, an obligation may be satisfied, fulfilled, or complied with. Deontic modal objects like obligations and permissions have a world-word/mind direction of fit. Modal objects may be produced by the very same acts that produce illocutionary products, such as acts of requesting, promising, and permitting. But unlike illocutionary products, modal objects may last beyond the illocutionary act that may have established them. Thus, if Joe, being in the position of power, asks Mary to work fulltime, then not only a request for Mary to work fulltime results, but also (under the right circumstances) an obligation for her to work fulltime, and that obligation may last way past the time of the request. A modal object produced by an illocutionary act shares its satisfaction conditions with the illocutionary product that the same act produces, but it generally has a different lifespan.

Why do some objects have satisfaction conditions rather than truth conditions? There is a common characteristic of attitudinal and modal objects with a world-word/mind direction of fit and future-oriented attitudinal objects, given a view of an open, branching future. That is, at the time at which those attitudinal and modals objects exist, there will be different actions / states of affairs in different future world states that satisfy the attitudinal object. This is not the case for beliefs, claims etc, not even for those that could have several truthmaking states of affairs. Disjunctive or existentially quantified beliefs may have several states of affairs that make them (actually) true, but those states of affairs would all be part of the actual circumstance.

Not all attitudinal and modal objects that have a world-word/mind direction of fit or are future-oriented can be ‘satisfied’ or ‘fulfilled’. Attitudinal and modal objects can be ‘satisfied’ or ‘fulfilled’ only if their modal force is that of necessity. Attitudinal and modal objects with the modal force of possibility such as proposals, permissions, offers, and invitations cannot be ‘satisfied’ or ‘fulfilled’. Instead, a proposal, a permission, or an offer may be ‘taken up’ and an invitation ‘accepted’. What distinguishes proposals, permissions, offers, and invitations from requests and obligations is that unlike the latter proposals, permissions, offers, and invitations cannot be violated: not taking up an offer or accepting an invitation is not a violation, but not satisfying a demand or fulfilling a promise is, and whatever action is performed by which the demand or request is not satisfied is a violator of the request of demand. Attitudinal and modal objects of possibility may have ‘satisfiers’, as I will (misleadingly) call them, but they cannot have violators (Moltmann 2015b, to appear a). This difference is sharply reflected in the different satisfaction predicates applicable to the two sorts of modal objects. It is also reflected in the absence of any predicates of violation applicable to permissions, offers, and requests. Obligations can be violated or contravened, and rules or laws can be broken. Offers and invitations can be declined or refused, but that does not amount to a violation. The predicate *ignore* conveys violation with modal objects of necessity, but with modal objects of possibility it conveys simple failure to satisfy it. Ignoring a permission does not mean violating it, but ignoring a command or request means that. The difference in modal force is also reflected in the way satisfiers are evaluated. An action taking up a permission would not be ‘correct’, but ‘legitimate’. Note that by only having satisfiers and no violators, attitudinal and modal objects of possibility can only bear the equivalent of truth (that is, satisfaction), not of falsehood. Thus whereas requests and obligations should be assigned as their content both a set actions that are satisfiers and a set of actions that are violators, proposals and permissions should be associated only with a set of satisfiers.

Not all attitudinal objects with a world-mind/word direction of fit permit predicates such as *satisfied* or *fulfilled*, in particular intentions and decisions don’t. Decisions are not fulfilled, but perhaps implemented, and intentions likewise are not satisfied, but rather perhaps realized. Intentions and decisions have satisfaction condition, in the reflective sense of ‘satisfaction conditions’, but not in the sense of the verb *satisfy*. What distinguishes intentions and decisions from requests, promises is that they are mental states or products that must stand in a causal relation to the actions that could satisfy (i.e. implement or realize) them. Here a causal connection between attitudinal object and satisfiers is thus what determines the applicability of satisfaction predicates (*satisfy* vs *implement/realize*).

To summarize, the differences among satisfaction predicates reflect the availability of satisfiers in different circumstances, the relation of satisfiers to the attitudinal object, as well the presence or absence of violators. These conditions could not be formulated if attitudinal and modal objects were just assigned a set of worlds as their content. Rather they support a truthmaker approach to the content of attitudinal and modal objects.

It is remarkable that *correct* fails to convey satisfaction when applied to attitudinal and modal objects that come with satisfaction conditions. A request cannot be ‘correct’ (in the sense of being satisfied), though it can be ‘correctly satisfied’. An offer cannot be ‘correct’ (in the sense of being taken up), but it can be ‘correctly taken up’. Similarly, in such a sense, an obligation would not be ‘correct’, but correctly complied with, and an intention would not be ‘correct, but ‘correctly realized’.[[7]](#footnote-7) *Correct* evaluates actions that aim to satisfy a request, offer, obligation or intention, but it cannot convey the fulfillment of the teleological norm associated with such objects. As with *correct* conveying truth (and just truth) with truth-directed attitudinal objects, this is likely a linguistic universal: the very same holds for normative predicates such as *right, wrong,* and German *stimmen*. The reason, it appears, is that *correct* is sensitive to the direction of fit: it applies to what needs to fit, not what needs to be fitted. Truth-directed objects need to fit the world, actions need to fit a satisfaction-directed object.

**4. Predicates of validity**

Deontic modal objects like obligations, permissions, obligations, offers, as well as rules and laws have another truth-related dimension, namely validity. Predicates of validity include *is valid*, *obtain*, and *hold*. The validity of a modal object (at a time) amounts to the existence of the modal object (at the time) (even if *exist* may not be applicable):

(30) a. The obligation for Mary to work still holds.

b. The permission / offer for Mary to use the house is still valid.

Equivalently, predicates of validity convey the time-relative truth of the corresponding modal sentence or the truth of the corresponding tensed modal sentence. Thus (30a) is, roughly, equivalent to (31a, b), and (30b) to (32a, b):[[8]](#footnote-8)

(31) a. That Mary still has to work is true.

b. That Mary has to work is still true.

(32) a. That Mary may still use the house is true.

b. That Mary may use the house is still true.

For modal objects that are laws, rules, and conditions, the same holds for the predicate *obtain*:

(33) a. The law that one must have a passport still obtains.

b. That one must have a passport is still true.

Validity goes along with truth (of the corresponding modal sentence), but it also goes along with existence, as the mode of being of deontic modal objects. It also goes along with satisfaction: only modal objects that have satisfaction conditions can have validity. There is moreover a close connection between validity and correctness: if a modal object (of necessity) is valid, then actions satisfying it are correct.[[9]](#footnote-9)

**5. Partial truth, correctness, satisfaction, and validity**

Truth and the more general notions of correctness and of satisfaction as well as the related notion of validity permit partial application vielding notions of partial truth, partial correctness, partial satisfaction, and partial validity (Moltmann 2017).[[10]](#footnote-10) Linguistically, this is reflected in the use of adverbial modifiers like *partly* below:

(34) a. John’s belief is partly true.

b. John’s claim is partly correct.

c. Mary’s desire was partly satisfied.

d. The offer was partly taken up.

e. The offer is now only partly valid.

*Partly* as a predicate modifier relates to the content-based part structure of an attitudinal object Thus (34a) – (34d) are equivalent to (35a) – (35d):

(35) a. Part of John’s belief is true.

b. Part of John’s claim is correct.

c. Part of Mary’s desire was satisfied.

d. Part of the offer was taken up.

Also agent-related predicates of satisfaction allow for partiality:

(36) a. John partly satisfied the demand.

b. John partly followed Mary’s advice.

Note that for distinguishing illocutionary products of the sort of requests and demands from attitudinal objects of the sort of permissions, an assignment of content will not be enough. Partial (but not complete) fulfillment of an order goes along with partial ignorance or violation of the order, whereas partial (but not complete) taking up of a permission or offer does not go along with any sort of violation.

Also modal products allow for partial satisfaction:

(37) a. John partly fulfilled his obligation.

b. John partly followed the law / the rule.

Modal products display a part structure based on partial content as well. The *part of*-construction applies naturally to deontic modal products, picking out a partial content:[[11]](#footnote-11)

(38) a. Part of John’s obligation is to help Mary.

b. Part of the offer is to use the house in summer.

c. Part of the law concerns children.

Both satisfaction and validity may be partial: The obligation for Mary to work fulltime may be satisfied only partially, and it may still be valid only partially. An offer may hold only partially, and it may be taken up only in part. Both validity and satisfaction thus require a notion of partial content for their bearers.

Validity of part of a modal object cannot be reduced to partial truth of a statement of the modal object’s validity. Thus (39a) is not equivalent to (39b) and neither is (40a) to (40b):

(39) a. The students fulfilled part of the requirement.

b. That the students fulfilled the requirements is partly true.

(40) a. The police force ignored part of the order.

b. That the police force ignored the order is partly true.

(39a) cannot have a reading on which part of students fulfilled the requirement, but (39b) can have such a reading. Similarly (40a) cannot have a reading according to which part of the police force ignored the order, but (40b) can have such a reading.

Truthmaker semantics provides a straightforward notion of partial content, as below (Fine, to appear a):[[12]](#footnote-12)

(41) For sets A and B of situations or actions, 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.

A notion of a partial content of an attitudinal and modal object o can then be defined as below, where cont(o), the content of o, consists of a set of satisfiers sat-cont(o) and possibly a set of violators viol-cont(o):[[13]](#footnote-13)

(42) A set B of situations or actions is a *partial content* of an attitudinal or modal object o iff

B is a partial content of sat-cont(o).

With this notion of partial content, the two notions of partial validity and partial satisfaction (truth) can be formulated as below:

(43) a. An (attitudinal or modal) object o is *partially satisfied* iff there is an actual situation or

action s and a partial content B of o such that s ∈ B.

b. A (potential) modal object o is *partially valid* if there is a partial content B of o such

that some modal object d such that B = sat-cont(d) exists.

(43b) is a condition on potential modal objects and presupposes that for every partial content B of a potential modal object, there is a potential modal object with B as its content.

**6. Truth predicates and sentential subjects**

We have seen that truth predicates and their variants, predicates of correctness, satisfaction and validity apply to attitudinal and modal objects, entities that come with essential representational and normative properties. The question now is, how are truth predicates to be understood when they apply to *that*-clauses as sentential subjects:

(44) That Berlin is the capital of Germany is true.

There are two important generalizations about truth predicates with sentential subjects. First the sentential subject construction in (44) systematically alternates with the extraposition construction below:

(45) It is true that Berlin is the capital of Germany.

This alternation in fact holds for *all* predicates that take sentential subjects: all predicates that take clauses as subject also allow for clause to be extraposed, as in (45).

Second, sentential subjects generally can be replaced by special quantifiers or pronouns such as *something* and *that*:

(46) a. Something is true.

b. That is true.

Quantifiers and pronouns like *everything* and *that* are special in that they can take the place of predicative, intensional, and other nonreferential complements. They are thus not themselves indicators of the referentiality of the expression they may replace (Moltmann 2003a, 2004, 2013a).

The philosophical literature, as was mentioned, has mainly focused on truth predicates with sentential subjects. This focus has given rise to particular views about the notion of truth, in particular minimalist and deflationist approaches, which are based on the view that *that*-clauses are straightforward proposition-denoting nominalizations of sentences. I will come to those in the next section.

Another approach that the focus on *true* with sentences has given rise to is the view that *is true that* is in fact an operator or connective rather than *true* being a predicate predicated of an object (Mulligan 2010). As a connective or operator, *it is true that* would have no semantic contribution or at best would just serve to shift the evaluation of the subsequent clause to a different time or circumstance. Linguistically, this view is untenable, though. First of all*, it is true that* does not form a constituent; rather *that* and the clause that follows *that* do. Moreover, the view gives priority to the extraposed form, when in fact extraposition of sentential subjects is always available even for predicates like *is nice, is unfortunate*, and *is hard to believe*, which could hardly be considered ‘connectives’ or ‘operators’ (Moltmann 2015a). In fact, the availability of the extraposed form with *true* should not be considered evidence for *true* not acting as a predicate. There are predicates that allow only for the extraposed form, for example seem (*it seems that* S and *it appears that* S), and the general explanation is that those predicates select CPs (roughly, sentential arguments), whereas those that take subject clauses select DPs (roughly, referential arguments). This means that *true* actually selects a DP (referential argument) and thus acts as a predicate, predicated of an object, even if the embedded clause is extraposed.

But how can a *that*-clause, which is a CP, relate to the DP argument that is required by the predicate *is true*? There are two different views in the literature about the syntactic position of the apparent subject clause and its relation to the DP that the predicate requires in subject position. On one view, argued for by Koster (1978), the subject clause is in fact in topic position and as such linked to an empty nominal element (DP) in the subject position. The topic position does not require a referential expression, but also allows for example predicates such as *really happy*, as below:

(47) Really happy, he will never be.

It will then be the empty nominal element in subject position that will refer to object *true* is predicated of. The empty nominal may stand for different sorts of objects, depending on the type of object the predicate requires; the *that*-clause in topic position will just serve to characterize its content.

On another view, recently pursued by Kastner (2015), a subject clause will in fact just be a part of a DP in subject position modifying an empty nominal element that is the head of the DP; of the sort [eN *that* S]DP a construction that would overtly be of the sort *the claim that* S, *the fact* S, or *the proposition that* S. On that view, again, the *that*-clause would have the semantic role of characterizing the object the entire DP stands for, the object that the predicate will apply to.

Without going into the details that motivate the two views and a comparison among them, clearly on either view *true* (unlike *seems*) requires a referential category (DP) in subject position. It will thus perform its ordinary semantic role as a predicate applying to an object.

What sort of object does the DP with *is true* stand for? There are two sorts of semantic evidence that *true* with a *that*-clause *does not* apply to propositions, but rather applies to attitudinal objects, just like *true* with an overt DP. More precisely, *true* with a *that*-clause applies to a contextually given claim or suggestion whose content is specified by the embedded clause.

The first piece of evidence for that is the applicability of the normative truth predicate *correct* to *that*-clauses. *Correct*, which was not applicable to propositions, is unproblematic with *that*-clauses (in subject position and when extraposed), and then, as with beliefs and claims, it conveys truth:

(48) a. That John is the director is correct.

b. It is correct that John is the director.

The second piece of evidence is the applicability of part-related expressions. Adverbial modifiers such as *partly* and *completely* may relate to a *that*-clause in subject position:

(49) a. That John’s family is German is partly true.

b. That John write the article is to a good extent implausible.

(49a) is equivalent to something like (50a), but not to (50b), since, as we have seen, propositions are not treated as entities that have parts. Similarly for (40b) and (51a, b):

(50) a. Part of the claim / ?? proposition that John’s family is German is true.

b. ?? Part of the proposition that John’s family is German is true

(51) a. A good part of the suggestion / hypothesis that John wrote the article is implausible.

b. A good part of the proposition that John wrote the article is implausible.

The syntactic arguments do not require *that*-clauses with the predicate *true* to stand for propositions. The semantic arguments make it implausible that  *that*-clauses with the predicate *true* stand for propositions. Rather *that*-clauses with *true* as predicate serve to characterize a claim, suggestion, or hypothesis with which the speaker refers to with the implicit DP that occupies the subject position. This need not be an actual claim: the *that*-clause can serve to characterize a kind of claim, ‘the claim that S’, which may lack a relevant actual instance (Moltmann 2013a, Chap 2). Such an interpretation would correspond to a syntactic structure on which the subject DP contains a silent head noun specified for an assertive illocutionary product and the *that*-clause appears in or relates to the position following the silent noun.[[14]](#footnote-14)

**7. Truth predicates and deflationist and minimalist accounts of *true***

One central issue in the philosophical discussion of truth is the status of *true* as a predicate expressing a property. The last section made clear that *true* syntactically and semantically acts as a predicate even with *that*-clauses. Another question is whether its semantic value would be a property in any substantial sense and whether the view allows for a deflationist or minimalist account of some sort (Horwich 1990, Kuenne 2003). Deflationists and minimalists deny that *true* expresses a true property, but they do not necessarily make claims about the syntactic status of *true*. Thus, Horwich’s (1990) version of deflationism only says that what constitutes having the concept of truth is the knowledge of the equivalence schema below, where [S] is a nominalization function (roughly corresponding to *that*):[[15]](#footnote-15)

(52) [S] is true iff S.

As stated in (52), the account still makes some semantic assumptions, though. It gives priority to the clausal construction: (52) is applicable only when *true* applies to a *that*-clause and not when it applies to a referential NP. (52) moreover treats a *that*-clause as a proposition-referring term. Given (52), the application of the truth predicate amounts to the denominalization of the proposition-referring term (a *that*-clause) and the use of the sentence thus obtained.

In addition, (52) would not be able to extend to the full range of truth-related predicates. It would not account for the normative predicate *correct* conveying truth when applied to some objects, but not others. *Correct* does not even apply to propositions, but only to entities like beliefs and assertion.

Moreover, (52) cannot be extended to predicates of satisfaction (which is particularly problematic if they are considered predicates that include *true* as a special case). For a schema like (52) to cover predicate of satisfaction, it would have to apply to what amounts to the nominalization of an imperative, to a request, say. But the satisfaction of a request does not amount to the use of an imperative, which serves to make a request, not to satisfy it. The deflationist account, moreover, could not apply to agent-related satisfaction predicates.

There is also a general issue with what *true* is taken to apply to in (52). It is far from clear that there is such a thing as a notion of a proposition -- a truthbearer -- that is not itself constituted by the notion of truth (Boghossian 2010). Truth is intimately linked to intentionality and the ability to represent, on a par with satisfaction. Attitudinal objects incorporate that link, abstract propositions don’t.

**8. Conclusion**

The aim of this paper was to show that a closer look at the semantic behavior of truth predicates and their variants provides important insights into the nature of truth and related notions. The core of natural language, the paper argued, reflects the view that attitudinal objecte are the bearers of truth or satisfaction conditions, rather than propositions, and that even when truth predicates apply to *that*-clauses. Furthermore, it reflects the notion of truth having the status of a norm that applies to certain types of representational objects, rather being action-guiding. Finally, the different types of satisfaction predicates give support for a truthmaker theory being associated with the notions of truth and satisfaction, as does the possibility of partial truth, partial satisfaction, and partial validity.

If attitudinal objects rather than propositions act as the primary truth bearers, this will raise the question of the semantics of attitude reports. On the standard view, attitude reports like *John claimed that* S involve propositions as the semantic values of *that*-clauses, which will act as the relata of a two-place attitudinal relation such as the relation of claiming. Moreover, quantifiers like *something* as in *John claimed something*, on the standard view, range over propositions. However, there are various linguistic and philosophical motivations for an alternative view on which in fact attitudinal objects play a central role in the semantics of attitude reports. On that view, *that*-clauses semantically act as predicates of attitudinal objects and quantifiers such as *something* that can take the place of *that*-clauses range over attitudinal objects or kinds of them (Moltmann 2003a, 2014, to appear a).

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1. Note all attitudinal objects come with truth or satisfaction conditions. There are also ‘expressive’ attitudinal objects, for example products of expressive illocutionary acts such as sighs and complaints. [↑](#footnote-ref-1)
2. Interestingly, though, *part of* does apply to what is described as a content, picking out a partial content:

   (i) Part of the content of the sentence / the claim / the thought that John came and that Mary left is that John

   came. [↑](#footnote-ref-2)
3. Sometimes a language displays only the normative predicate and no specific truth predicate. Thus, German has only *falsch* the antonym of *richtig* ‘correct’, conveying mere falsehood with claims and beliefs, but, for example, failure to follow the choreography with dance movements (Moltmann 2015a). Interestingly, *falsch* when predicated of sentences as in (ia) is not ambiguous, but means only ‘false’, not ‘grammatically wrong’. To convey ungrammatically requires explicitly negating *korrekt* or *richtig*:

   (i) a. Der Satz ist falsch.

   ‘The sentence is false.’

   b. Der Satz ist nicht richtig / nicht korrekt / inkorrekt.

   ‘The sentence is not right / not correct / incorrect.’ [↑](#footnote-ref-3)
4. There are other cases where *true* is appropriate, but not *correct*, as below:

   (i) a. The story the children were told is true.

   b. ? The story the children were told is correct.

   These seem to be cases where truth is secondary for the purpose or *telos* of the representational object, which thus does not act as a norm associated with it. [↑](#footnote-ref-4)
5. The applicability of predicates of satisfaction makes particularly clear that nouns like *demand, request, promise* etc. could not stand for acts or propositions: neither acts nor propositions can be ‘fulfilled’, ‘satisfied’, ‘taken up’, or ‘broken’ (Ulrich 1976, Moltmann to appear a). [↑](#footnote-ref-5)
6. There are other modal objects that will wet aside, such as epistemic modal objects (certainties, possibilities), abilities, and essences (see Moltmann (to appear a) for discussion). [↑](#footnote-ref-6)
7. Jarvis (2012) mistakenly takes correctness to also apply to conative mental states such as intentions, pointing to the possibility of an intention being ‘correctly realized’. But here *correctly* applies to the action, not the mental state. [↑](#footnote-ref-7)
8. It may be tempting to view the existence statements in (30a, b) as conclusions from something-from-nothing inferences from modal sentences, introducing a pleonastic entity (Schiffer 2003). However, this would not account for validity as its mode of being, and fail to capture its satisfaction conditions, as well as the correctness of actions satisfying it. [↑](#footnote-ref-8)
9. Validity is restricted to modal product, with the exception of products of declarative illocutionary acts or the resulting abstract state (in the sense of an abstract state of Moltmann 2015b):

   (i) a. The declaration of war is still valid.

   b. The state of war still obtains.

   Abstract states, can ‘obtain’, though they would not be ‘valid’. As with modals, validity and existence coincide for abstract states the obtaining of a condition at a particular time (when established by acts of declaration). Like modal objects, abstract states also display a part structure based on partial content. For example travel restrictions may be part of a state of emergency). Abstract states may also have satisfaction conditions, though they do not do so, it seems, in general: an institution may comply with or act against a state of emergency; but a state of war can hardly be complied with. Abstract states, unlike deontic modal products, do not necessarily come with a normative component. [↑](#footnote-ref-9)
10. The notion of partial truth is discussed extensively in Yablo (2015). [↑](#footnote-ref-10)
11. There are other modal objects that in a way display a part structure based on partial content, though they are not the products of acts. These are entities of the sort of abilities, habits, implicit rules, and dispositions (Moltmann 2017). With them, *part of* picks out part of the constitutive conditions making up the modal objects (as in *part of John’s special ability*, *part of John’s habit*). Of course, modal objects of the sort of abilities and habits cannot be true or false or even satisfied or not satisfied, but they can be manifested and partly manifested. An activity that is a partial manifestation of an ability is a manifestation of part of the ability. [↑](#footnote-ref-11)
12. For an account of partial content formulated in terms of possible words see Yablo (2015). [↑](#footnote-ref-12)
13. One motivation for Fine’s notion of partial content is to account for the invalidity of the inferences below (Ross’ paradox):

    (i) Take an apple!

    Take an apple or the gold!

    (ii) You may take an apple.

    You may take an apple or the gold.

    Fine takes the consequence relation among imperatives as in (i) to be the relation of partial content, defined as follows: Imperative B is a consequence of imperative A iff every satisfier of A contains a satisfier of B and every satisfier of B is contained in a satisfier of A. This can be carried over modal sentences as in (ii), applying now the satisfaction relation to modal objects that are permissions. [↑](#footnote-ref-13)
14. There is a puzzle for this syntactic account of subject clauses, though, that still needs an explanation. This is a difference between full DPs with a *that*-clause modifier and DPs with silent head noun. *That-*clauses in subject position are not referentially independent. That is, what a *that*-clause in subject what kind of entity it stands for depends strictly on the predicate. This can be seen with the evaluative predicate *nice* below:

    (i) That Mary got elected is nice.

    (i) allows only for a reading on which *nice* evaluates a fact, even though *nice* could in principle evaluate a proposition (as in *the proposition that* S *is nice*) or a possibility (as in *the possibility that S is nice*). Only in the presence of a suitable predicate can a *that*-clause in subject position stand for something like a proposition, as in (iia), or a possibility, as in (iib):

    (ii) a. That S / The proposition that S implies that S’.

    b. That John might get elected / The possibility that John might get elected is excluded.

    This means that the silent head noun of the subject DP cannot be as freely chosen as an overt head noun in the appositive constriction of the sort *the claim that* S. [↑](#footnote-ref-14)
15. For a related view see Künne (2003). The following critique applies to Künne’s minimalist account in the very same way. [↑](#footnote-ref-15)