Attitudinal Objects and the Distinction between Actions and Products

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Propositions as mind-independent truth-bearing entities play a central role in contemporary philosophy of language. Ever since Frege, it has become an established view that propositions act as the primary truth bearers, the meanings of sentences, and the objects of propositional attitudes. Given their role as objects of propositional attitudes and meanings of sentences, propositions must be intersubjectively shareable and thus are taken to be mind-independent. Furthermore, propositions as meanings of both independent and embedded sentences are taken to be entities representing content separated from (illocutionary or attitudinal) force.

Propositions have also been subject to a range of criticism, though. As mind-independent abstract objects that belong, according to Frege, to a third ‘realm’, they raise questions of their cognitive accessibility and their causal interaction with agents. Moreover the way propositions are formally conceived, as sets of circumstances, functions from circumstances to truth values, or as structured propositions, and thus formal structures or one sort or another, raise serious difficulties such as the problem of the truth-directedness and the unity of propositions as well as the problem of arbitrary identification. Finally, propositions as semantic values of that-clauses raise problems for linguistic semantics since that-clauses do not appear to act as singular terms referring to propositions.

One approach to the conceptual problems for propositions that has recently been pursued by a number of philosophers consists in a return to an act-based, pre-Fregean view of content, in particular by taking predication to be an intentional relation relating an agent to a property and its arguments (Jubien 2001, Hanks 2007a, Soames 2010, author 2003a). An important issue that the act-based account raises, is, however, the question of what could play the traditional roles of propositions, since actions themselves are neither truth-bearing nor shareable (among different agents and different attitudes).

In this paper, I will explore a notion of a truth-bearing entity that is distinct both from a proposition and from an intentional event, state, or action, and that is the notion of an
attitudinal object. Attitudinal objects are entities like ‘John’s belief that S’, John’s claim that S’, ‘John’s desire that S’, or ‘John’s request that S’. Attitudinal objects, though they form an ontological category of their own, are entities that share properties both with mental events and with propositions. Like propositions they are bearers of truth or more generally satisfaction conditions. But they share their conditions of existence and their spatio-temporal location with the corresponding intentional event, state, or act. Though attitudinal objects are as concrete as the corresponding event, state, or act, they enter exact similarity relations, and thus form ‘kinds’, if they share the same content and the same force.

Unlike propositions, attitudinal objects do not give rise to problems such as the problem of arbitrary identification and the problems of the truth-directedness and the unity of propositions. The notion of an attitudinal object is not a notion introduced for particular philosophical and semantic purposes, though. Rather it is a notion that is extremely well reflected in our linguistically manifest intuitions. Attitudinal objects are precisely the referents of terms with certain types of nominalizations derived from attitude or speech act verbs, such as John’s belief that S, John’s claim that S, John’s desire that S or John’s request that S. For clarifying the notion of an attitudinal object, we can therefore let ourselves be guided rather strictly by the semantic behavior of such nominalizations.

While I made use of the notion of an attitudinal object in previous work (author 2003a, 2004), this paper discusses the notion in much greater depth, proposes a novel ontological account, and presents a historical predecessor of that notion.

The notion of an attitudinal object has an important precedent in the work of the Polish philosopher Twardowski (1912), who drew a more general distinction between ‘actions’ and ‘products’, such as walking, screaming, judging, and thinking on the one hand and a walk, a scream, a judgment, and a thought on the other hand. While Twardowski left the distinction at an intuitive level, I will propose an ontological account of the distinction, based on the notion of a trope or particularized property.

Attitudinal objects are not the objects of attitudes, but, as Twardowski would say, their products. This matches the semantic role of attitudinal objects. Attitudinal objects do not play a role in simple attitude reports such as John believes that Mary is happy (which, with attitudes as intentional predication relations, are better suited for a development of Russell’s Multiple Relations Analysis). Attitudinal objects play a role only in sentences involving some form of nominalization, either overt nominalizations as in John’s belief that Mary is happy or else quantifiers or pronouns that can take the place of that-clauses and semantically act as nominalizing expressions, such as something or what John believes (author 2003b).
After first laying out the problems for propositions as they have been discussed in the recent philosophical literature, I will introduce the notion of an attitudinal object with its various properties as well as the notion of a kind of attitudinal object and the more general distinction between actions and products. Drawing from previous work, I then present the empirical linguistic problems with propositions acting as values of that-clauses embedded under attitude verbs as well as problems with propositions acting as semantic values of quantifiers and pronouns in sentential position. A particular version of a neo-Russellian analysis of attitude reports will provide both a way of avoiding the linguistic problems and a basis for an ontological account of attitudinal objects, within a more general trope-based account of actions and products. I will finally mention some important applications of attitudinal objects to issues of context dependency.

1. Propositions

Propositions in contemporary philosophy of language are primarily characterized in terms of their roles. Propositions are the sharable objects of propositional attitudes, the meanings of sentences (including the shared meaning of equivalent sentences from possibly different languages), and the primary bearers of truth and falsity. In order to fulfill these roles, propositions, it is generally agreed, must be abstract and in particular mind- and language-independent. There are then different views as to the nature of propositions, whether they are sets of circumstances, structured propositions, or primitives (which I will come to shortly).

1.1. The semantic motivations for propositions

The strongest motivations for positing propositions comes from the apparent semantic structure of natural language sentences, namely simple attitude reports such as (1a):

(1) a. John believes that Mary arrived.

Such attitude reports appear to involve that-clauses in referential position, providing an argument of the attitude verb. This is reflected in the most common, Relational Analysis of such sentences. According to the Relational Analysis, that-clause complements of attitude verbs takes a proposition as semantic value and the attitude verb expresses a relation between agents and propositions, as in (1b) for (1a):
(1) b. believe(John, [that Mary arrived])

Propositions are also generally considered the entities that quantifiers range over and pronouns stand for that occur in the place of a that-clause. In English, a restricted class of quantifiers and pronouns can occur in that position, which includes *something, everything, or nothing*, the pronoun *that*, and also relative clauses with *what* (as in *what John thought*). I call these ‘special quantifiers and pronouns’. Propositions as semantic values of such quantifiers or pronouns appear to be needed to account for the validity of the inferences in (2a, b) as well as sentences such (2c, d):

(2) a. John thinks that Mary arrived.
   John thinks something.
   b. Mary believes everything Bill believes.
      Bill believes that it is raining.
      Mary believes that it is raining.
   c. John claimed that it was raining. Mary claimed that too.
   d. John said that it is raining. What John said is true.

Propositions are taken to be both the meanings of independent sentences and the semantic values of embedded sentences, in particular that-clauses. As meanings of sentences, they are also generally taken to be the entities that sentential (modal, temporal, spatial) operators operate on.

1.2. Conceptions of propositions and conceptual problems for propositions

There are different conceptions of propositions, as entities that fulfill the above-mentioned roles. Two main conceptions in particular can be distinguished: [1] the Stalnaker/Lewis conception of propositions as sets of circumstances (possible worlds or situations) or as functions from circumstances to truth values; [2] the conception of propositions as structured

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1 See, for example, Schiffer (2003), a book whose title, *The Things we Mean*, consists itself in a special relative clause.

2 Some philosophers take propositions to be the referents of embedded sentences; others take them to be what both independent and embedded sentences ‘express’, but allow that-clauses to refer to the proposition that the sentence following that expresses. The following discussion is entirely neutral on this issue.
propositions (more recently defended by Cresswell 1985, Soames 1987, and King 2007), that is, as sequences (or other formal structures), consisting of properties or concepts and objects (and perhaps modes of presentation), or semantic values construed otherwise. The first conception is associated with notorious problems in that it identifies propositions that are necessarily true or necessarily false. The second conception avoids such problems by reflecting (to an extent) in the meaning of the sentence itself the syntactic structure of the sentence as well as the way the truth value of the sentence is compositionally obtained.

A range of problems have been pointed out for both conceptions in the philosophical literature, in particular by Jubien (2003) and more recently Soames (2010). Let me only briefly mention those problems without going into an in-depth discussion. The first problem is the problem of arbitrary identification (see also Moore 1999). This is a problem familiar from Benacerraf’s (1965) discussion of natural numbers in the context of the philosophy of mathematics. Benacerraf points out that the identification of a natural number with a set-theoretic entity of one sort or another is, to a great extent, arbitrary, for example the identification of the number two with either \( \{\emptyset\} \) or \( \emptyset, \{\emptyset\} \). Similarly, the choice of a formal object to be identified with a proposition is, to an extent, arbitrary. The problem arises for the first as for the second conception of propositions. Given the first conception, nothing in the general conditions propositions need to fulfill could decide between identifying propositions as sets of circumstances or as functions from circumstances to truth values. Given the second conception, the problem is that a proposition such as, for example, the proposition that John is happy could be represented either as \(<H, \text{John}>\) or as \(<\text{John}, H>\) the choice among which appears arbitrary: either pair could fulfill the relevant conditions.

Two further, related problems arise for structured propositions. One of them is the truth-directedness of the proposition. Why should a mere sequence of entities be true or false? There is nothing inherent in a sequence that would qualify it as a truth bearer. But propositions were meant to be entities that have their truth conditions essentially. The second problem is known as the problem of the unity of propositions. Given the structured -propositions conception of propositions, the problem is: what distinguishes a mere sequence of properties and objects from a proposition, an entity that has truth conditions inherently? Why should the relation between H (the property of being happy) and John in the sequence \(<H, \text{John}>\) be understood in such a way that the proposition comes out true in case John is

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3 See Soames (2010) for a recent critique of that view.

4 See Gaskin (2008) for a recent discussion of the problem, also in its historical context.
happy? The relation could be understood in many other ways: it could be that the proposition is true just because H and John are different or because John is not H or because John likes H. In fact, it is not clear why the relation between H and John should be understood in any way at all, so as to allow assigning a truth value to the ordered pair.

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

Thus there are fundamental problems with propositions when they are identified with abstract formal objects of whatever sort. The problem would not go away, if propositions were not actually identified with the formal objects, but just taken to be represented by it and the formal object considered a ‘model’ for the proposition. A model of an object should allow deriving all the essential properties of the object. The truth-directedness and truth conditions of a proposition are part of the proposition’s essential properties, but they cannot possibly be derived from the kinds of entities proposed as structured propositions.  

2. Properties of attitudinal objects

What is needed then is a kind of truth-bearing entity that in some way reflects the compositional semantics of a sentence, that has truth conditions essentially, and moreover about which we have clear intuitions. Attitudinal objects are entities that fulfill just those conditions. What kinds of entities are attitudinal objects? First of all, attitudinal objects act as referents of referential noun phrases of a particular type, namely noun phrases with certain types of nominalizations of attitude or speech act verbs, such as the following:

(3) a. John’s thought that Mary likes Bill
    b. John suspicion / hope / desire that Mary will like Bill.

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5 There are philosophers that propose that propositions are primitive entities (Thomason 1980, Bealer 1982) or entities ‘sui generis’ (Moore 1999). But with propositions as primitives it is even less clear how to explain their truth-directedness and the particular truth conditions they should have as essential properties.
c. John’s claim / denial that Mary likes Bill

In first approximation, attitudinal objects are entities in between propositions and mental events or speech acts. They involve two components: an attitudinal or illocutionary force and a propositional content. Thus, (3a) refers to an attitudinal object involving the illocutionary force of thinking; the examples in (3b) refer to attitudinal objects involving other attitudinal forces; and those in (3c) refer to attitudinal objects involving other illocutionary forces.

Attitudinal objects are not peculiar entities whose nature and existence should invite major dispute. Rather, we have very clear intuitions about them, reflected rather directly in the semantic behavior of terms of the sort in (3). The semantic behavior of such terms is helps reveal the properties and the nature of attitudinal objects themselves.

2.1. Truth and satisfaction conditions

Most importantly, attitudinal objects have truth conditions, at least if they are doxastic or assertive in nature. This is reflected in the applicability of truth predicates:

(4) a. John’s belief that that S is true / false.
    b. John’s claim that S is true / correct / accurate.

Attitudinal objects of the sort of desires or requests do not have truth conditions, but rather conditions of fulfillment (of the desire or request):

(4) c. John’s desire to become a king was fulfilled.
    d. (?) John’s imagination to be a king turned out to be correct.

Similarly, attitudinal objects of the sort of decisions have conditions of implementation or execution:

(4) e. John’s decision to postpone the meeting was implemented.
    f. John’s command that people leave the building was executed.

Even imaginations may have corresponding conditions associated with them, let’s say conditions of representational correctness.
I will call such more general conditions the *satisfaction conditions* of attitudinal objects. It is the attitudinal or illocutionary force that ensures the attitudinal object’s aim for truth, fulfillment, implementation, or representational correctness.

The truth or satisfaction conditions of attitudinal objects also apply to counterfactual circumstances, not just the circumstances in which the attitudinal object itself exists:

(5) a. John’s thought that S would be true even if John had never thought it.
   b. John’s claim that S would be true even if John never made that claim.

In general, the circumstances in which attitudinal objects of desire or request are fulfilled are in fact counterfactual circumstances. Attitudinal objects thus involve a notion of being true (or fulfilled) ‘at’ a world (which does not require the attitudinal object to exist in that world), rather than ‘in’ a world (which would require the attitudinal object to exist in that world). 6

Attitudinal objects obviously have truth or satisfaction conditions inherently. They are not externally imposed, as on they would be on sets or abstract formal structures.

2.2. Involvement of force

Attitudinal objects share truth (or satisfaction) conditions with propositions. However, they differ from propositions in a range of respects. First of all, attitudinal objects, unlike propositions, depend for their identity on the particular attitudinal or illocutionary force that they involve. This is reflected in the fact that identity statements such as the following are generally not judged true:

(6) a. *John’s thought that it will rain is also his remark that that it will rain.
   b. * John’s discovery that it will rain is his hope that it will rain.
   c. * John’s desire to leave is his decision to leave.
   d. * John’s claim that it will rain is his hope that it will rain.

This is in contrast to (6e), which is of course trivially true:

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6 See Iacona (2003) for a recent discussion of the notion of truth at a world. Iacona argues that that notion undermines the need for mind-independent and language-independent propositions.
(6) e. John’s thought that it will rain is John’s thought that it will rain.

Thus, attitudinal objects are identical only if they share both content and force.

2.3. Similarity relations

Attitudinal objects that are dependent on different acts can enter relations of similarity. Two attitudinal objects that depend on distinct acts, but have the same content and involve at least very similar attitudinal or illocutionary forces intuitively count as ‘the same’:

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

The same as in natural language should not be taken as expressing numerical identity, but rather exact or close similarity. Evidence for this is that the is of identity, which does express numerical identity, would be inapplicable to distinct attitudinal objects. Thus the sentence below appears false:⁷

(7) b. ?? John’s thought is Mary’s thought.

The same as expresses similarity certainly in other contexts, such as (7c):

(7) c. Mary made the same mistake as Bill.

2.4. Properties of concrete objects

Attitudinal objects differ from propositions in that they may have properties of concrete objects. First of all, predicates of perception are applicable to suitable attitudinal objects such as remarks or screams, but they are not applicable to propositions:

⁷ The predicate is identical to is better applicable to John’s thought and Mary’s thought than the is of identity:

(i) John’s thought is identical to Mary’s thought.

But is identical to arguably expresses qualitative identity as well, not strict numerical identity.
(8) a. John heard Mary’s remark that S / Mary’s scream that S.
    b. ?? John heard the proposition that S.

Note that (8a) implies both the perception of the speech event and the comprehension of its content.

Attitudinal objects classify as concrete objects moreover in that they may enter causal relations. While it is not uncontroversial whether abstract objects fail to be causally efficacious, certainly predicates of mental causation are problematic with propositions but not with attitudinal objects, as illustrated in the contrast below:

(9) a. John’s claim that S caused astonishment.
    b. ?? The proposition that S caused astonishment.

Attitudinal objects share their ability of entering causal relations with events, and as such, attitudinal objects will involve a particular agent. But attitudinal objects do not play the very same causal roles as the corresponding events. For their role in relations of mental causation, not only the eventive aspect matters, but also the content of attitudinal objects. Thus, whereas (10a) can easily describe a case in which it is the manifestation of John’s ability to speak that delighted Mary, (10b) strongly suggests that it is also the content of John’s speech that was cause of Mary’s delight.8

(10) a. John’s speaking delighted Mary.
    b. John’s speech delighted Mary.

As (9) and (10b) make clear, propositional contents can be causally efficacious only in connection with an attitudinal or illocutionary force and an agent, not as pure propositions.9

8 The following seems ok even though it seems to state the possible sharing an attitudinal object by different agents:

(i) John’s thought that S might have occurred to Mary.

However, John’s thought that S may in fact refer to a kind of attitudinal object, ‘the thought that S’, with the specifier John’s specifying that John ‘has’ the thought that S.

9 An example involving attitudinal forces making the point is the one below:
There is another sense in which attitudinal objects are concrete. Attitudinal objects are generally more specific than the content of their description, that is, a term of the sort John’s belief that S. In that respect, attitudinal objects differ from abstract objects that are facts or states, which are entirely constituted by the content of their canonical description (author 2007). The applicability of comparative predicates to attitudinal objects but not to facts or states illustrates the point:

(11) a. John’s belief that it will rain is stronger than Mary’s belief that it won’t.
   b. * John’s believing that it will rain is stronger than Mary’s believing that it won’t.
   c. * John’s belief state is stronger than Mary’s.

John’s belief that S involves a particular degree of belief, but not so for the fact that John believes that S or the state of John’s believing that S, which are entities whose nature is ‘exhausted’ by what is contributed by the content expressed by those terms. ‘John’s belief that S’ is concrete, in the sense of being fully specific, involving a particular manifestation and thus degree of belief (author 2007).

The attitudinal or illocutionary force involved in attitudinal objects also influences the way evaluative predicates are understood. Evaluative predicates when applied to attitudinal objects are not understood as they would with propositions; rather they also evaluate the attitudinal or illocutionary mode with which the propositional content is sustained. An illustration is the following contrasts:

(12) a. John’s thought that S is unusual.
   b. ?? The proposition that S is unusual.
(13) a. John’s claim that S is mean.
   b. ?? The proposition that S is mean.

What is said to be unusual according to (12a) is a content as thought by John, not an abstract semantic object, as in (12b). Similarly, what is said to be mean according to (13b) is a content claimed by John, not an abstract object that is a proposition.

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(i) a. The thought she might fail frightened Mary.
   b. ?? The proposition that she might fail frightened Mary.

A simple that-clause with unusual can refer neither to a proposition nor an attitudinal object. (ia) cannot be understood as (ib) or as (ic), but rather requires a factive reading as in (id):

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A common view about terms for attitudinal objects as in (3) is that they are ambiguous: they stand sometimes for propositions, sometimes for mental events or illocutionary acts. But given the observations presented so far, this view cannot be right. First of all, terms for attitudinal objects simply do not allow for the readings of predicates that explicit proposition-referring terms display with them. Thus, evaluative predicates with the terms in (3) cannot be understood as with explicit proposition-referring terms (the proposition that S), and so for identity is or the same as. Moreover, readings of predicates that are typical with event-denoting terms are not freely available with terms for attitudinal objects, as we will see later. Finally, predicates typical of events and predicates typical of propositions can apply simultaneously to one and the same term of the sort in (14):

(14) a. John heard Mary’s false remark that S.
    b. John’s obviously false claim that S caused astonishment.

We should rather conclude that the familiar ontology of propositions and events is simply insufficient to account for the semantic behavior of terms as in (3). Rather these terms stand for objects of another category, namely attitudinal objects.

2.5. Kinds of attitudinal objects

The main argument for propositions being mind-independent was the possibility of propositional contents being shared by different agents. If attitudinal objects take the place of propositions as the truth-bearing objects associated with propositional attitudes, this raises the question of how contents can be shared. There are two ways in which propositional contents can be shared on the basis of attitudinal objects. First, the sharing of attitudinal objects may consist in the attitudinal objects being exactly similar (though not numerically identical) (which, though, requires the same attitudinal or illocutionary force). Second, the sharing of propositional contents may consist in kinds of attitudinal objects being shared. Kinds of

(i) a. That it is raining is unusual.
    b. The proposition that it is raining is unusual.
    c. The thought that it is raining is unusual.
    d. The fact that it is raining is unusual.

11 This view can be found, for example, in Pustejovský (1995). Twardowski (1912a) himself in fact thought that terms for attitudinal objects have another interpretation according to which they refer to actions, mistakenly I think. See van der Schaar (2006) for Twardowski’s view.
attitudinal objects naturally form the referents of terms like *the thought that S*, *the claim that S*, or *the thought that S*, allowing for typical kind predicates such as *is widespread*. The sentence below obviously describes the sharing of a kind of attitudinal object:

(15) John and Mary share the thought that S

Kinds of attitudinal objects like ‘the thought that S’ have as their instances particular attitudinal objects of the sort ‘John’s thought that S’ or ‘Mary’s thought that S’. Kinds of attitudinal objects are independent of a particular agent, though they still involve a particular attitudinal mode. Terms for kinds of attitudinal objects are semantically of the very same sort as bare mass nouns and plurals (such *gold* or *tigers*) when acting as kind terms (author 2003a, b). I will not go into a discussion of how kinds are to be conceived, whether as entities of their own or mere pluralities of instances (or possible instances). What is important in the present context is that the instances of kinds of attitudinal objects are similar in the sense of sharing content and force, and moreover that kinds also have content-related properties, including truth or satisfaction conditions, in virtue of their instances having those properties.

Kinds of attitudinal objects that are mere entertaining allow for a reconstruction of the notion of a proposition, in one particular semantic role. Propositions obviously do play a very limited semantic role, namely as referents of noun phrases of the sort *the proposition that S*.

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12 A kind of attitudinal object can be attributed to a particular agent, in which case the agent is required to be the subject of a particular instance of the kind, as below:

(i) John had the thought that S.

The construction John’s thought that S may also involve reference to a kind, specifying that John ‘has’ the kind in the sense of (i). This is in fact what needs to be assumed to make sense of sentences like (ii):

(ii) John’s thought that S had also occurred to Mary.

13 If uninstantiated kinds are admitted, this, one might think, would be a way of accounting for the possibility of content-bearing entities that have never been entertained, another general role that propositions are to fulfill. But there are also reasons not to take kinds as referents of bare mass nouns and plurals to be uninstantiated. Thus *Gold exists* means that there is an instance of gold, not that a possibly uninstantiated kind exists. Also the linguistic intuitions about kinds of attitudinal objects indicate that. Consider the choice of the counterfactual mood in (i) below:

(i) a. John might claim that he has won the race. But that would not be true.
   b. John might claim that he has won the race. ?? But that is not true.

The reference of conditional over indicative mood indicates that *that* could not just stand for the kind ‘the thought that John has won the race’ as an uninstantiated kind.
The semantic value of such terms can then simply be identified with a kind of attitudinal object of the sort ‘the entertaining that S’.

2.6. Differences between attitudinal objects and mental events or speech acts

Attitudinal objects share causal properties as well as their dependence on an agent with mental events or states and speech act. But attitudinal objects are not events, states, or acts. Event, states and actions are very familiar ontological categories in contemporary semantics and philosophy. They typically form referents of gerundive nominalizations such as John’s thinking, John’s believing, John’s claiming, or John’s desiring, but of course they also fall under the corresponding sortals event, state, and action. There are three major ontological differences between attitudinal objects and mental events or illocutionary acts.

First of all, events, states, and actions cannot be true or false or more generally have satisfaction conditions. The lack of truth- or satisfaction conditions of events, states, and actions is reflected in the inapplicability of the relevant predicates both to gerundive nominalizations and to event sortals:

(16) a. # John’s thinking / claiming / believing that S is true.
    b. # John’s desiring / requesting / hoping is true.
    c. # John’s belief state is true.
    d. # John’s action (of claiming) is true.
    e. # John’s action (of requesting) was fulfilled.
    f. # John’s action of deciding was implemented / executed.

It is particular mental or psychophysical products that have the status of bearers of truth or satisfaction conditions, in virtue of the truth directedness of the corresponding act. But the fact that with the act the agent aims at truth or satisfaction does not mean that such an act is itself a bearer of truth conditions or satisfaction conditions. It is only products as particulars that are bearers of truth or satisfaction conditions.

Another important difference between attitudinal objects and events concerns the way the two kinds of entities behave with respect to similarity relations. Attitudinal objects are treated as exactly similar if they share the same content as well as their attitudinal or illocutionary mode. For events that involve different agents to be exactly similar, they have to share a lot
more than just their content; they need to involve the very same way of performing the activity. This is illustrated in the contrast between (17a) and (17b):

(17) a. John’s speech was the same as Mary’s.
    b. ? John’s speaking was the same as Mary’s.

This also holds for (nonexact) similarity and is reflected in the difference in the understanding of similar between (18a) and (18b):

(18) a. John’s thought was similar to that of Mary.
    b. John’s thinking was similar to that of Mary.

(18a) expresses similarity of thought content, (18b) expresses similarity of thought process.

There is a third major difference between attitudinal objects and events, and that concerns their relation to time. It appears that the time of occurrence is accidental to attitudinal objects, but not so for the time of occurrence of mental events. Thus, while (19a) is perfectly natural, (19b) does not quite sound right:

(19) a. John’s thought might have occurred to him earlier than it did.
    b. ?? John’s thinking might have occurred earlier than it did.

The distinction between attitudinal objects and mental events or speech acts is in fact a more general one. At the beginning of the 20ieth century, the Polish philosopher Twardowski (1912) argued for a fundamental ontological distinction between actions and what he called products. There are mental actions and products, physical actions and products, as well as psychophysical actions and products. Thinking and desiring are mental actions, thoughts and desires are mental products. Claiming and requesting are psychophysical actions, claims and requests psychophysical products. Thoughts, desires, claims, and requests are non-enduring.

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14 The attribution of counterfactual temporal properties appears possible with certain kinds of events. Wars could have taken longer than they did, demonstrations could have taken place at different times than they did, and a death might have occurred earlier than it did. Note, however, that all these cases may involve events as ‘products’, not as ‘actions’. Certainly demonstration and death are product nominalizations, contrasting with demonstrating and dying.

15 For a presentation of Twardowski’s view in its historical context, see Bobryk (2009), Betti (2010), Dubucs/Miskiewicz (2010), and van der Schaar (2006).
products that exist only as long as there is the corresponding mental event. An inscription is an example of an enduring product which exists beyond the time of the corresponding action.\textsuperscript{16} The distinction between actions and products also applies in the physical realm: walkings and screamings are physical actions, walks and screams are physical products. While observing that actions and products differ in the kinds of properties they have (including truth or satisfaction conditions), Twardowski characterizes nouns describing products as nouns “that do not bring to force the aspect of action, but bring to force a different aspect, the ‘phenomenal’ or ‘static’ aspect” (Twardowski 1912, pp.104-105). In the particular case of a shout, as opposed to a shouting, he says ‘in speaking of the shout, we do in fact abstract from the activity of shouting, treating the shout as an acoustic phenomenon’ (Twardowski 1912).\textsuperscript{17}

In regard to Twardowski’s general distinction between actions and products, a further property can be added that distinguishes particularly physical actions from physical products. These are ‘gestalt’ properties, or more generally properties that evaluate an entity as a whole. Physical products have gestalt properties but physical actions do not. Gestalt properties form the basis of for the application of certain evaluative predicates. Evaluative predicates apply differently to physical actions and products: they can evaluate the former as a whole in the way they could evaluate the latter. Consider the contrast between (20a) and (20b):

\begin{enumerate}
    \item[(20a)] Mary’s dance was unusual.
    \item[(20b)] Mary’s dancing was unusual.
\end{enumerate}

The evaluative predicate unusual in (20b) evaluates all the various ‘small’ temporal part of the dancing, but in (20a) it evaluates the dance as a whole and allows Mary’s dance to have been unusual just because of the very beginning and the very end, a situation that could not be described by (20b).

Twardowski’s distinction raises an important issue, namely how language-particular the distinction may be. Note that Twardowski wrote his paper originally in Polish and then

\textsuperscript{16} Propositions for Twardowski (1912) are products of belief states and thus non-enduring products, which last only as long as the belief is sustained. Twardowski (1912, p. 24) did provide a reconstruction of propositions as durable products, though, proposing that they are ‘artificial’ products, surrogates of an actual state of believing. As such they can be used by agents independently of the actual actions by which they were created, that is, without repeating an action with a similar product (see also Bobryk 2009).

\textsuperscript{17} The distinction between actions and products that Twardowski draws obviously does not match the distinction that is common in linguistics between event and result nominalizations; result nominalizations are taken to refer to the physical product only of an event.
translated it into German. The distinction is thus clearly manifested at least in a range of European languages; though of course to see how the distinction may be manifested in other languages is an extremely interestingly project to pursue.

Attitudinal objects as the ‘products’ of attitudes obviously are not suited as ‘objects’ of attitudes. Attitudinal objects are entities that involve what the attitude verb would contribute itself: an attitudinal or illocutionary force. The only objects of propositional attitudes there are are the entities the attitudes are about. The question then is what is the semantic role of attitudinal objects, as the primary bearers of truth, besides being referents of certain kinds of nominalizations? We will see that the semantic role of attitudinal objects, which is basically limited to that of semantic values of nominalizing expressions, corresponds well to their ontology, as products of attitudes.

3. Semantic problems for propositions

3.1. Problems of substitution

In what follows, I will review certain generalizations about simple attitude reports, which put the notion of an object of an attitude as such into questions, properties that indicate that propositions do not act as arguments of relations expressed by attitude verbs. Propositions pose not only conceptual problems, they are also problematic as entities that on the relational view act as the semantic values of that-clauses in simple attitude reports such as (21):

(21) John believes that Mary is happy.

The semantic problem for the relational view of simple attitude reports is that the that-clause cannot generally be replaced by an explicit proposition-referring term. This phenomenon has been discussed at length in the literature (Prior 1971, Bach 1997, King 2002, 2007, author 2003a, b, Rosefeldt 2006). I will just recall what I take to be the crucial facts. First, only some attitude verbs allow for a replacement of a that-clause by the proposition that S or a term for a related object, such as the fact that S or the possibility that S; many verbs such as claim, know, expect, and imagine do not:

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

John believes / proved the proposition that S.
b. valid: John regrets that S.
   John regrets the fact that S.

c. valid: John fears that S.
   John fears the possibility that S.

(23) a. invalid: John claimed that S.
   John claimed the proposition that S / the fact that S / the possibility that S.

b. invalid: John knows that S.
   John knows the proposition that S / the fact that S / the possibility that S.

c. invalid: John expect that S.
   John expect the proposition that S / the fact that S / the possibility that S.

d. invalid: John imagined that Mary was alive.
   John imagined the proposition that S / the fact that S / the possibility that S.

Some verbs such as *claim* are simply unacceptable with a replacement of the *that*-clause by a full NP. Other verbs, such as *expect* or *imagine*, display a different reading. If the attitude verb displays a different reading, then this is generally a reading on which the complement does not describe the content of the attitude, but rather refers to an object the attitude is about or directed toward, as in the conclusion of (23c) and (23d).

While substitution problems of this kind put into question the view that simple attitude reports involve propositions in their semantic structure, this of course does not hold for attitude reports with explicit proposition-referring terms, such as (24):

(24) John believes the proposition that S.

*Believe* is one of the very few verbs that allows for a replacement of a *that*-clause by an explicit proposition-referring term. This is because *believe*, besides its particular semantic function in simple attitude reports, has a secondary lexical meaning on which it expresses a two-place relation between agents and propositions (author 2003a). Propositions as semantic values of explicit proposition-referring terms, as mentioned in the previous section, can be conceived as derivative in regard to attitudinal objects, namely as kinds of attitudinal objects whose instances are acceptances. Attitude reports of the sort *John believes the proposition that S* then are derivative both semantically and ontologically.

### 3.2. Restrictions on special quantifiers
Another semantic argument for propositions, besides the apparent referential status of that-clauses, was the possibility of special quantifiers like something, the pronoun that, and relative clauses with what taking the place of that-clauses. Special quantifiers do not give rise to the Substitution Problem. (25a, b, c) have only content-related readings:

    b. John imagines / expects that.
    c. John claims what Mary claims.

The reason why special quantifiers and pronouns are admitted in place of that-clauses cannot be a purely syntactic one. This is because there are certain verbs, such as complain and remark, which take that-clause complements, but do not accept special quantifiers:

(26) a. John complained / remarked that S.
    b. * Mary complained / remarked the same thing.
    c. Mary complained / remarked that too.
    d. * John complained / remarked what Mary claimed remarked.

Special quantifiers (and pronouns) play a rather central role when philosophers appeal to intuitions that supposedly show the need for propositions (as in the inferences in (2a, b) involving special quantifiers). However, special quantifiers, are not quantifiers ranging over propositions when they occur in clausal position; rather they range over attitudinal objects or kinds of attitudinal objects, as I had argued in author (2003, 200b, 2004). In what follows, I will summarize the relevant observations motivating that view.

First, evaluative predicates when they restrict special quantifiers evaluate just what they evaluate with attitudinal objects:

(27) a. John said something nice (namely that S).
    b. John thought something very daring (namely that S).
    c. John imagined something exciting.

King (2002) conjectures that it is for syntactic reasons that special quantifiers can appear in the position of clausal complements when no other noun phrases can take their place. I do not see evidence that special quantifiers are special in purely syntactic respects.
What *nice* in (27a) is predicated of could only be something of the sort ‘John’s remark that S’, not ‘the proposition that S’; similarly *very daring* in (27a) is predicated of something of the sort ‘John’s thought that S’ or ‘the thought that S’, not ‘the proposition that S’; and *exciting* in (27c) is predicated of an imagination, not a proposition. That is, evaluative predicates take into account not only the propositional content, but also the attitudinal or illocutionary force as well as, possibly, the agent.

Second, the applicability of causal predicates indicates that special quantifiers do not range over propositions, but rather over attitudinal objects:

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

It is John’s claim not a proposition that made Mary upset, according to (28).

Finally, there are constraints on the sharing of ‘the objects of attitudes’, as seen in (29), constraints that parallel the constraints on identity statements about attitudinal objects, as in (30):

(29) a. # John mentioned what Mary believes, namely that Bill was elected president.
    b. # John expects what Mary believes, namely that Sue will study harder.
    c. # John said what Mary believes, namely that it will rain.

(30) a. # John’s mention was Mary’s belief.
    b. # John’s expectation is Mary’s belief.
    c. # John’s claim was Mary’s belief.

This indicates that *what Mary believes* stands in fact for an attitudinal object, not a proposition.

Thus the linguistic evidence indicates that special quantifiers as well as special free relative clauses like *what John thought* do not range over abstract propositions, but rather attitudinal objects. This does not mean, though, that attitudinal objects form the arguments of attitude verbs. For this would lead to the very same substitution problem that arose with propositions:

(31) a. ?? Mary believes the belief that S.
    b. ?? John expects the expectation that S.
Rather attitudinal objects as semantic values of special quantifiers have a different semantic status: they are introduced by a form of semantic nominalizations, on the basis of the contribution of the attitude verb and propositional constituents, by special quantifiers that act in fact as nominalizing quantifiers. This corresponds to the status of attitudinal object as products of attitudes: attitudinal objects are not arguments of attitudinal relations, but reflect both the contribution of the attitude verb and a propositional content.

There are some cases in which identity statements of the sort in (29) are acceptable even though they involve verbs with different attitudinal or illocutionary forces:

(32) a. John finally said what Mary has always believed.
    b. John hopes what Mary firmly believes, namely that he will recover.

At first sight such examples seem to pose problems for the view that special quantifiers range over attitudinal objects (author 2003a, b). Note though that such examples are linguistically special: they generally involve focusing of the verbs and the addition of an adverbial. This indicates that in such examples a reanalysis of the meaning of the attitude verb takes place, namely into a more general attitude and a qualification of that attitude. The more general attitude may be that of assertion, acceptance, or even the most general attitude of entertaining (author 2003a). Again, the acceptability of sentences like (32a) and (32b) can be linked to the acceptability of identity statements involving the corresponding nominalizations:

(33) a. (?) John’s claim is Mary’s belief.
    b. John’s hope is Mary’s belief.

Again such examples improve with focusing of the verb *is*. Just like the attitude verbs in (33), these examples with involve a reanalysis of the nominalizations into a description of a more general attitude and a qualification of that attitude (author 2003a).

4. The ontology of attitudinal objects

4.1. Intentional predication and the Russelian Multiple Relations Analysis
A central problem with propositions was how propositions if they are structured can as such be true or false and, given their structure and components, have the particular truth conditions they should have. The source of the problem is that formal objects as such sequences of properties and objects simply cannot be truth-directed without intentionality, without an agent aiming at truth. The problem of the truth-directedness of propositions and the unity of structured propositions have a single solution and that is to view predication itself as an intentional relation, a relation relating an agent to a property and its arguments. That is, an agent predicking a property of objects is what makes up the ‘glue’ among the propositional constituents and the aim for truth (or satisfaction) of the proposition itself. An agent is successful predicking an n-place property of n objects if the property holds of the objects. This approach to the problem of truth-directedness and the unity of propositions has recently been pursued independently by a number of philosophers of language such as Jubien (2001), author (2003a), Hanks (2007), and Soames (2010).

Going along with the range of propositional attitudes there are, there will not be a single intentional predication relation, but a range of them. Propositional attitudes, on this view, will fundamentally be ways of predicking a property of its arguments. (It is only derivatively that they may also be relations towards attitudinal objects or kinds of them.) As such, propositional attitudes may be composed of simpler intentional predication relations. In fact, following the traditional view about propositional attitudes in general, all intentional predication relations will be based on the most general relation of entertaining (or ‘understanding’, as it has also been called). With ‘entertaining’, an agent does not aim at truth, but simply considers the property holding of the objects in question. Again following the traditional view, the relation of judgment is the most general relation aiming at truth; it consists in entertaining while approving of the property in fact holding of the objects. The relation of belief, on that view, involves further conditions, perhaps that of maintaining a disposition of judging.

Formally, the view that propositional attitudes themselves are fundamentally intentional predication relations matches well the Russell’s (1912, 1913, 1918) Multiple Relations Analysis of attitude reports (Jubien 2001, author 2003b, Soames 2010). On that analysis, an attitude verb does not express a relation between an agent and a single proposition, but rather takes the propositional constituents themselves as arguments. For Russell, the attitude verb specifies different types of relations in different syntactic contexts depending on the that-clause that is its complement. Thus, in the particular case of (34a), thinks specifies a four-place relation that holds between John, the liking relation, Mary, and Bill, as in (34b):
(34) a. John thinks that Mary likes Bill.
   b. think(John, LIKE, Mary, Bill)

Russell’s motivations for the Multiple Relations Analysis were very different from the present ones, and an intentionalist notion of content was certainly not one of them. Russell moreover did not take his analysis to provide a solution to the problem of the unity of propositions. This is not a place to go into a detailed discussion of Russell’s analysis, its motivations, and its historical context, though. In the context of this paper, it will have to suffice to indicate how the analysis can be developed and understood in a way that is not obviously problematic.

First, rather than taking the attitude verb to specify different attitudinal relations in contexts of different kinds of that-clauses, attitude verbs can be regarded multigrade predicates (Oliver/Smiley 2006). More precisely, an attitude verb such as think that takes a that-clause as complement can be regarded as a predicate that has two (argument) places, the second of which is a multigrade place, a place that itself contains an in principle unlimited number of positions, allowing for an in principle unlimited number of arguments. Thus John in (44a) fills in a different argument place than the propositional constituents (which occupy the positions in the multigrade second argument place). Within the multigrade argument place, there will be different positions for different roles: one distinguished argument position for a property, meant to be predicated of the other arguments, as well as further argument positions matching the argument positions of the property. Formally, the multigrade position of an attitude verb will have the very same argument structure as the instantiation relation, which takes a universal as well as a suitable number of objects relating at their places to the

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19 In fact, Russell’s interest was to do away with any representational object whatsoever, including propositions. See Sainsbury (1979) and Griffin (1985) for a discussion of Russell’s Multiple Relations Theory.

20 To the contrary, Russell became convinced by Wittgenstein’s critique that his analysis was in serious difficulty precisely because it appeared to face that problem. Wittgenstein’s objection was that if attitude verbs can take any number of objects all of which have equal status, how is this to rule out propositional contents consisting John, Mary and Sue, and how does this ensure that in (12a) the liking relation is understood so as to be predicates of Bill and Mary in a certain order. As an attempt to solve the problem, Russell later posited ‘logical forms’, as additional arguments of attitude verbs, but he refrained from making type distinctions among the propositional constituents (since he defined type precisely in terms of what entities can occur in a particular function in a judgment). See Griffin (1985) and Hanks (2007b) for further discussion.

21 Making use of multigrade predicates was not an option available to Russell, see Griffin (1985).

22 For the distinction between places and positions of multigrade predicates see Oliver/Smiley (2004).
relevant argument positions of the universal. The agent standing in the attitudinal relation has as his aim the property in the distinguished position holding of the arguments in the other positions.

A given place in the multigrade position of an attitude verb may itself be multigrade, containing a distinguished place for a function, for example, and others for the arguments of the function—in case of functional terms. Multiple nestings of multigrade argument positions are not a problem formally, and can be accounted by using multiple indexing (Taylor/Hazen 1992): each index corresponds to the position within a multigrade place, for subsequently deeper nested places (or ‘positions’). Thus the argument positions of *think* that are made use of in (34a) are \(<1\>\) (for John), \(<2,1\>\) (for the liking relation), \(<2,2\>\) (for Mary), and \(<2,3\>\) (for Bill).

Obviously, the structure of the multigrade position matches a structured proposition, on a standard conception. However, a structured proposition rather than being considered a single object should in the present context be viewed as an ordered plurality of propositional constituents, in the sense of a plurality as ‘many’, not as ‘one’ (Taylor/Hazen 1992). As such it can itself be represented as a sequence using multiple indexing. Thus (34a) may be represented by the sequence THINK\(<1\>\>, John\(<2,1\>\>, LIKE\(<3,2,1\>\>, Mary\(<4,2,2\>\>, Bill\(<5,2,3\>\)\>, keeping track of the order of arguments as well as the depth of nesting.

It is sharing ordered pluralities of this sort that makes attitudinal objects with different forces share the same content. Ordered pluralities of propositional constituents will also be involved in quantification with special quantifiers and in the specification of truth conditions for sentences. For technical purposes they may be taken to be the meanings of sentences (but as pluralities, not single propositions).

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23 Obviously the ordering among argument positions and places that such indexing establishes does not correspond to the nature of the multigrade relation, which, like relations in general, is a neutral relation in the sense of Fine (2000).

24 This would of course hold only for sentences apart from any illocutionary force indicator. Together with a specific illocutionary force indicator, independent sentences can be taken to express properties of agents that represent illocutionary act types. Thus, a declarative sentence meant to be used as an assertion would express a property of agents as in (1), for a content \(<C_1, ..., C_n>\) and the multigrade assertion relation ASSERT:

\[
(i) \lambda x[\text{ASSERT}(x, C_1, ..., C_n)]
\]

This means if an agent asserts *Mary is happy*, he will predicate of Mary, in the assertive mode, the property of being happy.
The (Neo-)Russellian multiple relations analysis obviously accounts for the substitution problem for propositions since on that analysis, *that*-clauses do not stand for single objects, but for ordered pluralities of propositional constituents.

The Multiple Relations Analysis faces a challenge when it comes to more complex sentences. A well known problem for expressivism is that sentences embedded within a *that*-clause do not specify the content of the kind of attitude expressed by the attitude verb. That is, (35a) and (35b) do not imply that John believes that S:

(35) a. John believes that S or S’.
    b. John believes that if S, then S.

In the present context, this means that predication in the belief-way can target only the highest connectives, *or* or *if-then*, not the predicate of the embedded sentences S or S’. The predicates of the embedded sentences can only involve the most general intentional predication of entertaining.

There are two formal options within the present approach of treating connectives like *or* and *if then* First, might consider them multigrade predicates taking attitudinal objects of entertaining as arguments. Alternatively, one might take them to be multigrade also with respect to their argument places, and impose conditions to the effect that only the highest predicate or connective will involve the specific predication relation expressed by the verb, whereas lowest predicates or connectives will be involved only the most general predication relation of entertaining.

An at first sight different formal view regarding the semantics of *that*-clause, based on an intentional notion of predication, is that of Soames (2010). Soames stays within the relational analysis and considers structured propositions the semantic arguments of attitude verbs. But on his view, it will not be the structured proposition that acts as the primary truth bearer, but an event of an agent predicking in the way specified by the attitude verb, the relevant properties or relations of their arguments. It is a general condition on a structured proposition being an argument of an attitudinal relation that the way of predicking specific to the attitude verb applies to the highest property or connective, whereas properties expressed by the predicate of embedded sentences will be predicated in the most general way, that of
‘entertaining’, of their arguments. It remains to be seen how this account could explain the problems of substitution.\footnote{Perhaps the substitution problem can be accounted for by appealing to the fact that an attitude verb on Soames’ account does not express a ‘real’ relation between agents and structured propositions, but rather serves only to interact in a particular way with the constituents of the propositional argument, by setting up predication relations among them and the agent in question. The role of the propositional argument is exhausted by the way its constituents enter intentional predication relations with respect to the relevant agent. This is what makes the account, as Soames himself calls it, a ‘deflationist’ account of propositions.}

Hanks (2007a) also argues for intentional predication being constitutive for the truth-directedness and unity of propositions. Hanks formally locates intentional predication in the particular mood of the embedded predicate. An embedded sentence with declarative, interrogative, or imperative (infinitival) mood then specifies an action type of predicating in the assertive, interrogative, or imperative way the property expressed by the predicate of its arguments. Three difficulties arise on this approach. First, Hanks has to assume that the interpretation of the mood of the antecedent of conditionals or sentences embedded under disjunction is suspended, which makes it unclear how those sentences can be evaluated as true or false for the purpose of the evaluation of the entire complex sentence. Second, there does not seem to be a way of avoiding a substitution problem on this account. Third, action types like particular actions are simply not as such suited as truth bearers.

Neither Soames nor Hanks in fact provide suitable objects that could act as truth bearers. Action types as such do not have truth conditions (as also pointed out by Soames 2010, chap. 6). But also events or specific actions of an agent predicating a property of objects do not intuitively have truth conditions. It is here where the distinction between actions and products comes in, and in particular the status of attitudinal objects as an ontological category distinct from the corresponding mental event, state, or speech act.

4.2. The ontological distinction between actions and products

How can the distinction between actions and products be conceived and in particular the distinction between mental events or illocutionary acts and attitudinal objects, given the role of intentional predication? The distinction between actions and products is a subtle one. An action and its product (as long as it is not a physical product) exist under the very same circumstances: a product exists as long as the corresponding action is taking place, and in any possible world in which there is an action, there will also be the product of the action.
Moreover, an action and its product share their spatio-temporal location. Taking the distinction to be an ontological distinction thus means recognizing distinct spatio-temporally coinciding entities. That the distinction is an ontological one is however plausible in view of the four distinguishing characteristics of actions and products, concerning satisfaction conditions, similarity relations, the relation to time, and gestalt properties. An ontological account of the distinction needs to explain those differences in properties.

I will propose an account of the distinction between actions and products based on the notion of a trope, that is, the notion of a particularized property. A few words are needed concerning the notion of a trope. Following the Aristotelian tradition (rather than recent trope-based one-category ontologies), I take tropes to be a category of particulars of its own, besides the category of individuals and perhaps that of universals. A trope is the particular manifestation of a property in an object (its bearer) at a time. A trope depends for its existence and its identity on a bearer. Thus, two tropes have different bearers, they cannot be identical. But they can be similar, namely if they are instances of the same property. Tropes that are instances of the same natural property are exactly similar (‘the same’). Thus the redness of the tomato is ‘the same as’ the redness of the apple in case the very same shade of redness is instantiated in the tomato and in the apple. There are also relational tropes, which are the particular manifestation of an n-place relation in n objects. A trope like ‘Socrates’ wisdom’ is a first-level trope: it has as its barer an individual. But there are also second-level tropes, such as ‘the greatness of Socrates’ wisdom’, a trope that has as its bearer a (first-level) trope.

I will propose that both a product such as ‘John’s thought that S’, that is, an attitudinal object, and an action or event such as ‘John’s thinking that S’ are tropes, but different kinds of complex tropes. The account I propose, I will argue, is extendable to physical products and actions.

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26 It is not clear that Twardowski considers the distinction an ontological one, see van der Schaar (2006).

27 Note that actions and products are not necessarily spatio-temporally coincident, since the time of occurrence is essential for an action, but not for a product. A product could occur at a different time than it actually did, but not so for an action.

28 See Williams (1953) as the classic modern reference on tropes, pursuing a one-category ontology in which individuals are conceived as bundles of co-located tropes and properties as classes of similar tropes. However, tropes, as ‘accidents or modes’, go back much further and play a central role already in Aristotle’s philosophy and subsequent Aristotelian traditions (see for example Lowe as a contemporary proponent of that tradition).

29 I will leave out the question of the ontology of states, such as ‘John’s believing that S’ since this will lead afar. In author (to appear), I argue that states are on a par with facts rather than with tropes and events, and I propose an account on which states are abstractions from properties and individuals.
Let me start with the ontology of events and the way events may be conceived on the basis of tropes. There are four possibilities. The first option is to take events to be pluralities of at least two tropes, one trope being an instance of a property P at time t and the other an instance of a property Q at a time t’, for contrary properties P and Q and subsequent times t and t’.

This option raises a serious problem, though, and that is that events cannot be arguments of plural predicates, as would be predicted. Thus, a plural predicate such as *were equally unexpected* (with an ‘internal reading’) is applicable to a collection of tropes as in (36a), but not to an event as in (36b):

(36) a. John’s illness and his subsequent healthiness were equally unexpected.
   b. ?? John’s becoming healthy was equally unexpected.

The second option is to take events to be instances of dynamic properties, properties, in the simplest case, of the sort ‘being P at t and Q at t’, for contrary properties P and Q and subsequent times t and t’. The problem with the second option is that instances of dynamic properties cannot have the kinds of properties that events can have. For example, they cannot be ‘sudden’ or ‘unexpected’, and they cannot ‘happen very quickly’. This is reflected in the contrast below, where *John’s becoming ill* would denote an event, and *John’s healthiness and subsequent illness* would be a plausible term for an instance of a dynamic property:

(37) a. John’s becoming ill was sudden / was unexpected / happened very quickly.
   b. # John’s healthiness and subsequent illness was sudden / was unexpected / happened quickly.

The third option is to take events to be instantiations of temporal transition relations among tropes. Temporal transitions naturally have the sorts of properties that events have, as can be seen by using the very term *transition* itself:

(38) The transition of John’s healthiness to John’s illness was sudden / unexpected / happened quickly.

But what is a transition? One might take a transition to be a second-level relational trope, let’s say, an instance of the temporal transition relation in first-level tropes, for example in the instantiation of P in a at a time t and the instantiation of Q in a at a time t’, for an individual a,
contrary properties $P$ and $Q$, and subsequent times $t$ and $t'$. Conceiving of events as transitions in that way allows a straightforward explanation of why events do not have truth conditions: temporal transitions are just not true or false.

But conceiving of events as transitions among tropes faces some serious difficulties regarding the similarity relations that events display. Tropes count as exactly similar (as ‘the same’) in case they instantiate the very same (natural) property. But then if events are transitions among tropes, there will be events that come out as exactly similar that should not. If events are instances of the general immediate temporal precedence relation, then they should come out as exactly similar just because they instantiate that relation, which is obviously wrong. Even if temporal precedence were to be specific to particular times, still simultaneous events that involve very different kinds of tropes may, incorrectly, come out as exactly similar.\(^{30}\)

What is required for the similarity of two events is that the tropes involved be similar too. The only things that need not be ‘the same’ are the times at which the events take place. Recall that the time at which an event takes place is essential to it. The fourth option of conceiving events in terms of tropes then is this: events are relational tropes consisting in the instantiation in times of temporal transition relations involving lower-level tropes. That is, only times would be the bearers of the higher-level tropes that events are. Let us take the very simple case of an event that consists in the transition from $P(a)$ to $Q(a)$ for some individual $a$ and contrary properties $P$ and $Q$. This event can now be conceived as the instantiation in times $t$ and $t'$ of the relation $\lambda t t'[P(t)(a) & t < t' & Q(t')(a)]$, that is, the relation that holds of times $t$ and $t'$ if $P$ holds of $a$ at $t$ and $Q$ holds of $a$ at $t'$ and $t$ (immediately) precedes $t'$. Given this, for any two events to be exactly similar the properties and individuals involved need to be the same and the times need to stand in a relation of immediate precedence. But the times at which the properties hold of the individuals need not be the same. Given this, the time of occurrence will be essential to an event (since a trope ontologically depends on its bearer).

With this conception of events as complex relational tropes, let us turn to attitudinal objects. Attitudinal objects obviously involve the instantiation of a multigrade attitudinal or illocutionary relation. This is reflected in the way evaluative predicates are understood:

\(^{30}\) One might argue that temporal precedence is too ‘thin’ a relation (in the sense of not allowing for different ways of instantiation) and that second-level tropes that are instances of such a relation require the similarity of the lower-level tropes as well. But this does not seem correct. The relations of being distinct and of being equivalent are equally ‘thin’, but the distinctness or equivalence of John’s ability and Mary’s ability is intuitively ‘the same as’ the distinctness or equivalence of $x$ and $y$, whether or not $x$ and $y$ are similar to John’s ability and Mary’s ability (for example John’s ability and Mary’s ability are as distinct as John’s head and Mary’s head). ‘The same as’ is perhaps not very felicitous in such a case, but it would not improve if $x$ and $y$ were chosen differently.
evaluative predicates when applied to attitudinal objects care also about the attitudinal or illocutionary force and not just the propositional constituents. But in what way are attitudinal objects instances of multigrade attitudinal relations?

The first option that comes to mind is that attitudinal objects are relational tropes. That is, they are instantiations of the multigrade attitudinal or illocutionary relation, so that ‘John’s belief that Mary likes Bill’ would be the instantiation of the multigrade belief relation in John, the liking relation, Mary, and Bill. This seems to get the truth-directedness of attitudinal objects right: if the multigrade attitudinal relation holds among an agent and the propositional constituents, then this is just the agent, by predicing the property of the objects, aiming at truth (or more generally satisfaction).

But there are several problems for the view of attitudinal objects as relational tropes with both the agent and the propositional constituents as bearers. First, this view makes the wrong predictions about perceptual properties: perceptual properties predicated of an attitudinal object can target only the agent, never a propositional constituent, and thus the agent and the propositional constituents cannot be on a par. For example, if Joe heard John’s remark that Mary hit Bill, this can never mean that Joe heard Mary hit Bill. An even more serious problem for the view is that it gets the similarity relations wrong that attitudinal objects display. If John’s belief that Mary likes Bill is the instantiation of the belief relation in four entities (John, the liking relation, Mary, and Bill), then such a relational trope should be exactly similar to Mary’s belief that Joe kissed Sue, which is an instance of the same multigrade belief relation. But this is clearly wrong. John’s belief that Mary likes Bill can bear exact similarity only to a belief with the same content (though possibly a different agent), such as Joe’s belief that Mary likes Bill. There is a third problem for the view, and that is that it treats all propositional constituents as bearers of a relational trope ontologically on a par, as objects in the world. But some propositional constituents may be considered concepts, entities of a sort that one might not want to admit as actual objects.

There is a second option of treating attitudinal objects as instances of attitudinal or illocutionary multigrade relations and that is as what I will call quasi-relational tropes. Quasi-relational tropes are monadic tropes instantiating object-dependent properties based on relations. The examples below illustrate the difference between relational and quasi-relational tropes:

(39) a. the relation between John and Bill
   b. John’s relatedness to Bill
c. Bill’s relatedness to John

Whereas (39a) stands for a relational trope, (39b) and (39c) stand for quasi-relational tropes. There are also more specific terms that stand for quasi-relational tropes, for example John’s *fatherhood*. Relations in general give rise to both relational tropes and (possible various types of) quasi-relational tropes (and of course a mixture of both with three- or more place relations).

Attitudinal objects, I propose, are quasi-relational tropes that are instantiations in an agent of complex properties of the sort $\lambda x[\text{believe}(x; \text{LIKE}, \text{Mary}, \text{John})]$. This explains straightforwardly the sorts of properties attitudinal objects may have. As quasi-relational tropes, two attitudinal objects are ‘the same’ just in case they involve the same attitudinal mode and the same propositional constituents. Perceptual properties will target only the one bearer of the trope, the agent. Attitudinal objects will obviously be truth- (or satisfaction-) directed since also on this account they are instances of intentional predication relations. Furthermore, propositional constituents will not necessarily obtain the status of objects: propositional constituents may be concepts, occupying a position in the multigrade place of the attitude verb specifically marked for such entities. Finally, it is explained why the time of occurrence is only accidental to an attitudinal object. An attitudinal object as the instantiation of an attitudinal property need not involve the time of that instantiation as an essential component. In the case of events, by contrast, times were the bearers of the relational trope itself and thus essential components.

This account of attitudinal objects can be carried over to physical products. A walk or a scream would be the instantiation in an agent of the property (of an agent) to have particular physical properties at subsequent times. In a very simple case, such a property may be of the form $\lambda x[\exists t \exists t'(P(x) & Q^t(x) & t < t')]$, for contrary properties P and Q and times t and t’ with t immediately preceding t’. To summarize, the trope-based account allows distinguishing between attitudinal objects and the corresponding events ontologically, entities that exist under the very same circumstances in the very same locations, but have different properties. Attitudinal objects on that account are quasi-relational tropes with an agent as bearer and events relational tropes with times as bearers.

This account also explains why gestalt properties are unproblematic with products, but problematic with actions. There is no problem for an agent (of a product) to instantiate a time-related property involving an interval as a whole. But gestalt properties involving the interval
as a whole can hardly play a role in actions as instances of temporal transition properties in subsequent times.

The denotations of terms for attitudinal objects and terms for kinds of attitudinal objects are indicated below:

(40) a. \([John's claim that S]^w = f(John, \lambda x[<x; C_1, ..., C_n> \in [claim]^w]),\]

where \(<C_1, ..., C_n> = [S]^w\)

b. \([the claim that S]^w = f_{kind}(\lambda x[<x; C_1, ..., C_n> \in [claim]^w])\) = the kind whose instances at a world \(w\) are: \{ e | \exists a \in D(w) e = f(a, \lambda x[<x; C_1, ..., C_n> \in [claim]^w]\}

In (40a), \(f\) is the function mapping an agent and a property to the instantiation of the property in the agent at the relevant time. The denotation of \(the claim that S\) is a kind of attitudinal object, which depends only on a property.

The truth conditions or more generally satisfaction conditions of attitudinal objects (with the simple kinds of content so far discussed) can now be given as follows:

(41) An attitudinal object \(f(a, \lambda x[<x; C_1, ..., C_n> \in R])\), for an agent \(a\), propositional constituents \(C_1, ..., C_n\) and an attitudinal relation \(R\) is true (satisfied) at a world \(w\) iff \(<C_2, ..., C_n> \in [C_1]^w\).

If attitudinal objects are the primary truth bearers, the question is what to make of the truth conditions of sentences. Sentences are associated with sequences of propositional constituents (which as mentioned earlier can be taken as their meanings). But such sequences do not have truth conditions inherently, only attitudinal objects involving the propositional constituents (in the relevant order) do. A sentence expressing a sequence of propositional constituents can, however, be given truth (or rather satisfaction) conditions derivatively, on the basis of the satisfaction conditions of the corresponding attitudinal object:

(42) A sentence \(S\) expressing the sequence \(C_1, ..., C_n\) at a world \(w\) and time \(t\) is true at a world \(w\) iff for any possible attitudinal object \(e\), \(e = f(d; \lambda x[<x, C_1, ..., C_n> \in R])\): \(e\) is true (satisfied) at a world \(w'\) iff \(P(w')(C_1, ..., C_n)\) (in which case \(S\) is true in \(w'\)).

Also inferences among sentences can be accounted for that way: a sentence \(S\) expressing a sequence of propositional constituents \(C_1, ..., C_n\) at a world \(w\), implies a sentence \(S'\)
expressing the propositional constituents $C_1$, ..., $C_m$ at a world $w$ iff for any world in which $S$ is true, $S'$ is true, which means, for any attitudinal objects $e$ and $e'$, $e = f(d; \lambda x[R(x, C_1, ..., C_n)])$ and $e' = f(d; \lambda x[R(x, C_1', ..., C'_m)])$: for any world $w'$, if $e$ is true (satisfied) at $w'$, then $e'$ is true (satisfied) at $w'$.

5. The semantics of special quantifiers

Given that prosentential special quantifiers do not range over propositions, but rather attitudinal objects, they cannot act as ordinary quantifiers ranging over potential propositional arguments of attitude verbs. Rather special quantifiers act as nominalizing quantifiers, introducing ‘new’ entities into the semantic structure of the sentence on the basis of possible propositional constituents and the semantic contribution of the attitude verb. They range over attitudinal objects with their status not as objects, but as products of attitudes (or possibly kinds of attitudinal objects).

The formal semantics of special quantifiers requires distinguishing between a scope and a nominalization domain - the part of the sentence on which the introduction of the new entities (the (kinds of) attitudinal objects) is based. The nominalization domain in (43a) includes both the object position and the attitude verb, as indicated in (43b):

(43) a. John claimed something interesting.
    b. something interesting, (John (claimed t))

Special quantifiers will then involve quantification over sequences of propositional constituents $C_1$, ..., $C_n$ and quantification over attitudinal objects, as in the analysis of (43a) in (43c):

\[ (43) \text{c. } \exists x \exists C_1...C_n(<\text{John}; C_1, ..., C_n> \in [\text{claim}] \& x = f(\text{John}, \lambda x[<x; C_1, ..., C_n> \in [\text{claim}]]) \& x \in [\text{interesting}]) \]

(43c) means 'there is an attitudinal object $x$ and propositional constituents $C_1$, ..., $C_n$, so that $x$ is the instantiation in John of the property of standing in the multigrade claiming relation to $C_1$, ..., $C_n$ and $x$ is interesting'.
On a second, kind-related reading of special quantifiers, the nominalization function $f$ in (43c) is to be replaced by $f_{\text{kind}}$, so that something ranges over things of the sort the claim that S. This corresponds to the two options of interpreting the nominalization claim, either as in John’s claim that S or as in the claim that S.

Also the special pronoun that will stand for an attitudinal object or a kind of attitudinal object, which in this case is given by the context. The kind-related interpretation is particularly obvious in cases like (43d):

(43) d. John thought that S. Mary thought that too.

Free relative clauses like What Mary claimed involve the same kind of semantic nominalization function. With the kind-related reading as on the analysis in (44a), (44b) can be analysed as in (44c):

(44) a. $[\text{what Mary claimed e}] = \tau x[\exists C_1... C_n(x = f_{\text{kind}}(\lambda x'[<x'; C_1,..., C_n> \in [\text{claim}]]) & <\text{Mary}; C_1,..., C_n> \in [\text{claim}])$

b. John claimed what Mary claimed.

c. $\exists x \exists C_1... C_n(x = f_{\text{kind}}(\lambda x'[<x', C_1,..., C_n> \in [\text{claim}]) & <\text{John}; C_1,..., C_n> \in [\text{claim}])$

& $x = [\text{what Mary claimed}])$

The analysis of cases of sharing of attitudinal objects with different types of attitude or speech act verbs as in (32) will require re-analysing the verb into characterizing and constitutive parts regarding the attitudinal object, so that what is shared may just be a kind of attitudinal object of entertaining (author 2003a).

6. Further applications: Attitudinal objects and context

Attitudinal objects with their status as truth bearers and products of attitudes have another important application, namely to issues regarding context-dependency. Attitudinal objects provide the ‘natural’ truth-conditional completion for apparently truth-conditionally incomplete contents of propositional attitudes. Attitudinal objects are dependent on the relevant agent as well as the relevant mental act or event and thus on the time of the context.
Attitudinal objects therefore would not allow for truth that is relative to the agent and the time of the context, as Twardovski (1912b) himself already pointed out.\footnote{With some additional assumptions, it is formally possible though to allow for apparent cases of agent-relative truth for attitudinal objects, see author (2010).}

There are two further puzzles in contemporary philosophy of language for which attitudinal objects provide a natural solution. These are cases, where, as it has been argued, properties, not propositions act as contents:

1. Sentences used to describe the objects of attitudes \textit{de se}
2. Sentences expressing the kinds of things temporal or location operators operate on.

The puzzles consist in that in both cases the sentences at the same time appear to stand for objects that are truth bearers and thus could not be properties.

Concerning the first case, it has, following Lewis (1979), often been argued that attitudes \textit{de se} are not attitudes toward a proposition, but rather toward a property, as in the analysis of (45a) in (45b):

\begin{enumerate}
    \item John thinks that he himself is a hero.
    \item \textsc{Think}(John; \lambda x[\text{hero}(x)])
\end{enumerate}

The account is particularly meant to apply to infinitival clauses, as in (45c), which appear to be restricted to an interpretation \textit{de se}:

\begin{enumerate}
    \item John hopes [\textsc{pro} to become a hero].
\end{enumerate}

One major issue left open by such an account is the question of the truth conditions of the contents of attitudes \textit{de se}. Such contents appear to act as truth bearers in sentences such as the following:

\begin{enumerate}
    \item John thinks that he himself is a hero, which is true.
    \item John believes something that is true, namely that he himself is a hero.
    \item John hoped to become a hero. That in the end turned out to be true.
\end{enumerate}

The contents of attitudes \textit{de se}, to put it more appropriately, \textit{correspond} to objects that are truth bearers. But what kinds of objects could these be if they are not the contents of attitudes \textit{de se}?
Attitudinal objects, naturally. Intuitively, attitudinal objects that are ‘products’ of attitudes de se are in fact truth-conditionally complete. John’s belief that he himself is a hero is either true or false, and John’s hope to become a hero can be fulfilled or not. Attitudinal objects are true or false even if their content is a property because self-ascription of the property is itself part of what makes up the attitudinal object. Depending on whether the self-ascription succeeds or fails, the attitudinal object will come out as true or false (or satisfied or not satisfied). This is reflected in the following condition on the truth of attitudinal objects:

(47) For an attitudinal relation $R$, an agent $a$, a property $P$, and a world $w$, such that $R(a, P)$, the attitudinal object $f(a, \lambda x[R(x, P)])$ is true (satisfied) at $w$ iff $P^w(a)$.

Attitudinal objects (or kinds of them) form the domain of pro-sentential special quantifiers and pronouns. Therefore they should anyway act as the semantic values of the pronouns and quantifiers in (46).

The second case of a discrepancy between the content of an attitude and its truth-conditional ‘completion’ is also due to Lewis. Lewis (1980) argued that the roles of ‘objects of propositional attitudes’ and ‘objects that temporal and location operators operate on’ cannot be fulfilled by one and the same thing, namely propositions. Objects of attitudes must be truth-conditionally complete, but the things temporal and spatial operators operate on are not.

Temporal and spatial operators operate on truth-conditionally incomplete contents, roughly properties of time and of location. Such properties would also be ascribed to the agent’s own time or location in a propositional attitude that is ‘de se’ regarding the attitude’s time or the agent’s location. Propositional attitudes of this kind again have as their ‘products’ truth-conditionally complete attitudinal objects. This matches intuition: ‘John’s thought that Mary will like Bill’, with the future temporal operator, clearly has truth conditions on its own. Below is a very simplified indication of the truth (or satisfaction) conditions of an attitudinal object involving the ascription of a property to the time of the attitude:

(48) For an attitudinal relation $R$, an agent $a$, a time $t$, a world $w$, and a property of times $P$, such that $R^t(a, t; P)$, the attitudinal object $f(a, t; \lambda x[R(x, t'; P)])$ is true (satisfied) at $a$

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32 It is actually a matter of debate whether natural language has in fact temporal and location operators, rather than just, let us say, temporal and spatial predicates of implicit time or event arguments of verbs (as King 2007 has argued). The present account with its distinction between attitudinal objects and contents of attitudes would at least allow for the possibility of temporal and location operators in natural language.
world w iff P^w(t).

P as a property of times represents a very simple kind of content (let’s say, as expressed by *it is raining*, setting any more complex contents are aside). The attitudinal object is here taken to be a relational trope, involving an agent as well as a time as bearers.

To conclude, attitudinal objects provide precisely the ‘truth-conditional completion’ that some ‘propositional contents’ require. Attitudinal objects are able to do so because they are not ‘the objects of attitudes’, but ‘products of attitudes’, entities that correspond to a propositional attitude as a whole, including its contextual features.

7. Conclusion

In this paper, I have argued for the importance of the notion of an attitudinal object, within a more general distinction between actions and products. The notion of an attitudinal object is tied to the view that predication as an intentional notion provides the solution to standard problems for propositions as abstract objects, in particular the problem of truth-directedness and the problem of the unity of propositions. Attitudinal objects are entities that inherently have truth or satisfaction conditions and form natural similarity classes on the basis of a shared content and a shared attitudinal mode. Yet they are as concrete as the corresponding attitudinal or illocutionary event.

Attitudinal objects are the referents of terms of the sort *John’s thought that* S and kinds of attitudinal objects referents of terms such as *the thought that* S. Both attitudinal objects and kinds of attitudinal objects form the domain of entities that special quantifiers in sentential position range over or pronouns in that position make reference to. As such, they account for some of the crucial intuitions that philosophers appeal to when invoking propositions, by talking about ‘the things we believe’ and ‘what is said’. The recognition of attitudinal objects thus does not just account for a range of fundamental philosophical problems with propositions; they also underlie the very intuitions, in the way they have to be expressed linguistically, that led to the postulation of propositions. Attitudinal objects are precisely what appropriately accounts for the semantics of the sentences that philosophers *have* to use when trying to motivate propositions.

One question that arises is, why have attitudinal objects not been recognized so far as a separate ontological category, playing the roles generally assigned to propositions? The main reason, it appears, is that attitudinal objects have not been clearly distinguished from the rival
categories of mental events and speech acts, entities unsuitable for the roles that propositions were supposed to play.

The notion of a trope allows for a clear ontological distinction between attitudinal objects and the corresponding mental events or speech acts. Tropes, though they have played an important role in ancient and medieval metaphysics, have not been very popular in contemporary metaphysics, except for particular interests in reducing universals and individuals to a single ontological category (that of tropes). This paper may have shown that the notion of a trope fulfills much wider purposes, such as that of clarifying the distinction between attitudinal objects and mental or illocutionary events, and more generally ‘actions’ and ‘products’.

References

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