Attitudinal Objects

Friederike Moltmann
IHPST, Paris

Propositions have played a central role in philosophy of language since Frege. Propositions are generally taken to be the objects of propositional attitude, the meaning of sentences, the primary bearers of truth and falsehood, and the kinds of things that quantifiers in sentential position range over. As objects of propositional attitudes, propositions can be shared by different agents and moreover can be represented in one language or another. Thus, propositions are generally taken to be mind- and language-independent entities. In this paper, I want to argue that the notion of a proposition, given a range of philosophical problems as well as problems of linguistic adequacy, should be replaced by a different notion, for almost all the roles for which it has been invoked. The objects that are involved in propositional attitudes, that act as primary truth bearers, and that quantifiers in sentential position range over, I want to argue, are not propositions, but what I call *attitudinal objects* (or kinds of them).

Attitudinal objects are entities like 'John's belief that S', 'John's claim that S', and 'John's desire to do X'. Like propositions, attitudinal objects intuitively have truth conditions essentially – or, in the case of objects like desires, corresponding conditions of satisfaction. But unlike propositions, attitudinal objects are mind-dependent and possibly act-dependent, dependent on an attitude and possibly speech act of a particular agent. Nonetheless, attitudinal objects (or kinds of them), I will argue, can fulfill the roles of propositions. Attitudinal objects can be shared in the sense that attitudinal objects with the same content are exactly similar (or 'the same'), and moreover two agents may share a *kind of attitudinal object*, a kind whose instances are exactly similar attitudinal objects.

Attitudinal objects are closely related to mental events and speech acts. However, there are fundamental ontological differences between events or acts and attitudinal objects. Most importantly, mental events and speech acts do not have truth conditions (or corresponding satisfaction conditions), unlike attitudinal objects.

Attitudinal objects are entities intermediary between mental events and propositions, and it is because of the popularity of these two competing category that attitudinal objects may not have not properly been recognized as such. However, we have very clear and in act linguistically manifest intuitions about attitudinal objects: Attitudinal objects are also the referents of terms with nominalizations like *John's belief that* S, *John's claim that* S, and *John's desire to do* X, and kinds of attitudinal objects are the denotations of terms like *the belief that* S, *the claim that* S, and *the desire to do* X.

I will argue that the proper ontological characterization of attitudinal objects should be in terms of the notion of a trope: attitudinal objects are tropes of a particular complex sort. Events, I will argue, are also tropes, but of a very different sort.

Attitudinal objects do not give rise to a number of fundamental philosophical problems for propositions, such as the problem of arbitrary identification, the problem of the 'unity of propositions', and the problem of the truth-directedness of propositions, or so I will argue. What is striking about attitudinal objects as a 'solution' to those problems is that for recognizing and clarifying attitudinal objects, we can let us be guided rather strictly by natural language itself, that is, by our linguistic intuitions about the referents of terms like *John's belief that* S.

Attitudinal objects or kinds of them also form the domain of quantifiers like *something* as well as the referents of relative clauses with *what* (*what we think, what is said*) and the pronoun *that* in sentential position. Those expressions are special in that they are nominalizing expressions, introducing a 'new' domain of entities into the semantic structure of a sentence. Our linguistic intuitions also about such expressions can guide us as to the nature and role of attitudinal objects.

Attitudinal objects as a replacement of propositions go along with a (Neo)Russellian 'multiple relation analysis' of attitude reports, an analysis on which it is not propositions that are arguments of attitude verbs, but only the propositional constituents. I will propose a particular version of a neo-Russellian analysis, an analysis that does not share Russell's original motivations and conceptual restrictions, though. On that analysis, attitudinal relations are fundamentally multigrade intentional predication relations, involving concepts and objects.

I will first point out the philosophical problems for propositions and introduce attitudinal objects with their various properties as displayed by our linguistic intuitions about the relevant terms. I then introduce a particular version of a neo-Russellian analysis of attitude reports. On the basis of that I will develop an ontological account of attitudinal objects and of events

which is to explain the fundamental ontological differences between the two categories. I will then discuss some further applications of attitudinal objects and return at the end to the way the neo-Russellian analysis can to be extended to other complex sentences.

1. Propositions

Propositions as objects of propositional attitudes naturally go along with a relational analysis of attitude reports. One the relational analysis, an attitude verb expresses a relation between agents and propositions, as in (1b) for (1a):

(1) a. John believes that Mary arrived.
b. believe(John, [*that Mary arrived*])

Propositions are also taken to be the meanings of sentences, including of course embedded sentences, so that a *that*-clause will act as a term standing for a proposition.

Propositions moreover are generally considered the values of quantifiers and pronouns in sentential position, in particular quantifiers like *something, everything*, or *nothing*, the pronoun *that*, and also relative clauses with *what*. I call these 'special quantifiers and pronouns'. Propositions seem needed to account for the inferences in (2a, b) and the sentences in (2c, d):[1]

(2) a. <u>John thinks that Mary arrived.</u>
John thinks something.
b. Mary believes everything Bill believes.
<u>Bill believes that it is raining.</u>
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.

As meanings of sentences, propositions are also generally taken to be the entities that sentential (modal, temporal, spatial) operators operate on.

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

There are different conceptions of propositions. Two 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; [2] the conception of propositions as structured propositions (more recently defended by Cresswell 1985, Soames 1987, and King 2007), that is, as sequences (or configurations) of properties or concepts and objects (and possibly modes of presentation), or semantic values of constituents 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) the syntactic structure of the sentence and the way the truth value of the sentence is computed in the meaning of the sentence itself.

Both conceptions are subject to fundamental problems, though, pointed out in particular by Jubien (2003). The first problem is the *problem of arbitrary identification* (see also Moore 1999). It is a problem first discussed by Benaceraff (1965) in the context of the philosophy of mathematics: 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, for example the proposition that John is happy could be represented either as <H, John> or as <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*.[2] 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, John> be understood in such a way that the proposition comes out true in case John is

[2] 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 assign 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: they need to be stipulated. 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. 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 inherently, and moreover about which we have clear intuitions. Attitudinal objects are just the kinds of entities that, I want to argue, fulfill that need.[3]

2. Attitudinal Objects

Let us then turn to attitudinal objects. Attitudinal objects are naturally described by terms like the following:

(3) a. John's thought that Mary likes Bill
b. John suspicion / claim / denial that Mary likes Bill

In (3a), we have an attitudinal object involving the illocutionary mode of thinking; in (3b), we have attitudinal objects involving other attitudinal or illocutionary modes.

Attitudinal objects are not peculiar entities whose existence and nature should invite major dispute. Rather our intuitions about attitudinal objects are very clearly reflected in the use of the terms that refer to them, such as those in (3). Yet attitudinal objects have so far not been

[3] There are philosophers that propose that propositions be primitive entities (Thomason 1980, Bealer 1982) or entities 'sui generis' (Moore 1999). The problem with propositions as abstract objects that fulfill certain roles is that we do not have independent intuitions about them that would make us accept them for reasons other than needing entities fulfilling those roles.

recognized as an ontological category of entities per se, and a common view about the terms in (3) is that they stand sometimes for propositions, sometimes for mental events or illocutionary acts. The actual range of properties, though, that the referents of such terms may have (and be attributed at once), makes an ambiguity (or polysemy) between proposition-referring and event-referring terms rather implausible.

Unlike propositions that exist necessarily (at least if their constituents exist necessarily), attitudinal objects are contingent. They depend for their existence on a particular agent as well as a propositional attitude and perhaps a linguistic act. Also their identity depends on a particular agent, indicated by the fact that (4) cannot possibly be true:

(4) *John's thought that S also occurred to Mary.

Attitudinal objects also depend for their identity on the attitudinal or illocutionary mode. Thus the following identity statements are generally judged not true:

(5) a. *John's thought S is also his remark that S.
b. * John's that it will rain is his hope that it will rain.

The dependence on an attitudinal or illocutionary mode as well as an agent shows that attitudinal objects are not just propositions.

But like propositions, attitudinal objects have truth conditions, at least if they are doxastic or assertive attitudinal objects. In the case of attitudinal objects of desire or request, they do not have truth conditions, but rather conditions of fulfillment (of the desire or request). Even imaginations have corresponding conditions associated with them, let's say conditions of representational correctness. Predicates of truth, fulfillment, and perhaps representational correctness are naturally applicable to attitudinal objects:

(6) a. John's belief that S is true.
b. John's desire to become a king was fulfilled.
c. (?) John's imagination to be a king turned out to be correct.

I will call the more general conditions associated with attitudinal objects the *satisfaction conditions* of attitudinal objects.

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

(6) d. John's thought that S would be true even if John had never thought it.
e. 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 '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.[4]

Attitudinal objects have truth conditions (or other satisfaction condition) inherently: their truth conditions are part of their nature and are not to be externally imposed. Moreover attitudinal objects do not depend on language (but rather only on intentional acts). I will later argue that it is precisely the attitudinal or illocutionary mode that ensures the attitudinal object's aim for truth, fulfillment, or correctness.

Attitudinal objects differ from propositions in the range of other properties they may have. Most importantly, attitudinal objects have properties of concrete objects, which are properties propositions as abstract objects cannot have. One sort of property defining an attitudinal object as a concrete one is perceptual properties. Perceptual properties are applicable to suitable attitudinal objects such as remarks:

(7) John heard Mary's remark that S.

Attitudinal objects classify as concrete objects moreover in that they may have causal properties:

(8) John's claim that S caused astonishment.

What is responsible for the status of attitudinal objects as concrete is obviously the attitudinal or illocutionary mode as well as the agent involved.

The attitudinal or illocutionary mode also influences the way evaluative predicates are understood: evaluative predicates applied to attitudinal objects are not understood as they

[4] 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.

would with propositions; rather they also evaluate the attitudinal or illocutionary mode with which the propositional content is sustained, as seen in the following contrast:

(9) a. John's thought that S is unusual.
b. The proposition that S is unusual.

What is said to be unusual according to (9a) is a content as thought by John, not an abstract semantic object, as in (9b).[5]

There is another sense in which attitudinal objects are concrete: attitudinal objects are generally more specific than the content of their description (a description 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. The difference can be seen from comparative predicates, which are applicable to attitudinal objects but inapplicable to facts or states:

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

'John's believing that S' and 'the fact that John believes that S' are entities whose nature is 'exhausted' by what is contributed by the content expressed by those terms. For example, involving belief to some degree or other, states and facts are not fully specific but determinable and in that sense abstract. By contrast, 'John's belief that S' is fully specific: it involves a particular degree of belief. As a consequence, it can be compared (in that respect and possibly others) to another belief.

The question now is: in what way do attitudinal objects combine a content and an attitudinal mode, and moreover in what way are attitudinal objects distinct from mental or illocutionary events?

---

[5] A simple *that*-clause with *unusual* can refer neither to a proposition nor an attitudinal object. (1a) cannot be understood as (1b) or as (1c), but rather requires a factive reading as in (1d):

(1) a. That S is unusual.
b. The proposition that S unusual.
c. The thought that S is unusual.
d. The fact that S is unusual.

3. The ontology of attitudinal objects

3.1. Attitudinal objects and the intentionality of propositional content

Attitudinal objects are individuated both by a propositional content and an attitudinal or illocutionary mode, and the question is, in what way?

If propositions are accepted as an ontological category besides attitudinal objects, attitudinal objects would best be construed as qua objects, in roughly the sense of Fine (1982), that is, as propositions under a certain guise. 'John's thought that S', for example, would be the proposition that S qua being thought by John.

A separation of propositional content from an attitudinal or illocutionary mode has been the dominant view in philosophy of language since Frege. Thus, Frege (1918/9) argued that propositional content (mind-independent 'thought') should be separated from illocutionary force. Propositions ('thoughts') were taken to mind-independent objects of a 'third realm', contents that are thus intersubjectively sharable. Since Frege, it has become an established view in the philosophy of language that propositions, as the primary truth bearers, the meanings of sentences, and the objects of attitudes, are mind-independent and language-independent abstract objects.

I will defend the older, alternative view, according to which any representational object needs to be constituted by intentionality and according to which both truth and reference is tied to the intentionality of agents. On this view, there cannot be an abstract object, a proposition (as standardly conceived), that is the bearer of truth, in a non-derivative, non-stipulated way. Truth-bearing content, on that view, is constituted also by intentional acts, not only by objects and concepts (as propositions are on the Fregan and related views).

The alternative view goes along with a pre-Fregean conception of content, in particular with the notion of a *judgment*, an intentional, mind-dependent object. Thus, for example, Kant's notion of a judgment is a mind-dependent content-bearing entity that is part of any belief or assertion and that involves an act of intentional predication (which is conceived of as an intersubjectively sharable act) (Hanna 2004). The notion of a judgment has played a central role in the work of many other philosophers as well, including that of Russell. A judgment obviously is an attitudinal object itself. It is a very general attitudinal object and as such part of a range of other attitudinal objects.

I take the most general attitude to be that of *acceptance* (following roughly Stalnaker 1984). Acceptance consists in the provisional 'adoption' or just 'comprehension' of a content and thus implies neither belief nor disbelief. Acceptances are thus the most general attitudinal objects and as such (non-spatio-temporal) parts of both beliefs and disbeliefs and any other kinds of attitudinal objects with satisfaction conditions.

If a judgment or more generally an acceptance involves an intentional act of predication, any other attitudinal object should involve an act of intentional predication as well. In fact, attitudes (or at least many of them) can themselves be viewed as, fundamentally, acts of predication. Thus, belief would fundamentally be a way of attributing properties of objects (in the belief-way), and assertion would be another way of attributing properties of objects (in the assertion-way).

Since Frege, intentionalist notions of content have become rare. However, somewhat related views can be found in speech act theory. Thus, for Austin (1965), speech acts consist in various different sub-acts: phatic acts, rhetic acts, locutionary acts, illocutionary acts, and perlocutionary acts. Rhetic acts are acts of presenting a propositional content, involving, it appears, both acts of reference and of predication. In an earlier article, Austin (1952/3), in fact, distinguishes different speech acts on the basis of different ways of understanding the copula: acts of calling, of describing, of exemplifying, and of classing.[6]

Also Searle (1969) mentions referential and predicational acts, besides illocutionary acts (speech acts like assertions). An intentional notion of predication does not enter Searle's conception of a propositional content, though.

More recently, Hanks (2007a) has argued for the view that content and force not be separated, but that illocutionary acts (viewed as predicational acts) are constitutive of content as well.[7]

Speech-act-theoretic approaches are fundamentally unsatisfactory in one respect, though. They do not provide a notion of an entity that could itself be a truth bearer. Acts and events, including locutionary or illocutionary acts, are not entities that could be true or false: acts, like any events, are not truth-bearers. It is here where the notion of an attitudinal object takes central stage: attitudinal objects are both truth bearers and intentional entities. Attitudinal objects intuitively may be true or false (or more generally satisfied or not satisfied); speech acts or mental acts intuitively cannot be true or false: they may have a content, but they do not share the properties of their content (such as truth).

---

[6] See Fiengo (2009) for a recent discussion.

[7] Hanks (2007a) does not further develop a notion of content, though, that includes the contribution of force.

The intentionalist conception of content has another important motivation, namely to account for 'the unity of propositions' (Jubien 2001, Hanks 2007a). If propositional content does not just consist in a complex of concepts and perhaps objects, but is also constituted by intentional acts of predication, then such intentional acts of predication are precisely what ties propositional constituents together (at least when they consist in a predicable entity and its arguments). Moreover, they are responsible for the truth-directedness of propositional content (Jubien 2001, author 2003b). In the assertion of a simple sentences such as *Mary likes Bill*, intentional predication thus consists in the speaker predicating the liking relation of Mary and Bill.

Keeping simple cases like this in mind for the moment, the intentional predication that is required fits formally well within a Russellian or rather neo-Russellian account of attitude reports, namely Russell's 'multiple relation analysis' (Jubien 2001, author 2003b).

3.2. The neo-Russelian analysis of attitude reports

On Russell's (1912, 1913, 1918) multiple relation analysis, an attitude verb does not express a relation between agents and propositions, but rather it takes the propositional constituents as arguments. For Russell, the attitude verb specifies different types of relations, depending on the *that*-clause that is its complement. Thus in the particular case of (12a), *thinks* specifies a four-place relation that holds between John, the liking relation, Mary, and Bill, as in (12b):

(12) a. John thinks that Mary likes Bill.
b. think(John, the relation of liking, 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.[8] Russell moreover did not take his analysis to provide a solution to the problem of the unity of propositions.[9]

[8] 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 RelationTheory.

[9] 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

This is not a place to go into a detailed discussion of Russell's analysis, its motivations, and its historical context. I will rather propose one particular version of a Neo-Russellian analysis that is based on very different premises and that, I would think, does not face the same problems.

First, rather than taking the attitude verb to specify different attitudinal relations in contexts of different kinds of *that*-clauses, I take attitude verbs to a be multigrade, more precisely to have 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.[10] Thus John in (12a) fills in a different argument place than the propositional constituents (which occupy the positions in the multigrade argument place). This is indicated by the notation below:[11]

(12) c. think(John; the relation of liking, Mary, Bill)

How would this account for the problem of the unity of proposition and in particular guarantee that the relation is understood as predication of the liking relation of Mary and Bill (in their different roles) rather than anything else?

Concerning the distinction between the argument that is predicated and the other arguments of which the former is predicated, one might make the same move as Frege by distinguishing different types of entities: a predicable argument such as the liking relation would be of a different type (an incomplete concept) from arguments such as Bill and Mary, who would be objects. However, such a distinction is not necessary on a neo-Russellian analysis. All that is needed is to understand the attitudinal relation involved appropriately.

---

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.

[10] For the notion of a multigrade predicate and the distinction between places and positions see Oliver / Smiley (2004). Making use of multigrade predicates was not an option available to Russell, see Griffin (1985).

[11] The semantics of independent sentences will be parallel to that of embedded ones. Independent sentences only provide propositional constituents (in a certain configuration), and it is only in the presence of an illocutionary force indicator that they will have a complete meaning. Thus, a declarative sentence meant to be used as an assertion will specify a property of agents as in (1), for a content $<C_1, ..., C_n>$ and the multigrade assertion relation ASSERT:

(1) $\lambda x[\mathrm{ASSERT}(x, C_1, ..., C_n)]$

This means if an agent asserts *Mary is happy*, he will predicate of Mary, in the assertive mode, the property of being happy.

Crucially, at least for an attitude verb like *think*, the multigrade second place will have one distinguished position – what is taken to be the first position in (12c), namely a position that is reserved for predicable entities, that is, entities that can be said to be true of objects. The very same entities could occur in another place within the multigrade position, but there they will not play the role of an entity said to be true of the other argument. Thus no type-distinction is needed, but only a distinction between one particular position and all the others. Attitudinal relations appear in that respect no more problematic than other (multigrade) relations that involve one distinguished argument place, such a intentional predication, or the instantiation relation (a relation between one universal and other entities that instantiate it (and which may themselves in fact be universals and thus of the same 'type').

How is it guaranteed that in (12c) Mary and Bill would fill in the two argument positions of *like* in the right way when *think* successfully predicates the liking relation of them? Again the problem does not seem specific to attitude verbs. The very same issue arises for (multigrade) relations of intentional predication and instantiation. What is required is to understand the relations in the right way. One of the argument positions in the second place of *think* is reserved for a concept, the other arguments occupy positions each of which is meant to correspond to an argument places of the concept. That is, the argument positions other than that of the concept are linked to particular argument places of the concept.[12] The link can formally be represented simply by assigning the same numbers to the argument places of the concept and the relevant argument positions of the second, multigrade place of the attitudinal predicate.[13]

This neo-Russellian analysis naturally goes along with the view that *that*-clauses are in fact plural terms, standing for ordered pluralities of propositional constituents, so that the constituents will be able to occupy the second multigrade place of the attitude verb in the relevant order.

The neo-Russellian analysis that I have outlined is so far applicable only to *that*-clauses of a very simple logical form (consisting of a predicate and its arguments). Such *that*-clauses can be taken to specify ordered pluralities of constituents (consisting of a predicable entity and its arguments) in the right order, and the multigrade argument place of the attitude verb will simply take as its arguments a predicable entity and its arguments. I will turn to more complex

[12] This account of the unity of propositions problem does not seem to have been at Russell's disposal because he did not conceive of the multiple relations that attitude verbs specify as predication relations.

[13] The particular order represented by the numbers should not matter, however: attitudinal relations are 'neutral relations' in the sense of Fine (2000).

that-clauses (involving embedded *that*-clauses as well as connectives or operators) later. For the moment, I will leave it with this simplified description of the logical form attitude reports within a neo-Russellian analysis.

3.3. The neo-Russellian analysis and attitudinal objects

The neo-Russellian analysis, thus, appears to account for the unity-of-propositions problem as well as the truth-directed of the content of propositional attitudes. The neo-Russellian analysis as given in (12c) does not yet provide an object, though, that is a truth bearer. One might argue that a success of the neo-Russellian analysis shows that no entities are needed that are proposition-like truth bearers: such entities are needed neither as the meaning of sentences nor as the object of attitudes. But we do have strong intuitions that there are such entities, intuitions that are particular manifest in the use of special quantifiers and pronouns, as in the inferences in (2). Attitudinal objects are precisely the kinds of entities that, I argue, are suited for the role of truth bearers, without facing the problems that arise for propositions.

One problem propositions was the problem of arbitrary identification. The neo-Russellian analysis in (12c) accounts for this problem simply by dispensing with propositions altogether. The problem of arbitrary identification does not arise for attitudinal objects. Attitudinal objects are concrete objects whose properties are up for discovery; they are not abstract objects that need to fulfill a certain number of roles and ask for identification with more familiar abstract objects.

Frege's main argument for mind-independent propositional contents was the possibility of propositional contents being shared by different agents. How can sharing be accounted for on the basis of mind- and agent-dependent attitudinal objects? There are in principle two options. First, sharing of attitudinal objects may consist in the attitudinal objects being exactly similar (though not numerically identical). If two attitudinal objects have the same content and involve at least very similar attitudinal or illocutionary modes, then they count, intuitively, as 'the same':

(13) 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 in that sentence:

(14) ?? John's thought *is* Mary's thought.

(14) appears false.[14]

There is another sense in which sharing can obtain and that is when *kinds* of attitudinal objects are shared. Kinds of attitudinal objects are agent-independent and they generally form the denotations of terms like *the thought that* S. An example of sharing of a kind of attitudinal object is given below:

(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'. Terms for kinds of attitudinal objects are kind terms just like bare mass nouns and plurals (such *wate*r or *tigers*) (Moltmann 2003a, b).

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:

(16) John had the thought that S.

Which option then should be chosen to account for the sharing of propositional content? It appears, just in face of the examples (13) and (15), that in some contexts the first option is sufficient (in the case of (13)), whereas in other contexts the second option is required (in the case of (15)).

4. Attitudinal objects, mental events, and illocutionary acts

[14] The predicate *is identical to* is better applicable to John's thought and Mary's thought than the *is* of identity:

(1) John's thought is identical to Mary's thought.

But *is identical to* arguably expresses qualitative identity as well, not strict numerical identity.

Let us now turn to the ontology of attitudinal objects and in particular the ontological distinction between attitudinal objects and events. There are three major ontological differences between attitudinal objects and mental events or illocutionary acts.

First, only attitudinal objects as in (17a) have truth conditions, not mental events or illocutionary acts, as in (17b):

(17) a. John's thought / claim that S is true.
b. # John's thinking / claiming that S is true.

Gerunds such as *thinking* and *claiming* are typical event nominalizations referring to processes or actions.

This difference between attitudinal objects and mental events or illocutionary acts extends to satisfaction conditions in general. States of desiring and acts of requesting can intuitively not be fulfilled, but desires and request (that is, attitudinal objects) can. Again this intuition can be put on display with linguistic examples:

(18) a. John's desire to become a king was fulfilled.
b. ?? John's state of desiring was fulfilled.
(19) a. John's request was fulfilled.
b. ?? John's act of requesting was fulfilled

A second ontological difference between attitudinal objects and events consists in how the two kinds of entities behave with respect to similarity relations. Attitudinal objects are treated as very or exactly similar if they share the same content as well as their attitudinal or illocutionary mode, as in (20). For events, when they involve different agents, to be similar, they have to share a lot more than just their content; they need to involve the very same process:

(20) a. John's thought was the same as Mary's.
b. John's claim / question was the same as Mary's.
(21) a. ? John's thinking was the same as Mary's.
b. ? John's claiming / questioning was the same as Mary's.

As mentioned already, *the same as* in English expresses qualitative, not numerical identity.

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 (22a) is perfectly natural, (22b) does not sound right:[15]

(22) 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 is in fact a more general one. At the beginning of the 20ieth century, the polish philosopher Twardovski (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 products that exist only as long as there is the corresponding action; an inscription is an example of an enduring product which exists beyond the time of the corresponding action. 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 have different properties (without giving a systematic classification), Twardovski 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" (Twardovski 1912, pp.104-105).

Besides the three kinds of properties distinguishing mental and psychophysical actions from the corresponding products noted above, there is a further kind of property which distinguishes particularly physical actions from physical products. These are 'gestalt' properties, or more generally properties that evaluate an entity as a whole. Such properties are applicable to physical products but hardly to physical actions. Thus the evaluative predicate *unusual* below evaluates the various 'small' temporal part of the dancing, but in (23a) it

[15] Attribution of counterfactual temporal properties is possible only with certain kinds of events. Wars could have taken longer than they did, for example. Planned events could have taken place at different times than they did (the demonstration could have taken place earlier than it did). Finally, a death might have occurred earlier than it did. The restrictions on the kind of event that can be counterfactually located in time suggest that what is located in time in these cases arguably are conceived or projected events (intentional entities), not events as they actually happened.

evaluate the dance as a whole: Mary's dance may be unusual because of the very beginning and the very end, a reading unavailable for (23b):

(23) a. Mary's dance was unusual.
b. Mary's dancing was unusual.

I will propose an account of the distinction between the two ontological categories of actions and products (and mental events/illocutionary acts and attitudinal objects in particular) on the basis of the notion of a *trope*, that is, a particularized property (or to use older terms, an 'accident' or a 'mode').[16] I take tropes to be a category of particulars of its own, besides the category of individuals and perhaps of universals. Tropes are instances of properties at a particular time, whereas events are changes in individuals from having one property at a time to having other properties at subsequent times. I propose that both actions and products be conceived in terms of the notion of a trope.

Let us start with the ontology of events. There are three possibilities of conceiving of events in terms of tropes. 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 incompatible properties P and Q and subsequent times t and t'. The problem with this conception is that events cannot be arguments of plural predicates, as would it be expected on this account. Thus a plural predicate such as *were equally unexpected* (with an 'internal reading') is applicable to a collection of tropes as in (24a), but not to an event as in (24b):

(24) 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 of the sort 'being P at t and Q at t'', for P and Q incompatible properties and times t and t' with t' subsequent to t. The problem with this conception 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 seen in the contrast

[16] See Williams (1953) as the classic modern reference on tropes.

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:

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

A third option is one that takes events to be instantiations of temporal transition relations among tropes. Transitions naturally have the properties events have, as can be seen by using the very term *transition* itself:

(26) The transition of John's healthiness to John's illness was sudden / unexpected / happened very 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, incompatible 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 (sparse) property, as illustrated below, where *the same as* obviously expresses exact similarity among tropes:

(27) The color of the car is exactly the same as the color of the table.

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.[17]

What is required for the similarity of two events is that the tropes they involve 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 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 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. 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'. For any two such 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 for the two events. Obviously, on this account the time of occurrence is essential to an event (since a trope ontologically depends on its bearer).

With this account 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; but the question is, in what way? 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 intentional predication aiming at truth or more generally satisfaction. A particular instance of the multigrade attitudinal relation should have satisfaction conditions. This account also seems to get the readings of evaluative predicates right: evaluative predicates care about the attitudinal mode and not just the propositional constituents.

[17] 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.

But there are several problems for the account of attitudinal objects as relational tropes. First, it makes the wrong predictions about perceptual properties: perceptual properties predicated of an attitudinal object can target only the agent, never a propositional constituent. The agent and the propositional constituent, however, would be on a par on that account. 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 account 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 relational-trope account, and that is that it will treat all propositional constituents as actual objects in the world: bearers of tropes must be entities like any others. But propositional constituents may be concepts, entities of a sort that one might not want to admit as actual objects.

A better account of attitudinal objects in terms of the notion of a trope is one on which attitudinal objects are what I call *quasi-relational tropes*. Quasi-relational tropes are monadic tropes instantiating object-dependent properties based on relations. To give some examples not involving attitudes, whereas (28a) stands for a relational trope, (28b) and (28c) stand for quasi-relational tropes:

(28) a. the relation between John and Bill
b. John's relatedness to Bill
c. Bill's relatedness to John

Relations in general give rise to the two kinds of tropes, relational tropes and (possible various types of) quasi-relational tropes (and of course a mixture of both with three- or more place relations). The distinction between relational and quasi-relational tropes is particularly clear with psychological relations. Thus, there is a clear intuitive difference between (29a) and (29b):

(29) a. the love between John and Mary
b. John's love for Mary

Attitudinal objects, I propose, are quasi-relational tropes that are instantiations in an agent of complex properties of the sort λx[believe(x; LIKE, Mary, John)]. This straightforwardly accounts for the relevant properties of attitudinal objects. 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-directed on that account as well: the multigrade place of the attitudinal or illocutionary relation will guarantee the truth-directedness (or satisfaction-directedness) of the propositional constituents. Furthermore, propositional constituents on that account 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, the account can explain why the time of occurrence is only accidental to an attitudinal object. An attitudinal object as the instantiation of an attitudinal property need in no way be constituted by the time of that instantiation: it is individuated quite simply as the instantiation of a property, at whatever time the property may be instantiated, by the agent in question. In the case of events, by contrast, time was the bearer of the trope itself and thus an essential component.

The account of attitudinal objects can be carried over to physical products. Thus 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 $\lambda x[\exists t\, \exists t'(P^t(x)\ \&\ Q^t(x)\ \&\ t < t')]$, for incompatible properties P and P.

To summarize, the notion of a trope appears to allow for a clear conception of the distinction between attitudinal objects and events: attitudinal objects 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 if actions are instances of temporal transition properties in subsequent times, gestalt properties involving the interval as a whole can hardly play a role in them.

Formally, the denotations of terms for tropes and terms for kinds of tropes can be given as follows. *John's claim that* S will have the denotation in (30a), where 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 for the sake of

simplicity I take to be a function from worlds to sets of attitudinal objects. The function f_{kind} maps a property to such a function, as in (30b):[18]

(30) a. [*John's claim that* S]^w = f(John, λx[<x; C_1,..., C_n> $\in$ [*claim*]^w]),
where <C_1, ..., C_n> = [S]^w

b. [*the claim that* S]^w = f_{kind} (λx[<x; C_1,..., C_n> $\in$ [*claim*]^w]) = the function g from worlds to sets of attitudinal objects, such that for any world w,
f(w) = { e | $\exists$a $\in$ D(w) e = f(a, λx[<x; C_1,..., C_n> $\in$ [*claim*]^w])}

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:

(31) An attitudinal object of the form f(a, λx[<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. The content of a sentences was taken to be a sequence of propositional constituents <C_1,..., C_n >. Such a sequence would not have truth conditions inherently (they would have to be externally imposed); only the attitudinal objects relating the propositional constituents do. But a sentence with such a content can be given truth (or rather satisfaction) conditions derivatively, on the basis of the satisfaction conditions of the corresponding attitudinal object:

(32) P gives the truth conditions of a sentence S expressing the sequence <C_1, ..., C_n> at a world w and time t iff for any attitudinal object e, e = f(d; λx[<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 content <C_1, ..., C_n> at a world w, implies a sentence S' expressing the content <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

[18] This is not entirely satisfactory. For one thing, kinds of attitudinal objects inherit their properties from particular ones and it is not clear how a function can do that. For example, the kind 'the claim that S' is true in case some actual instance is.

objects e and e', e = f(d; λx[R(x, C_1, ..., C_n)]) and e' = f(d; λx[R(x, C'_1, ..., C'_m)]): for any world w', if e is true (satisfied) at w', then e' is true (satisfied) at w'.

I will later return to the neo-Russellian semantics of attitude reports, extending it to more complex cases. For the time being, I will focus on attitudinal objects as such.

5. Further applications of attitudinal objects

5.1. Inferences among attitudinal objects

Propositions stand in inferential relations to each other. Attitudinal objects reflect such relations to an extent, namely in the following way:

(33) Let p and q to be propositional contents (of some variety) such that p implies q. Then if an attitudinal object e whose content 'constitutes' p exists and an attitudinal object e' whose content 'constitutes' q exists, then if e is satisfied, e' is satisfied.

Thus inferential relations among propositions are reflected in corresponding attitudinal relations as long as the latter exist. Of course, the doxastic attitudinal objects of a possible omniscient agent will reflect the entire range of inferential relations among propositions.

5.2. Attitudinal objects and context

Attitudinal objects have a further important advantage in that they provide the 'natural' truth-conditionally completion for apparently truth-conditionally incomplete contents of propositional attitudes, contents that (as it has been argued) are not propositions, but properties. There are two cases that have particularly puzzled philosophers of language:
[1] sentences used to describe the objects of attitudes *de se* and
[2] sentences expressing the things temporal or location operators operate on.
The puzzle is that in both cases the sentence contents at the same time appear to provide objects that are truth bearers and thus could not be properties.

Following Lewis (1979), it has often been argued that attitudes *de se* are not attitudes toward a proposition, but rather toward a property, as in the analysis of (34a) in (34b):

(34) a. John thinks that he himself is a hero.

b. THINK(John; λx[hero(x)]))

The account is particularly meant to apply to infinitival clauses, as in (34c), which generally can only have an interpretation *de se*:

(34) c. John hopes [PRO to become a hero].

One major issue left open by Lewis' account is the question of the truth conditions of the contents of attitudes *de se*. Such contents appear to act as truth bearers in sentences such as the following:

(35) a. John thinks that he himself is a hero, which is true.
b. John believes something that is true, namely that he himself is a hero.
c. John hoped to become a hero. That in the end turned out to be true.

The contents of attitudes *de se*, to put it more appropriately, apparently *correspond* to objects that are truth bearers. But what kinds of objects could these be if they are not the contents of attitudes *de se*?

Attitudinal objects provide just the right answer to this question. Intuitively, attitudinal objects that correspond to 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 it is the self-ascription of the property that is part of what makes up the attitudinal object. It is because such a self-ascription may succeed or fail that the attitudinal object will come out as true of false (or satisfied or not satisfied). For attitudinal objects with properties as contents we thus have:

(36) 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, λx[R(x, P)]) is true (satisfied) at w iff $P^w(a)$.

Moreover, as we will see in the next section, attitudinal objects (or kinds of them) form the domain of pro-sentential special quantifiers and pronouns.

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.

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). But in any case, 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.

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, an attitude that would be 'de se' regarding the attitude's time or the agent's location. Such propositional attitudes then again correspond to truth-conditionally complete attitudinal objects. I will give only 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. Below what is ascribed in the attitude is taken to be simply a property of times P (let's say a property as expressed by *it is raining*, any more complex contents are set aside); the attitudinal object moreover will be a relational trope, involving an agent as well as a time as bearers:

(37) 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 $f(a, t; \lambda xt'[R(x, t'; P])$ is true (satisfied) at a world w iff $P^w(t)$.

The corresponding attitudinal objects are also intuitively truth-conditionally complete: for example, John's thought that Mary will like Bill, with the future temporal operator, clearly has truth conditions on its own.

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 instead objects that correspond to a propositional attitude as a whole: they are the products of propositional attitudes, as Twardovsky would say.

6. Attitudinal Objects and special quantifiers

6.1. Problems of substitution

The neo-Russellian analysis immediately accounts for a general problem that arises for the standard relational analysis of attitude reports, namely the problem that the *that*-clause in an attitude report 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 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:

(38) a. valid: <u>John believes / proved that S.</u>
John believes / proved the proposition that S.
b. valid: <u>John regrets that S.</u>
John regrets the fact that S.

(39) a. invalid: <u>John claimed that S.</u>
John claimed the proposition that S / the fact that S / the possibility that S.
b. invalid: <u>John knows that S.</u>
John knows the proposition that S / the fact that S / the possibility that S.
c. invalid: <u>John expect that S.</u>
John expect the proposition that S / the fact that S / the possibility that S.
d. invalid: <u>John imagined that Mary was alive.</u>
John imagined the proposition that S / the fact that S / the possibility that S.

The problem of substitution does not arise on the neo-Russellian analysis, because on that analysis *that*-clauses are in fact plural terms (standing for an ordered plurality of propositional constituents). They are not singular terms referring to single objects that are propositions.

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 (39c) and (39d).

Verbs that do allow for a replacement of a *that*-clause by a full NP (such as *believe* or *prove*) do so because they have a homonymous variant that has a two-place relation between agents and propositions (or facts or possibilities) as its meaning.

Special quantifiers like *something*, the pronoun *that*, and relative clauses with *what* do not give rise to the Substitution Problem. (40a, b, c) have only content-related readings:

(40) a. John claims / knows / fears something.
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. There are some verbs, such as *complain* and *remark*, which take *that*-clause complements, but do not accept special quantifiers:[19]

(41) 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 are particularly important when it comes to attitudinal objects: special quantifiers and special pronouns range over or stand for attitudinal objects or kinds of them, as we will now see.

6.2. Special quantifiers as quantifiers ranging over attitudinal objects

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 (2) at the beginning of the paper). However, special quantifiers, as I argued in author (2003a, b), are not quantifiers ranging over propositions when they occur in clausal position; rather they range over attitudinal objects or kinds of attitudinal objects. Moreover, they are not ordinary quantifiers, but nominalizing quantifiers, introducing ‘new’ entities into the semantic structure of sentences, just like (certain) nominalizations. Similarly for special pronouns. Let me briefly recall those arguments and the corresponding analyses.

[19] 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.

First of all, special quantifiers cannot be substitutional. I will just mention an empirical reason: Special quantifiers can relate to two or more syntactic positions that would require substituents of different syntactic categories:

(42) a. John imagined something I never thought about.
b. John promised everything I ever dreamed of (namely that S, that S', that S'', ...).

Special quantifiers in fact appear to range precisely over the kinds of entities that are attitudinal objects or kinds of attitudinal objects, and not propositions. First, evaluative predicates as restrictions of special quantifiers are understood as with attitudinal objects:

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

What *nice* in (43a) is predicated of could only be something of the sort ‘John’s remark that S’, not ‘the proposition that S’; similarly *very daring* in (43a) 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 (43c) is predicated of an imagination, not a proposition.

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

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

John’s claim, not a proposition made Mary upset, according to (44).

Finally, there are constraints on the sharing of ‘the objects of attitudes’, as seen in (45), constraints that parallel the constraints on identity statements about attitudinal objects, as in (46):

(45) 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.
(46) a. #John’s mention was Mary’s belief.
b. # John’s expectation is Mary’s belief.

c. # John's claim was Mary's belief.

But of course attitudinal objects do not form the arguments of attitude verbs; only the propositional constituents, given the neo-Russellian analysis, do.[20]

Special quantifiers as nominalizing quantifiers do not range over entities meant to be arguments of the predicate, but rather they introduce 'new' entities into the semantic structure of the sentence, on the basis of possible propositional constituents and the contribution of the verb. The formal semantics of special quantifiers in sentential position then 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 (47a) includes both the object position and the attitude verb, as indicated in (47b). Special pro-sentential quantifiers involve quantification over propositional constituents C_1, ..., C_n as well as attitudinal objects, as in the analysis of (47a) in (47c) on the basis of the logical form in (47b):

(47) a. John claimed something interesting.

b. something interesting$_i$ (John (claimed t_i))

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

(47b) 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 moreover the attitudinal object *x* is interesting'. On another reading, the nominalization function f in (47c) may be replaced by f_{kind}, so that *something* ranges over things of the sort *the claim that* S. The quantifier *something* thus involves the same semantic operations as the nominalization *claim* in *John's claim that* S or in *the claim that* S.

Free relative clauses like *What Mary claimed* involve nominalization too, generally for a kind of attitudinal object, as in (48a). (48b) can then be analysed as in (48c):

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

b. John claimed what Mary claimed.

[20] This is misunderstood in Rosefeldt (2006), Fn 26.

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

Also a special pronoun such as *that* can be treated as anaphoric to an attitudinal object x_i given by the context, again involving the same operation f or f_{kind}:[21]

(49) [*John believes that*$_i$] = $\exists C_1 ... C_n (x_i = f_{kind}(\lambda x' [<x', C_1, ..., C_n> \in [\textit{believe}]]) \ \&$
$<John; C_1, ..., C_n> \in [\textit{believe}])$

As was mentioned, the attitudinal object of a judgment or acceptance is the most general attitudinal object and as such a non-spatio-temporal part of any (or perhaps almost any) attitudinal object. An attitudinal object may of course have yet other attitudinal objects as non-spatio-temporal parts. This kind of part-whole structure of attitudinal objects is reflected in some uses of special quantifiers, namely in sentences that at first sight pose problems for the view that special quantifiers range over attitudinal objects (author 2003a, b):

(50) a. John finally said what Mary has always believed.
b. John has often suggested what Mary now claims, namely that Bill is a spy.
c. John demanded what Mary was going to request, that the door be opened.
d. John hopes what Mary firmly believes, namely that he will recover.

The acceptability of such sentences can be linked to the acceptability of the following identity statements:

(51) a. John's claim is Mary's belief.
b. John's suggestion is Mary's claim.
c. John's demand was Mary's request.
d. John's hope is Mary's belief.

---

[21] Evidence that *that* can easily refer to a kind of attitudinal objects is the following example, pointed out to me by Stephen Schiffer:

(1) John believes that Mary won the race. That is true, even though John does not actually believe it.

That in (1) could not stand for a particular attitudinal object (John's belief that Mary won the race), but rather must stand for a kind that may even lack actual instances.

This means that the sentences in (50) claim in fact the sharing of a more general (kind of) attitudinal object which is part of the attitudinal object described by each one of the two clauses, such as a positive judgment in (50a). Thus, for a sentence like (50a) we will have roughly the analysis below, where BEL is the relation that holds between an acceptance and an agent in case the acceptance is sustained in the belief-way by the agent:

(53) $\exists x \exists C_1, ..., C_n$ (<John; $C_1, ..., C_n$ > $\in$ [*said*] & $f_{kind}(\lambda y[ACCEPT(y; C_1, ..., C_n)])$ =
$\iota x[\exists C'_1, ..., C'_n(x = f_{kind}(\lambda y[ACCEPT(y; C'_1, ..., C'_n)])$ & <x, Mary> $\in$ [*believe*])])

On this analysis, it is allowed that not all of the content of an attitude verb makes up the attitudinal relation in question; part of it may just play the role of a modifier of such a relation; it is then only the relation, not the modifier, that will be constitutive of the corresponding attitudinal object.[22] The contents of the nominalizations in (51) similarly will be divided into characterizing and constitutive parts regarding the attitudinal object.

The flexibility that special quantifiers display with respect to the kind of attitudinal object they introduce is also reflected in the versatility of the locution 'what is said' (Stojanovic 2008). Thus (53a) can be continued by (53b), (53c), or (53d):

(53) a. John said that he likes Bill.
b. Joe said the same thing (i.e. that he himself likes Bill).
c. Joe said the same thing about Sue (i.e. that Sue likes Bill).
d. Joe said the same thing about Sue and Max (i.e. that Sue likes Max).

In the case of (53d), the attitudinal object that *the same thing* stands for should be a kind of attitudinal object whose instances are attitudinal objects based on relations of the sort $\lambda xyz[claim(x; LIKE, y, z)]$, that is, attitudinal objects like 'John's claim that Sue likes Bill, and 'Joe's claim that Sue likes Max'.

7. Refinements of the Neo-Russellian semantics attitude reports

I have presented the neo-Russellian analysis only for very simple subject-predicate sentences. I will now indicate how the analysis can be extended to some more complex sentences, such

[22] For more discussion of the analysis of such cases see author (2003b).

as sentences with multiple embeddings of *that*-clauses, with connectives, and with modal operators. I will leave the treatment of quantifiers and functional terms for another occasion.

7.1. multiple embeddings of sentences

Attitude verbs are multigrade in their second place, which means that they can take an unlimited number of arguments corresponding to the propositional constituents given by a *that*-clause. But *that*-clauses can themselves contain *that*-clauses:

(54) John thinks that Mary thinks that Bill is happy.

The embedded occurrence of *think* is again multigrade, but this means that matrix *think* takes in its second place the multigrade concept of *think*, followed by the concept of happiness and Bill. This requires reflecting the embedded structure of the sentence in the multigrade place of *think*: one position in that place (the third) is itself multigrade, to be filled in by an n-place concept and n arguments, and some of those arguments may themselves consist of a sequence of a concept and its arguments, and so on. Multiple nestings of multigrade argument positions are not a problem formally. Thus, Taylor/Hazen (1992) give an account using multiple indexing of entities: each index corresponds to the position within a multigrade place, for subsequently deeper nested places (or 'positions'). From the point of view of compositional semantics, this requires multiple indexing of the relevant constituents of a *that*-clause. The indices will be determined on the basis of the depth of embedding of the *that*-clause and the order, within the multigrade place, of the relevant argument place or position. Thus, in (54), *Mary* will bear the index <2, 2>, and *Bill* the index <2, 2, 2>.[23]

7.2. sentence connectives and sentence operators

[23] A formal way of assigning such indices is to assign an embedded *that*-clause itself the index matching the argument place of the embedding verb and then to assign the predicate and its complement that same index; subsequently the same procedure applies to the second index of a deeper embedded *that*-clause.

It is not obvious how the neo-Russellian account applies to connectives, such as *and* and *or* when coordinating sentences, as well as *not*; in fact this is a problem that troubled Russell himself and he did not present fully developed proposals (Griffin 1985).[24]

Let us look at *or* first (*and* can obviously treated similarly). On the present account, attitudinal relations are taken to be intentional predication relations. But it is not clear in what sense connectives can be taken to be predicates. Moreover, unlike with subject-predicate sentences, the embedding attitude verb does not apply to the propositional constituents of the clauses that are coordinated. Let us look at (55):

(55) John believes that Mary won the race or Sue won it.

Obviously, in order for (55) to be true, John need not predicate in the belief mode *won the race* of Mary or *won the race* of Sue (since he need not be sure about either one). No 'doxastic predication' takes place in the evaluation of the disjuncts. Instead only *or* will be the target of the attitudinal mode of belief.

There are three options to account for coordination. The first option is to take the two disjuncts to in fact stand for attitudinal objects and thus truth bearers. The attitudinal objects will have to be the most general attitudinal objects, which means attitudinal objects of acceptance ('judgments'). *Or* in (55) then will be a two-place predicate of acceptances – or better (because *or* can coordinate any number of clauses) a multigrade predicate of attitudinal objects of acceptance. *Or* holds of *n* such attitudinal objects just in case one of them is true. In fact, *or* must hold of kinds of attitudinal objects, since the agent will not be available in the semantic evaluation of a *that*-clause. Thus, if *or* coordinates two sentences, we would have (56a), with the meaning of *or* given in (56b):

(56) a. For sentences S and S' such that $[S] = \langle C_1, ..., C_n \rangle$ and $[S'] = \langle C'_1, ..., C'_m \rangle$

$[\textit{that}\ S\ \textit{or}\ S'] = \langle [\textit{or}], e, e' \rangle$, where $e = f_{kind}(\lambda x[ACCEPT(x; C_1, ..., C_n)])$ and

$e' = f_{kind}(\lambda x[ACCEPT(x, C'_1, ..., C'_m)])$

b. For kinds of attitudinal objects e and e', $\langle e, e' \rangle \in [\textit{or}]$ iff e is true or e' is true.

[24] The problem was a serious one for Russell since he allowed only universals and objects as propositional constituents, not concepts or properties of higher type (Griffin 1985).

One problem with this account is that it is not clear how the conjunct clauses could denote (kinds of) attitudinal objects. Sentences as such do not denote (kinds of) attitudinal objects, but only specify sequences of propositional constituents. Another problem is that the account does not seem to get the intuitions right of what disjunctions are about: 'That Mary won the race or Sue won it' intuitively is just about Mary, Sue, and the race, not about the acceptance that Mary won the race and the acceptance that Sue won the race.

These problems are avoided if *or* is considered a multigrade 'predicate' which is multigrade in all of its places (allowing for an unlimited number of propositional constituents as provided by the disjuncts). The places of *or* will be occupied by the various propositional constituents given by the disjuncts, as below, for a two-disjunct case:

(57) [*that* S *or* S'] = <[*or*]; C_1, ..., C_n; C'_1, ..., C'_m> for [S] = <C_1, ..., C_n> and [S'] = <C'_1, ..., C'_m>

This second account still faces one problem, namely how does it enable the propositional constituents in the multigrade places of *or* to be evaluated as true or false when evaluating the overall attitudinal object with the disjunctive content as true or false (or satisfied / not satisfied)? Only an attitudinal relation can ensure the truth evaluation of the propositional constituents, but not *or* itself. What is required is adding conditions on the concept expressed by *or*, namely conditions on attitudinal objects that are objects of acceptance of the propositional contents given by the disjuncts. I propose then that the concept expressed by *or* is a concept OR which imposes conditions on the truth (or satisfaction) of the overall attitudinal object, to the effect that the overall attitudinal object is true (or satisfied) just in case one of the acceptances of a disjunct is true. (58) is again formulated for the two-disjunct case:

(58) For an attitudinal relation R and an agent a, $f(a; \lambda x[R(x; OR, C_1, \ldots, C_n, C'_1, \ldots, C'_m)])$ is true iff $f(a, \lambda x[ACCEPT(x, C_1, \ldots, C_n)])$ is true or $f(a, \lambda x[ACCEPT(x, C_1, \ldots, C_n)])$ is true.

This account assumes that the agent 'accepts', at least implicitly, the disjuncts, but it does not make acceptances propositional constituents. The account makes use of what one may call a 'syncategorematic concept' OR, a concept whose semantic contribution is exhausted by

conditions it imposes on the truth (or satisfaction) of the overall attitudinal object, the 'product' of the attitude whose content involves 'or'.

Also other connectives, such as negation, can be treated that way. If the content of a negated sentence is an in (59a), then the conditions on the truth of a corresponding attitudinal object are as in (59b):

(59) a. [*not* S] = <NOT, C_1, ..., C_n> for [S] = <C_1, ..., C_n>

b. For an attitudinal relation R and an agent a, f(a; λx[R(x; NOT, C_1, ..., C_n)]) is true iff f(a, λx[ACCEPT(x; C_1, ..., C_n)]) is false.

The account also carries over to expressions that can be considered sentential operators, such as modal and temporal operators. Let us look at (60):

(60) John must work.

Let us take *must* to have the standard meaning of a modal operator shifting the world of evaluation. The challenge we of course face is that the embedded infinitival sentence does not denote a proposition. The first option then is to take the sentence the modal operates on to specify an attitudinal object of acceptance, so that *must* would express a property MUST that holds of an acceptance e just in case e is true at an accessible world w. This option faces the same problems as we saw with disjunction, though: a sentence by itself cannot denote an acceptance and (60) is not about an acceptance. The second option is that *must* is a multigrade predicate taking as many arguments as are given as propositional constituents by the sentence it operates on. Again this raises the difficulty that there is nothing intentional about *must* that could lead to an evaluation of the propositional constituents as true or false (on at least its reading of metaphysical or deontic necessity). Thus, *must* better denotes a concept that will have the role of shifting the index of evaluation of the 'acceptance' of the propositional content of the scope of *must*, in the evaluation of the truth value of the overall attitudinal object:

(61) For an attitudinal relation R, an agent a, and a world w_o,

f(a; λx[R(x; MUST, C_1, …, C_n)]) is true at w_o iff for all w, w R w_o,

f(a; λx[ACCEPT(x; C_1, …, C_n)]) is true at w.

Obviously, this requires an attitudinal object to be able to be true at worlds in which it does not exist.

7.3. other clausal predicates

Attitudinal objects replace propositions for the various roles for which they have been invoked. Propositions play a role only in so far as the propositional constituents form the arguments of a multigrade place of an attitudinal predicate. This allows a straightforward account of attitude reports, but it is less obvious how other clausal predicates can be treated.

One clausal predicate, which has played an important role in philosophical discussions, is the truth predicate. These are some key facts about the truth predicate in natural language: First, the *that*-clause in the subject position of a sentence with the predicate *true* can (as expected) be replaced by a special quantifier or pronoun:

(62) a. That S is true.
b. Something / That is true.

Second, the predicate *true* allows *that*-clauses in subject position as well as explicit proposition-referring terms:

(63) a. That S is true.
b. The proposition that S is true.

However, the same does not hold for truth-related predicates such *is possible* or *is likely*. (64a) and (64b) are not equivalent:

(64) a. That S is possible / is likely.
b. The proposition that S is possible / is likely.

Is possible and *is likely* with *that*-clauses mean ‘is possibly true’ and ‘is likely to be true’, but with referential terms they mean ‘possibly exists’ and ‘is likely to exist’

The previous account of connectives is plausible for truth-related predicates as well: *true* and *possible* would be multigrade predicates that express concepts which impose conditions

on the truth of the overall attitudinal object. In the case of *true*, the condition on the overall attitudinal object would be that it is true in case the acceptance of the content of the clausal subject is true; in the case of *possible*, the overall attitudinal object would be true in case the acceptance of the content of the subject clause is true at some accessible world. These attitudinal objects of acceptance will also make up the semantic values of special quantifiers and pronouns in place of a *that*-clause.[25]

7.4. conjoined *that*-clauses and plural quantifiers

It is well-known that a conjunction of *that*-clauses as below is not equivalent to a conjoined sentence preceded by *that*:

(65) a. John is happy that Mary started the project and that she finished it.
b. John is happy that Mary started the project and she finished it.

Unlike a *that*-clause of the form *that* S *and* S', a conjunction of *that*-clauses *that* S *and that* S' behaves in fact like a plural term, going together with a distributive interpretation of certain predicate as in (65a) and with typical plural predicates, as below in (66a) and (67a):

(66) a. John is equally happy that May started the project and that she finished it.
b. ?? John is equally happy that Mary started the project and she finished it.
(67) a. That it is raining and that the sun is shining contradict each other.
b. * That it is raining and the sun is shining contradict each other.

If *that*-clauses are plural terms standing for ordered pluralities of propositional constituents, then, given the way the predicates in (66a) and (67a) are understood, conjunctions of *that*-clauses will have to stand for higher-level pluralities. The problem then is the very same as arises for other cases of higher-level plurality, such as (68):

[25] This account need not apply to all clausal predicates. It is plausible that *that*-clauses in the subject position of a sentence may serve to characterize facts, in particular in the case of emotive predicates:

(1) That S is surprising / unexpected / astonishing.

In general with such predicates the *that*-clause is easily replaceable by an explicit fact-description of the sort *the fact that* S. I will leave an account of facts compatible with the neo-Russellian analysis to another occasion.

(68) The X and the Y are equally cooperative.

On the relevant reading, the cooperation among the X s is compared to the cooperation among the Ys. If plural terms refer to collections of some sort, then the relevant reading requires the use of second-level collections. On an alternative view on which plurals involves plural reference (reference to several individuals at once), such cases are more difficult to handle, without reifying pluralities (see Rayo 2006 for a proposal within plural logic). In any case, the problem presented by conjoined *that*-clauses is part of the more general problem of higher-level pluralities, except that *that*-clauses make reference to ordered pluralities.

8. Conclusion

Attitudinal objects, I have argued, should replace propositions for the various roles for which propositions have been postulated. Attitudinal objects have a range of properties that can be read off our intuitions about the reference of canonical terms referring to them, terms of the sort *John's thought that* S: While attitudinal objects have essential truth conditions or more generally satisfaction conditions, they also qualify as concrete objects, dependent on the attitude of a particular agent; moreover, they form natural similarity classes on the basis of a shared content and a shared attitudinal mode. We equally naturally make reference to *kinds* of attitudinal objects, with canonical kind terms such as *the thought that* S, entities which different agents can share. Both attitudinal objects and kinds of attitudinal objects also 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 does not just account for a range of fundamental philosophical problems with propositions, they also underlie the very intuitions, as they have to be put 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 before 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 and thus have escaped a proper ontological characterization. Attitudinal objects, I would say, can be recognized as a separate ontological

category and characterized properly only on the basis of the notion of a trope. The notion of a trope allows distinguishing attitudinal objects clearly from events, entities unsuitable for the roles that propositions were supposed to play. 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 events, and more generally actions and ‘products’.

References

author (2003a)

author (2003b)

Austin, J.L. (1952/3): ‘How to talk’. *Proceedings of the Aristotelian Society*, reprinted in J. L. Austin: *Collected Papers*. Clarendon Press, Oxford, 1961.

---------- (1965): *How to do things with words*. Oxford UP, Oxford.

Bach, K. (1997): 'Do Belief Reports Report Beliefs?'. *Pacific Philosophical Quarterly* 78, 215-241.

Bealer, G. (1982): *Quality and Concept*. Clarendon Press, Oxford.

Benacerraf, P. (1965): ‘What Numbers could not be’. *Philosophical Review* 74, 47-73.

Cresswell, M. (1985): *Structured Meanings*. Bradford, Cambridge (Mass.).

Fiengo, R. (2009): ‘Austin’s Cube’. Ms CUNY.

Fine, K. (1982): 'Acts, Events and Things'. In W. Leinfellner et al. (eds.): *Language and Ontology*. Proceedings of the Eighth Wittgenstein Symposium. Hoelder-Pichler-Tempsky, Vienna.

---------- (2000): ‘Neutral Relations’. *The Philosophical Review* 109, 1-33.

Frege, G. (1918/9): ‘Thoughts’. In *Collected Papers on Mathematics, Logic, and Philosophy*, ed. By B. McGuinness. Blackwell, Oxford, 1984, 351-372.

Gaskin, R. (2008): *The Unity of Propositions*. Oxford UP, Oxford.

Griffin, N. (1985): ‘Russell’s Multiple Relations Theory’. *Philosophical Studies* 47, 213-247.

Hanks, P. W. (2007a): ‘The Content-Force Distinction’. *Philosophical Studies* 134, 141-164.

---------- (2007b): ‘How Wittgenstein defeated Russell’s Multiple Relations Theory’. *Synthese* 154, 121-146.

Hanna, R. (2004): ‘Kant’s Theory of Judgment’. *Stanford Encyclopedia of Philosophy*,online.

Iacona, A. (2003): ‘Are there Propositions?’. *Erkenntnis* 58, 325-351

King, J. (2002): ‘Designating Propositions’. *Philosophical Review* 111, 341-471.

--------- (2007): *The Nature and Structure of Content*. Oxford UP, Oxford.

Moore, J. G. (1999): ‘Propositions, Numbers, and the Problem of Arbitrary Identification’. *Synthese* 120, 229-263.

Lewis, D. (1979): 'Attitudes *de dicto* and *de se*'. *Philosophical Review* 88.

---------- (1980): ‘Index, Content, and Context’. In S. Kanger / O. Ohman (eds.): *Philosophy and Grammar*. Reidel, Dordrecht, 79-100.

Prior, A. (1971): *Objects of Thought*. Clarendon Press, Oxford.

Rayo, A. (2006): ‘Beyond Plurals’. In A. Rayo /G. Uzquiano (eds.): *Absolute Generality*. MIT Press, 220-254.

Rosefeldt, T. (2006): ‘‘That’-Clauses and Non-Nominal Quantification’. *Philosophical Studies* 133, 301-333.

Russell, B. (1912): *The Problems of Philosophy*, London.

---------- (1913): *Theory of Knowledge*. The 1913 manuscript. Edited by E. Ramsden Eames, Unwin Hyman Ltd, reprinted in 1993 by Routledge, London.

---------- (1918): 'The philosophy of Logical Atomism'. In B. Russell, *Logic and Knowledge*. Routledge, London.

Sainsbury, R. M. (1979): *Russell*. Routledge and Kegan Paul, London.

Schiffer, S. (2003): *The Things we Mean*. Clarendon Press, Oxford.

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

Soames, S. (1987): ‘Direct Reference, Propositional Attitudes, and Semantic Content’. *Philosophical Topics* 15, 47-87.

Stalnaker, R. (1984): *Inquiry*. MIT Press, Cambridge.

Stojanovic, I. (2008): ‘*De Se* Assertion’. Ms Institut Jean Nicod, Paris.

Taylor, B. / A. P. Hazen (1992): ‘Flexibly Structured Predication’. *Logique et Analyse* 139-40, 375-93.

Thomason, R. (1980): 'A Model Theory for Propositional Attitudes'. *Linguistics and Philosophy* 4.1., 47-71.

Twardowski, K. (1912) : ‘Actions and Products. Some Remarks the Borderline of Psychology, Grammar, and Logic’. In Brandl and Wolenski (eds.): *Kazimierz Twardowski. On Actions, Products, and Other Topics in the Philosophy*. Rodopi, Amsterdam and Atlanta, 1999.

Williams, D. C. (1953): 'On the Elements of Being'. *Review of Metaphysics* 7, 3-18.