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Two kinds of first-person-oriented content

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Abstract In this paper, I will argue that two kinds of first-person-oriented content are distinguished in more ways than usually thought and I propose an account that will shed new light on the distinction. The first kind consists of contents of attitudes *de se* (in a broad sense); the second kind consists of contents that give rise to intuitions of relative truth. I will present new data concerning the two kinds of first-person-oriented content, together with a novel account of propositional content in general, namely based on the notion of an attitudinal object. That notion solves two major problems with Lewis's account of contents of attitudes *de se* and clarifies the difference between contents of attitudes *de se* and contents that give rise to intuitions of relative truth. I will propose an analysis of contents of the second kind in terms of what I call first-person-based genericity, a form of genericity most explicitly expressed by sentences with generic *one*. I show how the overall account explains the particular semantic properties of sentences giving rise to intuitions of relative truth that distinguish them from sentences with expressions interpreted *de se*. I will start by introducing Lewis's account of attitudes *de se* and the problems that go along with that account. Introducing the notion of an attitudinal object, I will extend the account by an account of the truth conditions of the content of attitudes *de se*. I then discuss the second kind of first-person-oriented content, which is associated with intuitions of relative truth, and give an account of such contents on the basis of an analysis of generic *one*. Again making use of attitudinal objects, I will make clear what exactly distinguishes those contents from first-person-oriented contents of the first sort.

Keywords *De se* · Relative truth · Propositional attitudes

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1 *De se* contents

Let us start with a typical report of an attitude *de se* with controlled PRO, as below:

(1) a. John_i expects PRO_i to win.

It is generally agreed that, for propositional attitudes *de se*, neither a mode of presentation nor in fact the agent's actual self needs to be part of the propositional content expressed. These requirements are captured by the account of Lewis (1979) of attitudes *de se* as self-ascriptions of properties, as in the analysis of (1a) below[1]:

(1) b. expect(John, λx[win(x)])

De se-interpreted pronouns belong to a larger class of expressions, which I will call *de se* expressions and which I will come to shortly. It includes *local*, *left*, *right*, and *soon*.

One important property that sentences with *de se*-interpreted pronouns exhibit is *sharing*. By sharing I mean the intuition that two agents of attitudes *de se* with contents expressible by the same sentence share the content of their attitude, an intuition manifested by the following type of inference:

(2) a. John expects to win.
Bill expects to win
John and Bill expect the same thing.

Crucially, the shared content need not be denoted by the expression *the same thing*, but may also be expressed by *the same belief*, *the same expectation*, etc.:

(2) b. John expects to win.
Bill expects to win.
John and Bill have the same expectation.

Sharing also holds for sentences with the emphatic pronoun *he himself* rather than controlled PRO:

(3) John believes that he himself is a hero.
Bill believes that he himself is a hero.
John and Bill believe the same thing/have the same belief.

However, sharing is not obligatory for pronouns interpreted *de se*. While the inference in (4a) is clearly valid, the same inference with (4b) or (4c) as conclusion is valid too:

(4) a. John thinks that he is the winner.
Bill thinks he is the winner.
John and Bill think the same thing.
b. John and Bill think different things.
c. John and Bill have different thoughts.

Thus, *de se* expressions exhibit *optional sharing*.

[1] See also Chierchia (1990).

Lewis's account obviously explains sharing, if the property that, on his view, the complement clause expresses is what *the same thing, the same belief*, or *the same expectation* stand for. However, Lewis's account does not provide the means for accounting for the optionality of sharing.

There are a range of other expressions that are *de se* in a relevant sense and exhibit optional sharing. *Right*, *left*, *soon*, and *recently* are of this sort:

(5) a. John thinks that the door is to the right.
Bill thinks that the door is to the right.
John and Bill think the same thing.
b. John thinks that the door is to the right.
Bill thinks that the door is to the right.
John and Bill think different things.

It is easy to see that *right*, *left*, *soon*, and *recently* relate to the first person or the time of the attitude in question in a *de se* way.

There are in fact also expressions that are not *de se*-interpreted pronouns yet behave in the same way as *de se* expressions. These are expressions like *another time*, *a second time*, or *again* when used in a way in which they relate to elements in the mental state of an agent:

(6) John believes that he won in 2006.
Mary believes that she won in 2005.
John and Mary hope to win another time/a second time/again.
John and Mary hope for the same thing/have the same hope.

Even though such presuppositional expressions are generally held to be anaphoric to some element in a mental representation, the identity of the antecedent element does not bear on the identity of the content. However, just as *de se* expressions such as *soon* relate not to the agent herself but to the time of the attitude, expressions such as *another time*, *a second time*, or *again* relate to an element in a mental representation in a *de se* way.

Besides not accounting for the optionality of sharing, Lewis's account is deficient in another respect: it must be supplemented by a specification of the truth conditions of propositional contents of attitudes *de se*.[2] Properties as contents of attitudes are truth-conditionally incomplete. However, there are clear intuitions that the content of an attitude *de se* has its own truth conditions. If John believes that he himself is the winner, then what he believes is true or false. Moreover, attitudes *de se* that are expectations have fulfillment conditions. If John expects to be the winner, then his expectation is fulfilled just in case he turns out to be in fact the winner.

Moreover, if a content of an attitude or an assertion *de se* is accepted or rejected, then it is again a truth-conditionally complete object that is accepted or rejected. Thus, if John says that he himself is the winner and Joe accepts John's assertion, then Joe will accept that John is the winner, not that he, Joe, is the winner. Moreover, if Joe agrees with John's belief that he (himself) is the winner, then Joe agrees that he, John, is the winner, not that he, Joe, is the winner.

[2] See also Stalnaker (1981) on this point.

Truth-conditionally complete objects are also what propositional anaphors make reference to. Thus, if John believes that he himself is the winner and Joe believes that too, then Joe believes that John is the winner, not that he, Joe, is the winner.

Lewis's account of attitudes *de se* thus needs to be supplemented by an explanation of the optionality of sharing, by an account of the truth conditions or fulfillment conditions of attitudes *de se*, and finally by an explanation of why propositional anaphors relating to a *de se* content stand for truth-conditionally complete objects and why accepting a *de se* content means not self-applying a property but accepting a truth-conditionally complete content in which the property is predicated of the other agent.

2 Attitudinal objects and the content of attitudes *de se*

2.1 Attitudinal objects

What could the truth-conditionally complete object be, namely the object one makes reference to with *what John believes*? I propose that it is what I call an *attitudinal object* (Moltmann 2003a,b). Attitudinal objects are entities like John's belief that S, Mary's expectation that S, John's hope that S, etc. Attitudinal objects are in fact just the kinds of things one makes reference to with NPs whose head is a nominalized attitude verb, NPs of the form "John's belief that S" or "John's expectation that S." Before I come to what attitudinal objects are exactly, let us focus on their intuitive properties. The intuitive properties of attitudinal objects are just the kinds of properties expressed by predicates that are true of the referents of the corresponding nominalizations.

Attitudinal objects first of all are concrete objects. They are causally efficacious and have a temporal duration. John's belief that S may cause astonishment and may not last very long. Moreover, attitudinal objects are agent-specific. John's belief that S is particular to John. Finally, attitudinal objects involve what I call a particular *attitudinal mode*. Thus, John's belief that S is not identical to John's hope that S, and John's thought that S is not identical to John's expectation that S. John's belief involves the attitudinal mode of believing, John's hope that S the attitudinal mode of hoping, etc. With these characteristics, attitudinal objects are like mental events or states. However, attitudinal objects are not events. Unlike events, attitudinal objects have truth conditions: John's belief that S may be true or false, whereas John's believing is not; John's expectation that S may perhaps not be true or false, but it will be fulfilled or not. Attitudinal objects furthermore enter different similarity relations than events or states. John's belief that Mary likes Bill is "the same as" Joe's belief that Mary likes Bill. *The same as* here should not be taken as expressing identity, but close similarity, just as in the case of *John's car is the same as Mary's* or *John's ability is the same as Mary's*. However, John's hope that Mary likes Bill cannot be the same as Joe's thought that Mary likes Bill. Thus, roughly, attitudinal objects with the same content involving the same attitudinal mode are we can roughly say very similar.

Ontologically, attitudinal objects can be conceived as tropes, particularized properties, of a certain sort, namely as instantiations of properties like believing that S, in

an agent. Tropes are concrete as long as their bearers are concrete, and two tropes are similar if they instantiate the same property; they are exactly similar if they instantiate the same "sparse" or "natural" property. If attitudinal objects are instantiations in an agent of properties like believing that S, then attitudinal objects will be concrete (as their bearer, the agent, is concrete), and they will enter the right similarity relations: John's belief that S and Joe's belief S are "the same", because they instantiate the same property "believing that S."

How should an "attitudinal property," such as believing that S, be construed? One option is to take it to be the property of standing in an attitudinal relation to a proposition or property. Another option is not to make use of propositions, but rather only of propositional constituents and multigrade attitudinal relations, as on Russell's (1913) multiple relations analysis of attitudes. While I favor the second option for reasons given in Moltmann (2003a,b), a discussion of the two options should not concern us here. For the relevant cases of attitudinal objects corresponding to attitudes *de se*, I will (for simplicity) assume that the attitudinal property is one of standing in an attitudinal relation to a property. Thus, the form of an attitudinal object corresponding to an attitude *de se* is as in (7), where a is an agent, B an attitudinal relation, P a property representing the *de se* content, and f a function mapping a property and an object to the instantiation of the property in the object:

(7) f(a, λx[B(x, P])

Attitudinal objects have a propositional content, but what distinguishes them from propositional contents construed as properties is that attitudinal objects are always truth-conditionally complete. Thus, John's belief that he himself is the winner is intuitively either true or false, and it is true just in case John, not anyone else, is the winner. Thus for attitudinal objects that correspond to attitudes *de se*, it is always the agent of which the property making up the content is to be predicated. Other attitudinal objects, such as John's expectation to win, do not have truth conditions, but corresponding fulfillment conditions.

The same arguments that motivated Lewis's account of the content of attitudes *de se* apply to the content of attitudinal objects; that is, there are the same kinds of reasons to take the content of the corresponding attitudinal objects to be a property. Nonetheless the attitudinal object itself is truth-conditionally complete. The truth conditions of an attitudinal object of the form in (7) will then be as in (8):

(8) f(a, λx[B(x, P]) is true iff P(a)

Attitudinal objects will also be suitable semantic values of propositional anaphors and of descriptions like *what John believes* (Moltmann 2003a,b).

Furthermore, attitudinal objects are suitable entities in the case of an acceptance of an assertion. Thus, Joe's assertion that he himself is a hero aims at making the addressee accept that Joe is a hero, not that the addressee is a hero. That is, it aims at making the addressee accept the attitudinal object that is "the speaker's assertion of PRO being a hero."

Attitudinal objects as truth-conditionally complete objects have another important motivation. They resolve a conflict pointed out by Lewis (1980) for sentential operators.

Lewis (1980) argued that the roles of objects of propositional attitudes and of objects that temporal and location operators operate on cannot be fulfilled by one and the same thing, namely propositions. As objects of attitudes they must be truth-conditionally complete, but the things temporal and spatial operators operate on are not. There is a debate regarding 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). However, the distinction between attitudinal objects and sentence contents 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 or location. Such properties would also be ascribed to the agent's own time or location in a propositional attitude, an attitude that is "*de se*" about the agent's time and location, as in (9b) for (9a):

(9) a. John thought that Mary would like Bill.
b. $\lambda t[\exists t'(t < t' \ \& \ [Mary\ like\ Bill]^{t'} = 1)]$

But then we get a corresponding attitudinal object that is truth-conditionally complete: John's thought described in (9a), John's thought that Mary will like Bill, is truth-conditionally complete. This attitudinal object is not the object of the attitude, but it is an entity that corresponds to the attitude as a whole. The attitudinal object in this case is more complex than an ordinary *de se* report. It requires a time as an additional component. The attitudinal object in this case is of roughly the sort f(a, i, P), where P is predicated of the time i, and a is an agent.

2.2 Kinds of attitudinal objects

If attitudinal objects are the semantic values of propositional anaphors, how do they allow for sharing, as illustrated in (2) or (3)? There is an entity, closely related to attitudinal objects, that is a suitable semantic value of *the same thing* in the conclusions of (2) and (3), and that is an entity of the sort "the expectation to become the winner" or "the thought of being the winner." This entity does not include a particular agent, but can be shared by different agents, as in *John and Bill have the same expectation, namely the expectation of becoming the winner* or *John and Bill have the same thought, namely the thought of being the winner*. This entity is best considered a *kind* of attitudinal object, a universal whose instances are attitudinal objects of the sort "John's expectation to become the winner" or "John's thought that he is the winner" (Moltmann 2003a,b).

Other *de se* expressions can be treated in the same way. While *the museum is to the left* expresses a mere property, *the same thing* in (5a) takes as semantic value "the belief that the museum is to the left." By contrast, propositional anaphors like *that* take entities of the sort "John's belief that the museum is to the left" as values.

Two questions are still to be answered. The first one is, why is only one "reading" available for propositional anaphora and for the acceptance of assertions? That is, why do propositional anaphora not allow for a reading on which they stand for the kind and why could the acceptance of an assertion not be the acceptance of the corresponding kind? In both cases one would expect that, given a suitable instance of the kind,

the content could be self-applied by the relevant agent. An important observation for an explanation of this restriction is that overt terms standing for kinds of attitudinal objects would not be acceptable in those contexts either, for example, not with the predicate *is true*:

(10) a. John believes to be the winner.
b. * The belief to be the winner is true.
c. John's belief to be the winner is true.

This means that propositional anaphora, at least in the contexts discussed, cannot take kinds of attitudinal objects as values for independent reasons, that is, not because such anaphora would be specifically disallowed to take kinds of attitudinal objects.

We also note the unacceptability of explicit terms referring to kinds of attitudinal objects with acceptance:

(11) a. John claims to be the winner.
b. * Bill accepted the claim to be the winner. [as a reaction to John's claim that he (John) is the winner]
c. Bill accepted John's claim to be the winner.

That is, the attitude of acceptance does not apply to kinds of attitudinal objects if the instances of the kind do not have the same truth conditions. Note that the acceptance of attitudinal objects is possible if the instances all have the same truth conditions:

(12) John accepted the claim that Mary is the winner.

A further question is, why sharing is only optional with *de se* contents. Given the nature of attitudinal objects, this could not be because in (2), for example, John's expectation to win and Bill's expectation to win are numerically distinct. *The same thing* and *different things* are sensitive not to numerical identity or difference of attitudinal objects but to qualitative identity or difference. Thus, the inference to *John and Mary believe different things* would not be possible either with John's belief that Bill is happy and Mary's belief that Bill is happy, as in (13a), even though John's belief that S and Mary's belief that S are numerically distinct; and this also holds for the conclusion with *different beliefs* in (13b):

(13) a. John believes that Bill is happy.
Mary believes that Bill is happy.
John and Mary believe different things.
b. John and Mary have different beliefs.

Attitudinal objects with the same content could not count as different things. Thus, the reason why sharing is optional must be other than the mere distinctness of attitudinal objects with different agents. The reason why the inference to *different things* is possible, it appears, is that there are attitudinal objects closely related to the ones of the attitude described, namely attitudinal objects of the sort "John's expectation that he, John, is the winner" and "Bill's expectation that he, Bill, is the winner." These are attitudinal objects with the same attitudinal mode and the same agent, but with different, though related, contents. It is thus reasonable to take *different things* to stand for such closely related attitudinal objects in the inference in question.

To summarize, attitudinal objects appear to provide a straightforward account of the truth conditions of contents of attitudes *de se* and they offer an explanation for why reports of attitudes *de se* exhibit optional sharing.

3 Expressions giving rise to relative-truth intuitions

Expressions giving rise to intuitions of relative truth such as predicates of taste and epistemic modals obviously relate to the first person, and they do so in a *de se* way (Stephenson 2007). However, expressions giving rise to intuitions of relative truth are fundamentally distinct from *de se* expressions, in more ways than generally observed. Let me call such expressions *relative-truth expressions* for short.

Relative-truth expressions give rise to faultless disagreement and obligatory sharing. Moreover, they involve what I call a *quasi-de se orientation*, and they lead to generic sentences in at least certain contexts. The semantic analysis of sentences with relative-truth expressions that I will give aims to capture all four features. The analysis accounts for obligatory sharing by making use of certain general assumptions about attitudinal objects (as tropes). It also explains the intuitions of relative truth, though in a way quite different from standard theories of relative truth. The intuitions of relative truth are explained not in terms of the truth conditions of a proposition being relative to a context of assessment or a context of evaluation which includes an agent or other parameters (Egan et al. 2005; Lasersohn 2005; MacFarlane 2005a). Rather the explanation is that the content of relative-truth sentences is cognitively accessible only in an essentially first-person way.

One crucial motivation for the present account comes from an expression not generally recognized as an expression giving rise to relative truth, namely generic *one* (Moltmann, to appear, a). Certain sentences with generic *one* such as the one below also give rise to intuitions of relative truth:

(14) One can see the picture from the entrance.

Generic *one* is an expression that most explicitly displays what I think is going on in the semantics of relative-truth expressions.

In what follows, I will thus distinguish three kinds of relative-truth expressions: (1) expressions of personal taste (and more generally of esthetic and moral evaluation), (2) epistemic modals, and (3) generic *one*.

3.1 The intuitions of relative truth: faultless disagreement

The intuition that certain sentences give rise to intuitions of relative truth consists in the possibility of faultless disagreement (Koelbel 2002, 2003). Faultless disagreement consists in a situation in which two agents disagree about the truth of a proposition, with neither apparently being at fault. Thus, below, neither A nor B may be at fault, yet they disagree:

(15) A: Frog legs taste good.
B: No, I disagree, frog legs do not taste good.

In fact A and B may subsequently enter into a dispute about, say, whether they should start putting frog legs on the menu of their restaurant. Faultless disagreement not only arises in a situation of conversation but also manifests itself in intuitions about two agents being involved in different conversations (MacFarlane 2007) or about two agents' beliefs (Koelbel 2003). What is crucial about faultless disagreement is that both agents seem to be right in their claims or beliefs, and yet they disagree. What is important is that "to be right," or "not to be at fault" means more than having a reason or epistemic grounds: the intuition is that both the statement and its negation are in some sense true, though as uttered by different agents (or an agent and a former "time slice" of the same agent).

Faultless disagreement does not arise with sentences that express different propositions when uttered by different speakers. Moreover, faultless disagreement does not arise when the "judge" is made explicit, as in (16):

(16) A: Frog legs taste good to me.
B: Frog legs do not taste good to me.

Related to the possibility of faultless disagreement is the observation that two agents may *agree* about the content of an evaluative sentence even if it is clear that the relevant parameters of evaluation of the two agents are different. Suppose John is a great wine connoisseur whereas Mary has not tasted wine before, then the evaluation parameters for the proposition that the wine tastes good will certainly be different for John and Mary, yet they may agree that the proposition is true:

(17) John and Mary agreed that the wine tastes good (but for very different reasons).

This intuition is suitably called *faulty agreement*. Like faultless disagreement, it arises in just the same way in relation to different agents' beliefs. That is, (17) would be true even if John and Mary did not talk to each other, but just believed, for different reasons, that the wine tastes good.

On standard relative-truth theories, the object of disagreement or agreement is a propositional content that is truth-conditionally incomplete in that it does not involve the relevant judge. Thus, the evaluation of the sentence as true or false must be relativized to an agent, a judge, or else a parameter of taste.[3]

Epistemic modals are another often-discussed class of expressions that, as has been argued, display the intuitions of relative truth (Egan et al. 2005; Egan 2007; MacFarlane 2005b). They clearly display faultless disagreement: one person may believe or claim that John may be in Paris, while another person with more knowledge disagrees, with neither being at fault.

Faultless disagreement is possible with generic-*one* sentences, in just the same way as with predicates of personal taste and epistemic modals. One person might be right in asserting (18a), whereas another person, used to a greater level of comfort, may be right in asserting (18b):

(18) a. One can sleep on this sofa.
b. One cannot sleep on this sofa.

[3] For relative-truth theories of predicates of taste and epistemic modals, see Koelbel 2002, 2003, MacFarlane 2005a,b, Lasersohn 2005, Egan et al. 2005, among others.

Yet the two clearly disagree.

Also faulty agreement is possible:

(19) John and Mary agreed that one can sleep on this sofa.

(19) is acceptable even if John's and Mary's grounds for their generalization are quite different (if, for example, John and Mary have tried out the sofa sleeping in quite different bodily positions or if Mary just found the sofa soft enough and John just long enough to sleep on).

3.1.1 Sharing

Relative-truth expressions also exhibit sharing, but crucially sharing is obligatory with those expressions. If a sentences S gives rise to relative-truth intuitions, then sharing of propositional contents consists in the intuition that agents, even if they are clearly involved in different contexts of evaluation, share the same propositional content when they have a propositional attitude that S. Thus the inference in (20a) is always valid, even assuming that A's and B's criteria for evaluating wine are known to be quite different (A, but not B, let's say, being a connoisseur); by contrast, inferring the same conclusion (20b) from the same premises in (20a) is invalid:

(20) a. A believes the wine tastes good.
B believes the wine tastes good.
A and B believe the same thing.
b. A and B believe different things.

Inferences as in (20a) are valid with any propositional attitude or speech-act verb.

The validity of the inference in (20b) does not hinge on some "looseness" of uses of the expression *the same thing*. With a conclusion containing a free relative (*what Mary believes*) as in (21) the same sort of inference is possible, even if John's and Mary's taste parameters are rather different:

(21) John believes what Mary believes, namely that the wine tastes good.

The same sort of inference is also valid with a conclusion containing the corresponding nominalization of the verb, such as *the same belief* or *the same claim*:

(22) a. John believes that the wine tastes good.
Mary believes that the wine tastes good.
John and Mary have the same belief (share a belief).
b. John claimed that the wine tastes good.
Mary claimed that the wine tastes good.
John and Mary made the same claim.

Again, these inferences are valid even if John's and Mary's taste parameters are different and are even known to be different.

The crucial point that faultless disagreement and sharing appear to establish is that the propositional content of sentences with predicates of personal taste is the same even when the context-dependent criteria of evaluation involved (such as standards of taste, etc.) are clearly distinct.

Epistemic modals also lead to obligatory sharing of content, as shown by the validity of the inference in (23a) and the invalidity of the inference in (23b):

(23) a. Mary believes that it may rain (because she heard the weather forecast).
John believes that it may rain (because he noticed the cloud formation).
John and Mary believe the same thing (but for different reasons).
b. Mary believes that it may rain (because she heard the weather forecast).
John believes that it may rain (because he noticed the cloud formation).
John and Mary believe different things (but for different reasons).

The inference can also yield the valid conclusion in (24a) or, as an expression of faulty agreement, the conclusion in (24b):

(24) a. John and Mary have the same belief.
b. John and Mary agree that it may rain.

Generic *one* exhibits obligatory sharing in just the same way. Thus, two people with quite different experiences as their epistemic source may share the content of a generic-*one* sentence. Thus, an inference of the following sort is always valid, even if, let's say, A's discovery was made by standing at the entrance and B's discovery by seeing a photograph of the entrance:

(25) A discovered that one can see the picture from the entrance.
B discovered that one can see the picture from the entrance.
A and B discovered the same thing (namely that one can see the picture from the entrance).

Again, sharing is obligatory. Thus, the inference below is impossible, even if it is clear that A's and B's grounds for holding the generalization are different:

(26) A discovered that one can see the picture from the entrance.
B discovered that one can see the picture from the entrance.
A and B discovered different things (namely that one can see the picture from the entrance).

Free relative clauses and conjunction further support the criterion of "sharing" with generic-*one* sentences. Thus, (27a, b) are equally admissible as conclusions of (26), as is (27c), with a nominalization:

(27) a. A discovered what B found out, namely that one can see the picture from the entrance.
b. A and B discovered that one can see the picture from the entrance.
c. A and B made the same discovery.

The fact that generic-*one* sentences exhibit faultless disagreement and obligatory sharing just like sentences with predicates of personal taste and epistemic modals is revealing as to the semantics of the latter sentences. In fact, generic-*one* sentences display overtly what the underlying semantic structure of sentences with taste predicates and epistemic modals is, or so I will argue.

To get closer to that semantics, let us note two further semantic properties shared by generic-*one* sentences and sentences with epistemic modals, namely, first, what I will call the "quasi-first-person orientation" and, second, genericity.

3.2 First-person-based genericity

3.2.1 The quasi-first-person orientation

Another important feature of evaluative predicates and epistemic modals is that their first-person orientation in independent contexts need not be strict but may relate to another agent with whom the speaker only identifies. For example, a mother may try to persuade a child to eat by uttering (28), without thereby expressing her own taste judgment:

(28) Apple sauce tastes good.

The utterance in (28) in fact does not state an actual taste judgment of the child's mother, but a taste judgment that a normal child should have.

The same kind of point can be made with *because* clauses and questions:

(29) a. John took another spoon because it tasted so good.
b. Does this taste good?

Here the speaker may just identify with (or project himself onto) John (in 29a) or the addressee (in 29b), without being concerned with his own taste judgments at all.

With epistemic modals too first-person orientation may involve identification with another agent. Thus Egan et al. (2005) note that (30) could be uttered by a speaker who identifies himself with a person that is trying to find a way out of a maze:

(30) The exit may be this way.

The utterance of (30) would be right, Egan et al. (2005) argue, even if the speaker himself knows that the exit could not be that way.

Let me call the first-person orientation when the speaker in fact identifies with another agent *quasi-first-person orientation*.

A quasi-first-person orientation is not available with ordinary first-person pronouns except in certain contexts, such as contexts of imagination, as in (31) (Williams 1979):

(31) I imagine that I am Napoleon.

In (31) the content of the imagination does not involve an identification of the speaker's actual person with Napoleon, but rather the speaker simply projects himself onto Napoleon. Apart from attitudes such as imagination and desire, *de se*-interpreted expressions do not allow for a quasi-first-person orientation.

The first-person orientation of generic *one* manifests itself in what, at first sight, appears to be the general availability of an inference to the first person, as below:

(32) One can see the picture from the entrance.
I can see the picture from the entrance.

However, under closer scrutiny, it turns out that this inference is not in fact generally valid. The premise of (32) can also be uttered by someone who is for some reason unable to see the picture himself, someone, say, whose view is temporarily obstructed. Thus, generic *one* in fact displays a quasi-first-person orientation.

The point is made particularly clear by (33):

(33) One can see me from the entrance.

(33) does not display any conflict between the grammatical first person and generic *one*, because *one* here obviously involves identification with people different from the speaker.

The first-person orientation of relative-truth expressions concerns not only the speaker but also, in embedded contexts, whoever may be the described agent of the reported attitude or speech act:

(34) a. The mother told the child that apple sauce tastes good.
b. Looking from above at the person in the labyrinth John thought it obvious that the exit might be this way.

(35) a. John said that one can see the picture from the entrance.
b. John said that it is nice PRO_{arb} to walk in the park.

Thus, the way relative-truth expressions relate to the first person is not necessarily by applying to the actual agent in question, but possibly by applying to what one may call the agent's *simulating self*, that is, by applying to the agent pretending to be someone else or identifying himself with another class of people. In fact, identification with others is a form of genericity, as we will see in the next section.

3.2.2 First-person-based genericity

Sentences with predicates of taste and with epistemic modals behave like sentences with generic *one*, in one particular use. This is the use in which generic *one* expresses a generalization based on the first person. I will call this *first-person-based genericity*.[4] First-person-based genericity is expressed by a sentence like (36), on a reading on which the speaker himself went to the entrance, saw the picture from there, and generalizes that any normal person like him can see the picture from the entrance:

(36) One can see the picture from the entrance.

First-person-based genericity thus consists in the relevant agent generalizing his own experience or action to anyone (or anyone relevant in the context) taken to be as normal as himself.

In attitude contexts, the first-person-orientation of generic *one* is particularly transparent, for example, when a generic-*one* sentence is embedded under an epistemic predicate:

(37) a. John found out that one can see the picture from the entrance.

For (37a) to be true it is sufficient that John has had the experience of seeing the picture from the entrance. Generic-*one* sentences thus differ from universally quantified and other generic sentences, such as (37b):

(37) b. John found out that people can see the picture from the entrance.

[4] See Moltmann (2006, to appear b) for a discussion of other uses of generic *one*.

In (37b), John has to have made sure in other ways that people other than himself can see the picture from the entrance.

The first-person orientation of generic *one* manifests itself also in the ability of generic one to serve in an immediate description of a first-personal experience:

(38) I find that one can easily forget one's own past experiences.

The embedded sentence in (38) naturally serves as a direct description of a first-personal psychological state, though the generalizing force is there as well. (38) thus differs markedly from (39), where the attitude described takes as its immediate source third-person observations, or else has a derived content, obtained only inferentially from a first-personal experience:

(39) I find that people can easily forget their past experiences.

Generic *one* is in fact the expression best suited for generalizing subjective experiences as types of experiences.

First-person-based genericity need not be understood in strictly the sense so far described, but rather it is to be understood in a sufficiently flexible sense. First-person-based genericity may also just mean that the agent identifies with anyone taken to be normal (and relevant in the context), even if the agent in fact could not fulfill the condition himself. Still, in such a case, genericity is grounded in a generalization from the simulating self.

On the analysis I will give, the embedded sentences in (37a, b) do not differ in truth conditions, but rather only in an indication of epistemic grounds. The latter difference may lead to a difference in the truth conditions of the overall epistemic attitude reports themselves though, such as the difference in truth conditions between (37a) and (37b) as well as between (38) and (39).

3.2.3 The genericity of sentences with predicates of taste and epistemic modals

[1] The distinction between purely subjective contents and generic first-person-oriented contents There is good evidence that sentences with predicates of taste that give rise to intuitions of relative truth are generic sentences of just the same sort as sentences with generic *one*. Sentences with predicates of taste do not always have a generic reading, however, and the fact that there is a contrast between those contexts in which they have a generic reading and those in which they do not is itself evidence for the generic status of part of the occurrences of such sentences. Sentences with predicates of taste have a generic reading only in truth-directed contexts, such as, in general, independent sentences and contexts embedded under factive verbs like *know*. Thus, (40a) is roughly equivalent to (40b), rather than to (40c):

(40) a. I know that chocolate tastes good.
b. I know that one likes the taste of chocolate.
c. I know that I like the taste of chocolate.

Such a generic reading of a sentence with a predicate of taste is not triggered by all attitude verbs, though. In particular, attitude verbs expressing a purely subjective attitude do not trigger a generic reading. In English the verb *consider* is particularly

interesting in that respect: *consider* requires a predicate of taste in its complement (Lasersohn 2007), but it yields a subjective, not a generic reading.

(41) John considers frog legs tasty.

The verb *find*, on one reading, and even *think*, can also have that interpretation, as in *John finds that frog legs taste good* or *John thinks that frog legs taste good* (Stephenson 2007). What is important is that two statements of taste with *consider* (as well as *find* and *think* on the relevant reading) do not give rise to disagreement at all:

(42) A: I consider frog legs tasty.
B: I consider frog legs not tasty.

Here both interlocutors can be right, without disagreeing.[5]

Unlike sentences with predicates of personal taste, generic-*one* sentences do not display any difference in content from truth-directed verbs and with verbs like *think* that can express purely subjective attitudes:

(43) a. John claims/believes that one can see the picture from the entrance.
b. John thinks that one can see the picture from the entrance.

The content of the embedded sentence in (43b) is as generic as that of (43a). *Find* in fact would not be acceptable in (43b) on its subjective meaning, since that meaning is incompatible with a generic embedded sentence.

This supports the view that sentences with predicates of personal taste are ambiguous: they display or fail to display a generic interpretation depending on the kind of attitude verb under which they are embedded. By contrast, generic-*one* sentences are unambiguously generic. Sentences with predicates of taste display a generic interpretation just in case they are asserted as independent sentences or embedded under a truth-directed predicate.

[2] Connections between generic one and predicates of taste Further evidence for the genericity of sentences with predicates of taste—in truth-directed contexts—is the possibility of a link between generic *one* and predicates of taste. Such a link consists in that the generic quantifier that binds the variable introduced by generic *one* may at the same time bind the implicit "judge" variable that is associated with the predicate of taste. The following sentence is a case in point:

(44) It is nice when one is walking in the park.

In (44), the understood judge of *nice* is the same as, or rather covaries with, the referent of generic *one*. In such an example both the variable introduced by generic *one* and the one that corresponds to the "implicit judge" of *nice* would have to be bound by a single quantifier.

In the contexts below too the implicit judge of predicates of personal taste is understood as covarying with generic *one*:

[5] As a referee has pointed out, there are also uses of the two sentences in (42) without faultless disagreement, on which *consider* is used so as to tone down an assertion. In that case, the two speech acts involved would not be expressive, but assertive speech acts.

(45) a. It is sometimes more pleasant when one walks home than when one drives.
b. One should walk home because it is so pleasant.
c. When one drinks this with milk, it is delicious.
d. When one is young, roller-blading is lots of fun.

The possibility of a single operator binding both the "judge" variable and the variable introduced by generic *one* does not just give evidence for the genericity of statements with predicates of taste; it also means that the genericity involved in predicates of personal taste cannot be a matter of the lexical meaning of those predicates (or of *one* of their lexical meanings) but must be tied to the presence of a generic quantifier in the logical form of the sentence, a quantifier that is able to bind other elements as well.

4 The analysis of generic-*one* sentences

4.1 The idea

Let us then first give an analysis of generic-*one* sentences, such as requires a combination of two things: generic quantification and the first-person orientation.

A plausible, if simplified, way of understanding the generic quantifier, suited to the present purpose, is to take it to be a combination of a universal quantifier ranging over possible worlds, restricted by some accessibility relation R (relating the actual world to the "normal" worlds) and a universal quantifier ranging over individuals which is both restricted by a (vague) condition of normality N and a condition C on contextually relevant individuals:[6]

(46) $\forall w \, \forall x \, (wRw_o \, \& \, x \in D(w) \, \& \, N(w)(x) \, \& \, C(w)(x) \rightarrow P(w)(x))$

Generic sentences thus are heavily context dependent: the context will provide conditions of accessibility, normality, as well as contextual relevance. At the same time, this context dependence is subject to certain pragmatic restrictions, such as that the domain of quantification be shared by the interlocutors and, in the particular case of generic *one*, include the interlocutors themselves. This feature of generic sentences will also play a role for statements of taste on the generic interpretation.

Of course, (46) does not yet capture any first-person orientation of generic *one*. The general idea is that sentences with generic *one* as a whole express a generalization based on a first-person application of a predicate; that is, they express first-person-based genericity. First-person-based genericity involves the ability of abstracting from the particularities of one's own person and situation, judging oneself to be normal in relevant respects, and then generalizing to anyone meeting the same conditions. This way of generalizing self-attributions of properties is a form of abstraction, requiring a distinction between relevant and irrelevant features of a given person and his situation. First-person-based genericity can also be viewed as a form of *simulation* in the sense of Gordon (1986, 1995a,b), more precisely as what one may call *generic simulation*. In the case of generic simulation, the relevant intentional agent simply generalizes his own situation, abstracting from the features of his situation that are

[6] For a discussion of the generic quantifier and the various issues it raises, see Krifka et al. (1995).

particular to himself. He does not need to project himself onto a particular other person and make adjustments to adopt the other person's point of view (as in ordinary cases of simulation).

The notion of simulation also helps us understand the quasi-first-person orientation of generic *one*: first-person-based genericity does not require the agent to actually self-ascribe the predicate; the agent may just identify with someone to whom he applies the predicate.

Thus, first-person-based genericity involves self-reference that is detached from the relevant agent's actual person: it may involve self-ascribing a property while identifying oneself with someone else and in fact self-ascribing a property while identifying with each one of a collection of individuals.

For the semantic analysis of generic *one* I will make use of a primitive notion of identification or simulation "I," a relation between an agent and another individual with which the agent "identifies" or whom the agent simulates (or projects himself onto). The basic idea then is that generic *one* does not just range over individuals, but individuals as entities the relevant agent identifies with.

4.2 The formal analysis

Let us start with the paraphrase of (47a) as in (47b):

(47) a. One can see the picture from the entrance.
b. For every x such that w is someone with whom the speaker identifies, x can see the picture from the entrance.

Generic *one* ranges not over individuals as such, but "individuals as having a certain property", namely the property of being someone the speaker identifies with (or "simulates"). There are different ways of construing such entities under a perspective. I will adopt the view that 'an entity x as having a property P' is indeed a different entity than x: it is a "qua object" in the sense of Fine (1982), namely it is the object x qua being someone the agent identifies with.

On Fine's characterization, qua objects are objects obtained from an individual d and a property P (the "gloss") such that the following conditions hold:

(48) For a property P and an individual d,
1. d qua P exists in a world w at a time t iff P holds of d in w at t.
2. d qua P is identical to a qua object d' qua P' just in case $d = d'$ and $P = P'$.
3. d qua P has a property Q just in case d has Q at the time it has the property P.

The notion of a qua object needed here is not quite correctly captured by the third condition given by Fine's characterization: an individual x qua being someone the agent identifies with should have only those properties for whose application the identification provides an epistemic ground or is otherwise relevant, not just any properties that hold of x at the time in question. This corresponds to the actual qua-locution in ordinary language: John qua being a teacher, or more naturally John as a teacher, may not have a property like being 35 years old, but John as a teacher may know how

children behave, be entitled to a salary, or be competent: properties for which John's being a teacher is in some way relevant.

In generic-*one* sentences the gloss only serves to provide an epistemic basis for the application of the predicate; it does not affect the truth conditions of the sentence. Moreover, the gloss does not restrict the domain of entities generic *one* ranges over. The domain rather is restricted by vague conditions on what is considered normal and by a contextual restriction, just like the domain of any other generic quantifier. The gloss may influence the domain of quantification, though. In particular, since the domain will consist of entities the speaker identifies with, it is likely to include the speaker as well as the addressee.

With this modification in the definition of a qua object, the restriction to predicates expressing possible experiences or actions follows: the gloss asks for an application of the predicate on a first-person basis even when the predicate is predicated of individuals other than the speaker or relevant agent.

Generic *one* thus introduces a complex variable of the sort "qua(x, λy[I y z])," where the variable "z" is to stand for the relevant agent and "I" is the relation of identification. While, intuitively, the "ordinary" variable x concerns the truth conditions of a generic-*one* sentence, the gloss λy[I y z] gives the "mode of presentation" that is to govern the applicability of predicates, providing the epistemic basis for applying a predicate. The variable z will be bound by a lambda operator defining the meaning of a generic-*one* sentence as a property, as in the logical form of (47a) given in (49) below:

(49) λz[Gn x can see the picture from the entrance(qua(x,λy[I y z]))]

That is, (47a) expresses the property of being a z such that, for any contextually relevant x, x qua being identified with y can see the picture from the entrance.

The same kind of analysis can be applied to predicates of taste. I take the judge variable to occupy an argument position of the predicate of personal taste (since it can be bound at the same time by the quantifier introduced by generic *one*). This also provides an account of the semantic selection of predicates of taste by verbs like *consider*: *consider* would select certain two-place predicates with one argument position for a "judge." The meaning of *chocolate* (*is*) *tasty* in the context of (50a) would then be as in (50b), whereas in the context of (51a) it would be as in (51b):

(50) a. John considers chocolate tasty.
b. λx[tasty(c, x)]

(51) a. I claim that chocolate is tasty.
b. λx[Gn y tastes good(c, qua(y, λz[I z x]))]

Sentences with predicates of personal taste in truth-directed contexts (and without an overt subject being specified) always express first-person-based genericity, generalizing from a first-personal subjective experience to anyone meeting the contextually given restriction.

Epistemic modals too involve an implicit argument position which can be occupied by a variable bound by a generic quantifier. Again using qua objects of the sort "y qua being someone the relevant agent identifies with," the content of an epistemic modal

sentence can be represented as in (52), where M represents the epistemic modal in question:

(52) λx[Gn y (M(qua(y, λz[I z x]), p))]

5 The behavior of the first-person aspect of relative-truth expressions

On the present approach, it is attitudinal objects that are truth bearers, not propositional contents. The notion of an attitudinal object is helpful not only in giving the truth conditions of first-person-oriented contents; it also allows for a clarification of the role that two kinds of first-person components of a first-person-oriented content play: the component for relative-truth expressions and the other component for *de se* expressions. On the account of truth-relative expressions given in the preceding section, propositional contents of attitudinal objects may consist in a relation between agents (representing the two kinds of first-person-oriented roles), so that a relevant attitudinal object will be of the form in (53):

(53) f(a, λz[B(z, λxy[P(x, y)]])

Standing in an attitude to a two-place relation then means identifying oneself with the two places of that relation. Let me call those two places the two *first-person places*, and the first one *the relative-truth place* and the second *the de se place*.

Let us then formulate the truth conditions for such attitudinal objects. The truth of an additional object of the form in (53) certainly requires both first-person places to be identified with the agent of the attitudinal object, so that we have:

(54) f(a, λz[B(z, λxy[P(x, y)]]) is true iff P(a, a)

Thus, attitudinal objects with a content involving the additional component of a relative-truth expression do not have truth conditions that are any different from the truth conditions of an attitudinal object with a *de se* content.

What is special about such attitudinal objects, however, are conditions of "cognitive access," conditions for bearing any cognitive relation to attitudinal objects of this sort. For a content of a sentence with a relative-truth expression to be grasped, the relative-truth place must be identified with the agent in question, that is, the agent accessing that content. Making use of attitudinal objects, this means that an attitudinal object can be the object of any mental attitude whatsoever only if the agent of that attitude self-applies the content of the attitudinal object with respect to the relative-truth place. I will formulate this condition by making use of the most general propositional attitude, which, following Stalnaker (1984), is the attitude of acceptance, an attitude of provisional consideration of a content. It is an attitude shared by (that is, that is part of) any propositional attitude whatsoever. Acceptance of an attitudinal object with a two-place first-person-oriented content, thus, is subject to the following condition:

(55) accept(f(a, λz[B(z, λxy[P(x, y)]]) only if accept(f(a, λz[B(z, λy[P(a, y)]])

That is, acceptance of an attitudinal object with a content involving a relative-truth place requires self-attributing the content with respect to that place. This means that in a dispute about a relative-truth sentence each interlocutor must self-apply the content

with respect to the relevant relative-truth place. The agents all share the same attitudinal object, whoever the agent of that object may be, but they all must self-apply the content of that attitudinal object with respect to the relative-truth place.

From this the behavior of propositional anaphora immediately follows. Attitudinal objects require identification of the relative-truth place with whoever is the relevant agent in the context in question.

Why does obligatory sharing follow? It follows because attitudinal objects with the same truth-relative content instantiate exactly the same property and thus are exactly similar. They may be numerically distinct, but they are qualitatively indistinct. Moreover, they do not differ in truth conditions and thus do not imply the existence of distinct attitudinal objects, instantiating distinct properties. Since special quantifiers and pronouns and in particular the expression (*the*) *same* are sensitive not only to numerical distinctness, but also to qualitative distinctness, obligatory sharing follows.

6 Conclusion

In this paper, I have given an account of sentences with pronouns interpreted *de se* in terms of the notion of an attitudinal object. Against the background of that account I have made precise in which way sentences that give rise to intuitions of relative truth differ from sentences with *de se* expressions. The first-person-oriented aspect of relative-truth sentences has a fundamentally different status from the first-person-oriented aspect of sentences with *de se* expressions, requiring first-personal cognitive access to the content or rather corresponding attitudinal objects. It is the first-personal cognitive aspect rather than a relativized notion of truth that is distinctive of sentences giving rise to relative-truth intuitions. Such sentences have absolute truth conditions, but what is special about them is that they are generic sentences expressing first-person-based genericity, and as such they require first-personal access from anyone grasping their content.

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