

## *Tropes, Bare Demonstratives, and Apparent Statements of Identity*

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Philosophers who accept tropes generally agree that tropes do play a role in the semantics of natural language, namely as the objects of reference of nominalizations of adjectives, such as *Socrates' wisdom* or *the beauty of the landscape*. In fact, a philosophical discussion of the ontology of tropes can hardly do without the use of such nominalizations. In this paper, I will argue that tropes play a further important role in the semantics of natural language, namely in the semantics of bare demonstratives like *this* and *that*. Like terms such as *Socrates' wisdom* or *the beauty of the landscape*, *this* and *that* can act as ordinary referential terms referring to tropes. But, more importantly, they involve reference to tropes in what linguists call *identificational sentences*, sentences such as (1a) and (1b):

- (1) a. This is Mary.  
b. That is a beautiful woman.

Identificational sentences are not ordinary identity statements. One particularity that such sentences exhibit is the exceptional neutrality of the demonstratives *this* or *that* in subject position, regardless of the gender of the term following the copula—*Mary* in (1a) and *a beautiful woman* in (1b). Bare demonstratives in identificational sentences, I will argue, do not refer to individuals, but rather involve reference to perceptual features or tropes. Identificational sentences then express an identification of the bearer of a trope with an individual. Bare demonstratives in identificational sentences are not themselves referential terms referring to tropes, though; rather, their contribution to the composition of the meaning of the sentence is a certain

kind of function identified on the basis of a trope, a function mapping a conceivable world *w* to the entity that in *w* is the bearer of the trope. Like indexical predicates or adverbials, bare demonstratives as subjects of identificational sentences require a distinction between two stages of meaning: a first stage consisting of what the speaker refers to with the use of the bare demonstrative, and a second stage consisting of the contribution of the bare demonstrative to the meaning of the sentence, its denotation (that is, the function in question).

If tropes are the objects of direct perception, as trope theorists such as Williams (1953), Campbell (1990), and Lowe (2008) have argued, then identificational sentences serve to ‘identify’ the immediate object of perception with a particular individual. The connection to perception is even more explicit in sentences such as (2a,b), which are closely related to identificational sentences:

- (2) a. What John saw was Mary.  
 b. What John saw was a beautiful woman.

Such sentences exhibit the same exceptional neutrality of the subject. They require a perception verb as predicate of the free relative clause, which like *this* and *that* in (1a,b) will involve reference to a trope.

The trope-based account of the semantics of identificational sentences will explain straightforwardly the possibility of apparent relative identity statements such as (3a,b):

- (3) a. This is the same statue but not the same lump of clay as that.  
 b. What John saw today was the same river but not the same water as what he saw yesterday.

In (3a), the occurrence of the presentational pronouns *this* and *that* is crucial for the sentences to sound entirely natural; that is, (3a) is an identificational sentence. I will argue that what makes (3a) and (3b) acceptable and possibly true is the fact that tropes may have multiple bearers: the trope that *this* in (3a) makes reference to has both the statue and a lump of clay as bearer, and the trope that is ‘what John saw’ in (3b) has both a river and an amount of water as bearer. Thus (3a,b) do not involve Geach’s problematic notion of sortal-relative identity, nor do they involve reference to something indeterminate, as Dummett has argued, or indeterminate reference, as Perry has suggested.

The paper overall will make a new case for the importance of tropes in the semantics of natural language, in particular as a reflection of their role as objects of direct perception.

## 1. Identificational Sentences and Presentational Pronouns

I will start with some remarks about the linguistic properties of identificational sentences.

Identificational sentences have a range of properties that make clear that they are neither identity statements nor subject-predicate statements of any sort.<sup>1</sup> I will call *this* and *that* in their function as subjects of identificational sentences *presentational pronouns*, since they involve reference to a perceptual presentation of an individual in that context. Presentational pronouns are not referential terms, and as such they must be sharply distinguished from bare demonstratives in a referential function (as in *John ate that*, or *Mary saw this*). Several criteria show the non-referential status of presentational pronouns.

First, presentational pronouns are always neutral, regardless of the individual they appear to stand for. (*This is beautiful* is unacceptable in ordinary circumstances of utterance if *this* is to stand for a woman.) Furthermore, presentational pronouns cannot be coordinated with ordinary referential NPs. The examples below are impossible if *that* is to stand for a person:

- (4) a. \*Mary and that are a beautiful couple.
- b. \*Bill or that was the chairman of the session.

As ordinary referential demonstratives, by contrast, *this* and *that* are not barred from coordination with ordinary NPs:

- (5) a. You have to decide between this and me. (Pointing at a pack of cigarettes.)
- b. Do you want this or the cake? (Pointing at a melon.)

Second, presentational pronouns are incompatible with ordinary variables, more precisely, with variables as introduced into the logical form of the sentence by relative clauses or quantificational NPs (Mikkelsen 2004):

- (6) a. \*That, whom I first did not recognize, was John.
- b. \*Everyone except that came to the party.

Referential demonstratives, by contrast, are compatible with ordinary variables, just like other ordinary referential terms (Mikkelsen 2004):

- (7) a. Mary bought this, which I do not like.
- b. Everything except this is poisoned. (Pointing at a cake.)

Also the interpretation of modals shows the nonreferential status of presentational pronouns. Presentational pronouns allow only for an epistemic interpretation of a modal, as seen in the contrast between (8a) and (8b) and between (9a) and (9b):

- (8) a. John must be a student.  
b. This must be a student.
- (9) a. Mary could be a gymnast.  
b. This could be a gymnast.

Whereas *must* in (8a) allows for a deontic interpretation of the modal, (8b) allows only for an epistemic interpretation; and whereas *could* in (9a) can express physical possibility, in (9b) it can express only epistemic possibility. Such constraints on the interpretation of modals would be entirely unexpected if the presentational pronoun was an ordinary referential term.

There are also constraints on the syntactic predicate (the VP) in identificational sentences, constraints that show that identificational sentences cannot be ordinary subject-predicate sentences or ordinary identity statements. First, presentational pronouns are limited in their occurrence to the subject position of the verb *be* (Higgins 1973). Thus, sentences like (10a) or (10b) are never acceptable, with *that* standing for a person:

- (10) a. \*I saw that.  
b. \*I was looking for that.

Moreover, copula verbs other than *be* such as *become*, *remain*, or *seem* are excluded from identificational sentences:

- (11) a. \*This remained a beautiful women.  
b. \*This will never become a very good teacher.  
c. \*This seems a very good teacher.

Furthermore, presentational pronouns cannot occur as subjects of what linguists call ‘small clauses’, the clausal complements of verbs like *consider*, as below:

- (12) a. I consider John a very good teacher.  
b. \*I consider this / that / it a very good teacher.

In linguistics, small clauses constitute a standard test for subject-predicate sentences, and evidently identificational sentences are not among them (Higgins 1973). Thus, the *be* in identificational sentences cannot be the *be* of predication.

Identificational sentences also impose particular restrictions on the complement of *be*. In first approximation, it appears that presentational pronouns require either a sortal or a proper name in postcopular position, as seen in (13), a constraint that does not obtain for ordinary referential demonstratives, as in (14):

- (13) a. That is a beautiful woman.  
 b. That is Mary.  
 c. \*That is beautiful. (trying to refer to a woman)
- (14) That woman is beautiful.

It is not implausible that proper names, even if they are directly referential, have in fact sortal content—the sortal content ‘human being’ in case of names for people (Lowe 2007). Then the constraint imposed by identificational sentences would simply be that the complement of *be* be a sortal. This view of the constraint is in fact quite common among philosophers discussing sentences that are in fact identificational sentences (Section 3). However, it appears that the sortal-nonsortal distinction cannot be the right characterization of the restriction.

First, there are NPs that have both a predicative use (without a determiner) and an individual-introducing or referential use (with a determiner). An example is *mayor of Cambridge* as opposed to *the mayor of Cambridge*. Only the latter is acceptable in the postcopula position of identificational sentences (Higgins 1973, p.222).<sup>2</sup>

- (15) a. \*That is mayor of Cambridge.  
 b. That is the mayor of Cambridge.

But there should be no difference in sortal content between the two sorts of NPs.

Second, in certain cases expressions are acceptable in the postcopula position of identificational sentences that do not have sortal content. An example is pronouns in German whose gender is driven by formal agreement with an antecedent, rather than being tied to a sortal concept:<sup>3</sup>

- (16) Das Maedchen, das muss es sein.  
 the girl (neut.), that must *it* (neut) be

The correct generalization concerning the restriction on the postcopula position of identificational sentences should in fact not be made in terms of the sortal-nonsortal distinction, but in terms of the predicative-referential distinction, in a certain sense of ‘referential’. Presentational pronouns require an NP in postcopula position that takes individuals as semantic values, by either referring to them (proper name) or by introducing an individual variable (indefinite). In linguistic semantics, NPs in both functions are considered of type  $\langle e \rangle$ , NPs whose semantic values are individuals and which in that sense are ‘referential’. According to an influential view in more recent linguistic semantics, indefinite NPs do not have the status of predicates or quantifiers, but rather are of the same type as referential NPs. One way of spelling out that view is to make use of choice functions for the semantic

analysis of indefinites, that is, functions that map a set onto some element of that set (Reinhart 1997, Winter 1997). Thus, (17a) will be analysed as in (17b), on the basis of the notion of a choice function in (17c):

- (17) a. Mary met a man.  
 b.  $\exists f(\text{CF}(f) \ \& \ \text{meet}(\text{Mary}, f(\textit{man})))$   
 c. A function  $f$  is a *choice function* (CF( $f$ )) iff  $f$  maps any nonempty set onto an element of that set.

Within the choice-function analysis, the semantic contribution of an indefinite in the postcopula position of an identificational sentence as in (13a) will be as indicated below:<sup>4</sup>

- (17) d.  $\exists f(\text{CF}(f) \ \& \ \textit{that is } f(\textit{beautiful woman}))$

The treatment of indefinites in identificational sentences will not play much of a role in the rest of this paper, though.

Exactly the same linguistic constraints on identificational sentences are in place if instead of a presentational pronoun the sentence contains a neutral free relative clause with a perception verb in subject position, as in (2a), repeated below. (18) shows the incompatibility with ordinary variables, (19) the restriction to an epistemic interpretation of a modal, and (20) the restriction on the postcopula NP being referential:

- (2) a. What John saw was Mary.  
 (18) a. \*Bill and what John saw are married.  
 b. \*What John saw, who is a good friend of mine, is married.  
 (19) What I saw could be a gymnast.  
 (20) a. What John saw was a beautiful woman.  
 b. \*What John saw is married.  
 c. \*What John saw remained a beautiful woman.

Thus, there are good reasons to pursue a unified semantics of the two types of sentences—and in fact to consider them of the same type.<sup>5</sup>

## 2. Geach: Sortal-Relative Identity

Let me start with one particular approach to sentences like (3a,b), namely the view of sortal-relative identity. Geach (1962), famously, held the view that identity is by nature relative, that is, relative to a sortal concept. The world, according to Geach, does not consist in individuals as such, but rather is divided into various equivalence classes of entities via sortal concepts. For an individual  $x$  to be identical to an individual  $y$  relative a sortal concept

S means that x and y belong to the equivalence class defined by S. x and y may also belong to different equivalence classes modulo a different sortal. The primary use of a sortal concept for Geach is in fact that of expressing sortal-relative identity, by 'is the same S as'. It is only by 'derelativization' that sortals are obtained as one-place predicates (that is, a one-place sortal predicate S is defined as follows: an entity x is an S iff x is the same S as some entity y).

Geach's primary motivation for his view that identity is sortal-relative was not sentences such as (3a), but rather the aim to solve a range of philosophical puzzles about synchronic and diachronic identification of entities, the conviction that absolute identity is incoherent, as well as more particular problems such as that of the trinity (Geach 1962, 1972, Deutsch 2002 Noonan 1999).<sup>2</sup> But the acceptability and possible truth of sentences like (3a), even though not as such discussed by Geach himself, appears a good motivation of his view.

The view that identity is always sortal-relative is a view that has been subject to a range of criticism (Quine 1964, Dummett 1973, 1981, Hawthorne 2003, Deutsch 2002). Most obviously, the view is incompatible with classical logic: it implies a violation of Leibniz' Law and undermines the use of variables, notions of coreference, extensionality, and set (Hawthorne 2003).<sup>6</sup> Also the notion of sortal-relative identity itself is hard to understand (Dummett 1973). If it is a relation, then given all our intuitions of what a relation is, it should hold between entities with identity conditions; but then Geach's view would itself be incoherent: sortal-relative identity was exactly what gives entities their identity. But if relative identity is not a relation, it is hard to see what else it could be.<sup>7</sup>

Reference itself, for Geach, also requires a sortal concept, a concept that provides identity conditions for the object referred to (Geach 1962). Even ordinary proper names for Geach have sortal content (Geach 1957). Geach actually distinguishes two semantically distinct kinds of names: a name *for* an object and a name *of* an object. In the former case, the name refers to an entity that comes with the identity conditions given by the relevant sortal concept; in the latter case it does not. Similarly, Geach distinguishes two kinds of quantification: if a quantifier is restricted by a sortal (*every A*, *some A*), it ranges over entities that come with the identity conditions provided by the sortal. If a quantifier is unrestricted (*everything that is A*, *something that is A*), then it ranges over entities without identity conditions, entities which just happen to stand in relative-identity relations to others.

Geach's view that reference is sortal-relative appears incompatible with current views of reference according to which reference is direct, rather than mediated by description. But more importantly in the present context, there are problems for the treatment of relative-identity statements with the two sorts of names Geach posits. It is names *of* objects (names referring to entities without identity conditions) that must occur in sortal-relative identity

statements: that is, in *a is the same N as b*, *a* and *b* must be names of an object, not for an object. Otherwise, the semantics of relative identity statements would be incoherent. Crucially, the two names *a* and *b* may refer to entities that have different properties: it may be the case that *a is P* is true, but *b is P* is false. But then the question is: will *P* be true or false of the referent of the name *for* an object? As Hawthorne (2003) discusses in detail, there is no coherent way of relating the properties of the referent of a name *of* an object to the properties of the referent of a name *for* an object.

Geach's account of apparent relative-identity statements is problematic also in that the class of truly natural sentences apparently expressing sortal-relative identity is much more restricted than Geach would have it. In 'natural' apparent relative-identity statements, the presence of presentational pronouns or free relative clauses is crucial; replacing them by ordinary referential terms is in general not possible, or rather leads to the kind of 'philosophical' statements which sentences such as (3a) just do not belong to:<sup>8,9</sup>

(21) This lump of clay is the same statue as that lump of clay.

Whereas (21) is philosophically controversial, (3a) simply isn't.

One puzzling feature of the philosophical discussion of relative identity is that the relative identity statements that in general figure in them are not of the sort in (3a) or even (21), but rather of the sort in (22a), which, by making use of variables, is in fact not a sentence of English. Or else they are of the sort in (22b), where *a* and *b* are names of some sort for the entities said to be identical:

- (22) a. *x* is the same statue as *y*, but *x* is not the same lump of clay as *y*.  
 b. *a* is the same statue as *b*, but *a* is not the same lump of clay as *b*.

Discussing sentences like (22a,b) in place of natural language sentences of the sort in (3a,b) may in fact have partly led to the confusion about sortal-relative identity itself.<sup>10</sup>

It has not escaped philosophers' attention that there are in fact linguistic requirements of naturally sounding statements of apparent sortal-relative identity. Thus, Dummett and Perry discuss only apparent relative-identity statements with *this* and *that* or free relatives and propose alternative analyses that are specifically tied to those terms.<sup>11</sup>

### 3. Dummett: Reference to Something Indeterminate

Dummett (1973, Chap. 16; 1981, Chap. 11) argues that bare demonstratives in apparent relative-identity statements do not refer to ordinary objects, that is, entities with identity conditions; rather they stand for pre-individuated portions of the world, for parts of a reality that is an 'amorphous lump,

not yet articulated into discrete objects' (Dummett 1973, p. 577). Dummett considered *this* and *that* as they occur in (1) and (3a) to be just ordinary referential demonstratives, though demonstratives without sortal content. As such, they 'may be regarded as relating either to a piece of matter or to a sensory appearance' (Dummett 1973, p. 572). Dummett thus took the particular role of *this* and *that* in an apparent relative identity statement to be a side effect of the absence of a sortal content. He did not consider *this* and *that* as in (1) and (3a) to have a distinct semantic role, as what I call 'presentational pronouns'.

Dummett distinguished three kinds of statements in which bare demonstratives can occur:

[1] *Crude predications*: statements with a predicate that has only application conditions and carries no identity conditions. An example is *this is blue*, where the speaker simply makes reference to some blue appearance or rather something appearing blue without intending to refer to any particular object.

[2] *Recognition statements*: statements that contain a sortal predicate such as *this is a statue*. In [2], the pronoun again picks out a portion of a pre-individuated reality which the predicate then 'carves out' as a statue, should the sentence be true. When used in this way, only the 'application conditions' not the 'identity conditions' of the sortal predicate will enter into the truth conditions of the sentence.<sup>12</sup>

[3] *Statements of identification*: apparent sortal-relative identity statements such as *This is the same statue as that*. In such statements, the same sortal predicate 'carves out' two portions of a pre-individuated reality as the same object or as different objects.

Dummett's point is that once apparent relative-identity statements are understood properly, they will not require a notion of relative identity, but rather only a more fundamental notion of reference namely, reference to indeterminate entities, entities without identity conditions. First-order predicate logic (with its use of variables and absolute identity) is, according to Dummett, not designed for the level of reference to portions of a pre-individuated reality.

There are both linguistic and philosophical problems for Dummett's account. Clearly, Dummett's account cannot be adequate linguistically in a number of respects. First, Dummett fails to distinguish between presentational pronouns as subjects of identificational sentences and referential bare demonstratives. The latter, as we have seen, can act in ordinary subject-predicate sentences (allowing for the full range of interpretations of modals, allowing for the full range of copula verbs (*remain, become, seem*), being able to occur in small-clause environments), the former cannot. Moreover, the

latter behave like ordinary referential NPs (being able to be coordinated with other referential NPs, being compatible with ordinary variables, etc.), the former do not. Dummett is in particular mistaken in taking bare demonstratives in ‘crude predications’ to have the same semantic role as they have in apparent relative-identity statements. In the former context, *this* and *that* are referential terms; in the latter context, they act as presentational pronouns. Statements like *this is a statue*, which Dummett calls ‘recognition statements’, are in fact ambiguous: they may be either ordinary subject-predicate sentences with a referential demonstrative or identificational sentences with a presentational pronoun. Dummett’s classification of such sentences as ‘recognition statements’ would be suitable only in the former, not in the latter case. In the latter case, *a statue* has the function of introducing an object, rather than ‘recognizing’ or ‘carving out’ an indeterminate entity as an object of the sort of a statue. In particular, it does not have the function of ‘completing’, as a sortal, the job that the bare demonstrative in subject position could not do on its own.<sup>13</sup>

Dummett’s account is also philosophically problematic. First of all, it involves an assumption about reference that is not universally shared. For Dummett, intention, naming, or demonstrating is not sufficient for ordinary reference, rather ordinary reference always requires the use of a sortal term. Therefore, a bare demonstrative is able to refer only to a pre-individuated part of reality. This cannot be right, however: a sortal need not be used to refer to a fully individuated object.<sup>14</sup> The demonstratives *this* and *that* certainly allow referring to a fully individuated inanimate object if the speaker has the relevant sort of object in mind.<sup>15</sup> A sortal is required for reference at best in a weaker sense. When a referential term does not have any sortal content, then a sortal concept must be part of the speaker’s communicative intentions.

Another philosophical problem for Dummett’s proposal is how to make sense of reference without identity. If it is reference to a pre-individuated portion of reality, it is hard to see how sense can be made of such referents without invoking identity conditions at all. The portions of reality referred to obviously must be delimited in space and perhaps in time. But if they are just space-time regions, they will have identity conditions. Alternatively, and this is an option Dummett alludes to, the portions of pre-individuated reality could be understood as portions of matter, not objects constituted by them. But again portions of matter do have identity conditions. Moreover, *this* and *that* in apparent relative-identity statements should then be replaceable by explicit mass terms, which they are not. (23b) is hardly as natural as (23a):

- (23) a. This is the same statue as that.  
 b. ?? This clay is the same statue as that clay.

Yet another option Dummett alludes to is that the pre-individuated portions of reality are ‘sensory appearances’. Now the term ‘sensory appearance’ could be taken as an epistemic term, referring to a perceptual experience. But this is not what Dummett could have meant since for him bare demonstratives refer to parts of reality. What Dummett is likely to have meant is that *this* and *that* in the relevant sentences refer to perceivable features, such as a particular brownness or roundness, as entities distinct from the fully individuated objects that are their bearers. In other words, they refer to tropes. But again, tropes are entities which have perhaps no definite region to occupy, but which do have identity conditions and fall under sortal concepts. Moreover, they can act as referents of ordinary referential terms, such as *that feature*, which in fact cannot replace presentational pronouns in identificational sentences (Section 5.2). Tropes furthermore do not qualify as pre-individuated portions of reality that could be ‘carved out’ as discrete objects (like statues) by attributing the relevant kind of sortal concept to them.

Dummett’s proposal is problematic also when trying to formulate the semantics of apparent relative-identity statements. Obviously, in apparent relative-identity statements, the sortal terms must map the relevant parts of a pre-individuated reality onto real objects, objects that can enter absolute relations of identity and difference. Thus, for the compositional semantics of apparent relative-identity statements a function would need to apply to those pre-individuated portions and map them onto entities individuated by sortal concepts. But how can a function apply to something that does not have identity conditions?

Note also that anaphoric reference is possible to the values of presentational pronouns, thus presupposing again identity conditions for their semantic values:

(24) This is a man. *It* is not a woman.

We can thus conclude that Dummett’s account of bare demonstratives in identificational sentences is untenable both for linguistic and for philosophical reasons.

#### 4. Perry: Indeterminate Reference

Perry (1970) made a somewhat different proposal as to how acceptable apparent relative-identity statements are to be understood without making use of relative identity. Perry argues that in such statements, bare demonstratives as well as free relatives are referential terms, but they refer in an indeterminate way. With indeterminate reference a speaker has not yet made a decision as to what exactly he is referring to with the use of a term. For example, if a speaker says *this is blue*, he may refer to the surface of a bowl or to the

bowl itself, but need not actually have made a decision yet when uttering the sentence. Similarly, if a speaker utters a sentence like *this is the same statue as that*, then, Perry suggests, the speaker with the use of *this* or *that* has not decided whether he is referring to a statue or a lump of clay. In that sentence it is only the predicate that disambiguates ‘afterwards’ how reference with *this* or *that* is to be taken: it is precisely the function of the sortal in the predicate to ensure determinate reference ‘retroactively’.

It is clear that Perry’s account faces similar problems of linguistic adequacy as Dummett’s. Perry does not recognize the special nonreferential status of the subject of identificational sentences. Perry’s indeterminate reference should be available for any ordinary referential term. A more specific problem for Perry’s account is that it would not apply to apparent relative-identity statements like (3a), repeated below:

(3a) This is the same lump of clay but not the same statue as that.

Here two distinct sortal predicates would have to specify ‘retroactively’ distinct referents for one and the same occurrence of *this* (or of *that*), and this is impossible.

## 5. A Trope-Based Analysis of Presentational Pronouns

### 5.1. *This and That as Trope-Referential Terms*

Since *this* and *that* in identificational sentences are not referential terms, they cannot refer to the object that the postcopula NP introduces. We have moreover seen that they cannot stand for some indeterminate entity or refer indeterminately. Yet they in some way stand for a contextually given perceptual presentation: they relate to a perceptual feature or a collection of such features, and it is the function of the sentence to identify the bearer of such a feature or collection of features. Such ‘perceptual features’, a patch of color, a form, or a sound, or a combination of such features, are concrete manifestations of properties, that is, (simple or complex) tropes.<sup>16</sup> In identificational sentences, tropes act as the objects of direct perception, prior to the recognition and identification of the individuals that are their bearers. It is in fact precisely the function of identificational sentences to express the recognition of the bearer of a trope.

Unlike universals, tropes are concrete entities (at least if their bearers are concrete); they depend on a particular individual as their bearer, and they are causally efficacious and can act as objects of perception. In fact, it has been argued that they are the immediate objects of perception prior to the perception of individuals (Williams 1953, Campbell 1990, Mulligan, Simons and Smith 2004, Lowe 2008). It is quite obvious that presentational pronouns make reference to a feature as a particular, a trope, not to a property, quality, or type as a universal. For example, pointing at a blue figure in the distance,

a speaker by uttering *that is Mary* cannot claim that Mary has that same kind of appearance when it is in fact the appearance of Sue. Identificational sentences identify the bearer of the particular trope that is in fact perceived, not an individual that has the kind of quality exemplified by the perceived feature. Presentational pronouns thus are not type demonstratives such as *this color* or *that shape*, that is, demonstratives with which a speaker makes reference to a quality, a universal, by pointing at a particular trope.

These are some further examples of the involvement of tropes in natural uses of identificational sentences:

- (25) a. (Introducing someone:) This is my sister. (Trope: visual appearance)
- b. (Looking at a figure in the distance:) That is John. (Trope: visual appearance)
- c. (Talking on the phone:) This is me. (Trope: sound of the voice)

Identificational sentences may also involve reference to representations of tropes rather than tropes themselves. *This* in a sentence like (25a) is entirely natural when looking at a photograph representing my sister. Here the photograph acts as the representation of the relevant trope, of which it is a more immediate representation than it is of the object the photograph is about. (25a) then identifies the bearer of the photographic representation which *this* makes reference to.

*This* and *that* can also make reference to events, as in the following examples:

- (26) a. (A car passing by:) Who is that?
- b. (Looking at a broken glass:) Who was that?

With the utterance of *that* in (26a), the speaker makes reference to an event that is being perceived. With the utterance of *that* in (26b), the speaker makes reference to an event in the past on the basis of its current physical results. This is reflected in the use of past tense for the *be* of identification. By uttering (26a) or (26b), the speaker asks for the identification of the cause or agent of the event he makes reference to.

The choice of tense in identificational sentences is further evidence that presentational pronouns make reference to tropes or events, rather than the individuals that are their bearers or causes. The choice of tense of identificational sentences is driven by the time of the event or trope referred to, as illustrated by the choice of past tense in (26b), not the lifespan of the individual identified.

In the case of tropes, it may be the trope itself or the time of the representation of the trope that determines the choice of tense. Thus, looking at a photograph, both *this is my grandfather* and *this was my grandfather* are acceptable, talking about my deceased grandfather. But a subsequent ordinary subject-predicate sentence requires past tense (*He was / \* is a teacher*).

Events are of course entities closely related to tropes. Most importantly, like tropes, events ontologically depend on individuals, the event participants. Identificational sentences with event-related subjects serve to express an identification of the cause or agent of an event.

By using a presentational pronoun, the speaker refers to a trope; yet the presentational pronoun as the subject of an identificational sentence cannot have the trope as its denotation, that is, as what the pronoun contributes to the compositional meaning of the sentence. The reason is that presentational pronouns cannot be replaced by explicit trope-referring terms:<sup>17</sup>

(27) \* That feature / noise / drive is Mary.

Bare demonstratives can act as trope-referring terms, though, in contexts other than as subjects of identificational sentences. For example, they act as trope-referring terms with the preposition *like* in sentences about the perception of kinds, such as the following:

- (28) a. Turquoise looks like that.  
b. Pain feels like this.

In such sentences, *this* or *that* refers to a particular trope whose perception is compared to a type, a color in (28a) or a type of experience in (28b). The *like this*-construction of such sentences figures prominently in philosophical discussions of phenomenal concepts, concepts introduced by type demonstratives which involve reference to particular phenomenal experiences (Loar 1997, Levine 2010).

Bare demonstratives, moreover, act as trope-referring terms with trope predicates that are nominalizations of adjectives, as in the sentences below, when *pure elegance* in (29a), let us say, is predicated of the particular quality of a dance, and *justice* is predicated of the quality of a particular legal decision:

- (29) a. This is pure elegance.  
b. This is justice.

The nouns *elegance* and *justice* are predicates of tropes, being able to form trope descriptions in *Mary's elegance* and *the justice of that decision*.

Bare demonstratives can also act as trope-referring terms when they are complements of perception verbs. In that case, the trope referred to may be picked up in a subsequent use of a presentational pronoun, as in the second sentence below:

- (31) Did you see that? That might have been Mary.

*This* and *that* thus have a simple trope-referring function in suitable syntactic contexts. But they have a more complex semantic function as subjects of identificational sentences. This double function parallels that of complex demonstratives such as *this color*, *this shape*, or *that way*. Such demonstratives can function both as referential terms referring to a quality (*I like this color*, *I have never seen that color*) and as demonstrative predicates, as below:

- (32) a. The car is that color.  
b. John painted the car that color.

Demonstrative predicates have a more complex meaning than demonstrative referential terms (Heal 1997). They involve reference to an entity or type of entity, but what they contribute to the composition of the meaning of the sentence is a property identified by that entity or type of entity. Thus with *that color* in (32a), the speaker will refer to a particular color instance, but the contribution of *that color* to the meaning of the sentence will be the property of being of the color of the instance the speaker refers to. It is that property that is attributed to the car in (32a) and (32b).

Similarly, bare demonstratives as presentational pronouns involve reference to tropes, but this is not what they contribute to the meaning of the sentence. That is, bare demonstratives in their function of presentational pronouns do not have tropes as their denotation. The tropes they refer to only serve to identify their denotations.

What should the denotation of a presentational pronoun be? Let us recall one peculiarity of identificational sentences with presentational pronouns, the obligatory epistemic interpretation of a modal verb, as in (33):

- (33) That might be Mary.

(33) states the identity of Mary with what according to some conceivable world is the bearer of the trope the pronoun makes reference to. This behavior of modals with presentational pronouns motivates as the denotation of the presentational pronoun a function mapping an epistemically possible world onto an individual that according to that world is the bearer of the trope. It is crucial that the epistemically possible or conceivable worlds need not be metaphysically possible. A trope depends ontologically on its bearer and thus will have the same bearer in all metaphysically possible worlds. But a trope need not have the same bearer in all epistemically worlds. Given a particular trope, especially in its role as the object of direct perception, it is conceivable that its bearer is distinct from the bearer it actually has, as long as its actual bearer is not known.

We can then spell out the semantics of presentational pronouns in two stages. First, the presentational pronoun will be evaluated like a referential term, standing for the trope the speaker refers to with the utterance of the

pronoun. Second, the syntactic role of a pronoun as subject of an identificational sentence will be evaluated and the pronoun will be assigned what I will call its ‘presentational denotation’, the semantic value it will contribute to the composition of the meaning of the sentence in which it occurs. The presentational denotation will be the function identified by that trope, a function mapping a world onto the individual that according to that world is a bearer of the trope. Thus, the two-stage semantics of presentational *this* will be as below:<sup>18</sup>

- (34) The denotation of trope-related presentational *this*
- a. *The referential denotation:* For a context of utterance *c* and a world *w*,  $[this]_{ref}^{c,w}$  = the trope that the speaker of *c* refers to with the utterance of *this* in *c*.
  - b. *The presentational denotation:*  $[this]^{c,w}$  = the function that maps any conceivable world *w'*, compatible with what is known in *w*, to the entity in *w'* that is the bearer of  $[this]_{ref}^{c,w}$ .

The verb *be* when it occurs in identificational sentences will have a different denotation from *be* when it occurs in subject-predicate sentences or *be* in identity statements. Identificational *be* or  $be_{ident}$ , as I will call it, will denote a relation that holds between functions from worlds to individuals and individuals:

- (35) For a context *c*, a world *w*, an individual concept *C*, and an individual *d*,
- $$\langle C, d \rangle \in [is_{ident}]^{c,w} = 1 \text{ iff } C(w) = d.$$

Combining the denotation of a presentational pronoun as in (34b) with the denotation of identificational *be* as in (35) will yield a narrow-scope effect of the subject with respect to any modal. Moreover, since presentational pronouns involve epistemically possible worlds, an obligatory epistemic interpretation of the modal will result:

- (36)  $[NP_1 \text{ might } be \ NP_2]^{c,w} = 1 \text{ iff } \exists w'(w'Rw \ \& \ \langle [NP_1]^{w,c}, [NP_2]^{w',c} \rangle \in [be_{ident}]^{c,w}) \text{ iff } \exists w'(w'Rw \ \& \ [NP_1]^{w,c}(w') = [NP_2]^{w',c})$

The denotation of presentational pronouns as a function is also suited for uses of pronouns as subjects of identificational sentences that relate to a contextually given description, as below:

- (37) Someone had come in. That was Mary.

Here the denotation of the pronoun will not be determined by a trope, but rather by the description obtained from the preceding context (‘the person

that has come in'): it will be the individual concept associated with the description, the function mapping a possible world (of whatever sort) onto the individual that in that world satisfies the description. This in fact coincides with Romero's (2005) account of specificational sentences with definite descriptions or relative clauses as subject, as in (38a) or (38b):<sup>19</sup>

- (38) a. The winner is Bill.  
b. What Bill ate was an apple.

For Romero, a definite NP in subject position denotes an individual concept, the intension of the definite description; likewise a free relative clause such as *what Bill ate* denotes a function mapping a world onto the maximal plurality of objects meeting the description.

### 5.2. Location-Related Identificational Sentences

Besides identificational sentences involving tropes or descriptions of objects, there is another kind of identificational sentence in English which I would like to briefly mention. These are location-related identificational sentences, which contain *here* or *there* in subject position:<sup>20</sup>

- (39) a. Here is my passport. (Handing someone one's passport.)  
b. Here is John and there is my sister. (Pointing at two people in a photograph.)

Not any location modifier can appear as subject of identificational sentences in English, though. *In Munich*, *in the forest*, and *everywhere*, for example, would not qualify. Only *here* and *there* are able to act as identificational subjects. This restriction to bare location demonstratives matches the restriction of trope-related identificational sentences to bare demonstratives *this* and *that* as well as the anaphor *it* as identificational subjects.

Just as *this*, *that* and *it* can also occur as ordinary trope-referring terms, *here* and *there* can act as location predicates in sentences other than identificational ones.

In (39a,b), *here* and *there* could be replaced by presentational *this* and *that* without apparent difference in meaning, which might suggest that there is not much of a difference between location-related and trope-related identificational sentences. However, there are a range of semantic differences between the two kinds of identificational sentences. One of them is that location-related identificational sentences do not allow for (epistemic) modals, unlike trope-related identificational sentences:

- (40) a. This might be John.  
b. ?? Here might be John.

Another difference is that location-related identificational sentences do not allow for past tense in the way of trope-related identificational sentences that involve reference to a trope or event in the past. Thus (41b), looking at a photograph of a deceased person, is impossible, as is (42b), referring to a car passing by:

- (41) a. This was my great-grand father.  
       b. ?? Here was my great-grandfather.
- (42) a. This was John. (Referring to a car passing by.)  
       b. ?? Here was John.

These differences are no surprise if *here* and *there* as identificational subjects involve direct reference to a location and have as their denotation the function mapping a possible world to the present occupier of that location. Direct reference to the location will hardly allow epistemic variation as to the occupier of the location, and thus epistemic modals would not make sense. The denotation of identificational *here* and *there*, being a function mapping a world to the present occupier of the location, will exclude any reference to the location in the past.<sup>21,22</sup>

### 5.3. *Apparent Statements of Sortal-Relative Identity*

We can now turn to the particularly interesting case of identificational sentences that appear to express sortal-relative identity, as in (3a), repeated again below:

- (3a) This is the same lump of clay but not the same statue as that.

Let us assume that *this* makes reference to a feature, perhaps represented by a photograph, of brownness and roundness and that *that* refers to a feature of brownness and angularity. The analysis of identificational sentences given so far allows a straightforward account of such sentences without making use of sortal-relative identity and without making reference to something indeterminate or indeterminate reference.<sup>23</sup> What only needs to be added to the analysis so far is the recognition that tropes can have more than one bearer. Apparent statements of sortal-relative identity with *this* or *that* are possible precisely when the two tropes that the pronouns make reference to have multiple bearers, but do not share all of their bearers. For example in (3a), the trope of brownness and roundness has both a lump of clay and a statue as bearer and the trope of brownness and angularity shares with it one of its bearers, the lump of clay, but not the other bearer, the statue. In (3a), *this* and *that* both make reference to complex tropes, and the sentence as a whole says that a bearer of the one trope which is a lump of clay is the same as a bearer of the other trope, but that another bearer of that first trope, a

statue, is not the same as a bearer of the other trope which also is a statue. The possibility of apparent relative-identity statements is thus reduced to the possibility of making reference to tropes and the metaphysical possibility of tropes having multiple bearers.

For the semantic analysis of apparent relative-identity statements like (3b), I assume that the function denoted by *this* is in fact a function mapping a world to a plurality of entities, the entities that according to the world are the various bearers of the trope that *this* makes reference to. The objects introduced by the postcopula NP will be specified as being among the objects the function yields at the world and time in question.

This then requires a slight modification of the semantics of presentational pronouns and identificational *be*, namely as below, where  $\leq$  in (43b) is the 'is among' relation:<sup>24</sup>

- (43) The presentational denotation of trope-related presentational *this*
- a.  $[this]^{c,w}$  = the function that maps any conceivable world  $w'$ , compatible with what is known in  $w$ , to the entity or plurality of entities that in  $w'$  is the bearer (are the bearers) of  $[this]_{ref}^{c,w}$ .
  - b. For a context  $c$ , a world  $w$ , an individual concept  $C$ , and an entity or plurality of entities  $d$ ,  $\langle C, d \rangle \in [is_{ident}]^{c,w} = 1$  iff  $C(w) \leq d$ .<sup>25</sup>

In apparent sortal-relative identity statements such as (3a), the conjunction is arguably (wide-scope) predicate conjunction. A compositional semantic analysis, which I will not spell out in detail, will require combining a semantic analysis of *same / different* with an account of indefinites as expressing choice functions. Informally, the logical form can be described as in (44a); more formally its truth conditions will be as in (44b):

- (44) a. For some lump of clay that is among the values of *this* at  $w$  and some lump of clay that is among the values of *that* at  $w$ , the two lumps of clay are identical, and for some statue that is among the values of *this* at  $w$  and some statue that is among the values of *that* at  $w$ , the two statues are not identical.
- b.  $[This\ is\ the\ same\ lump\ of\ clay,\ but\ not\ the\ same\ statue\ as\ that]^{c,w} = [This\ is_{ident}\ (a\ lump\ of\ clay\ and\ the\ same\ as)\ and\ (a\ statue\ and\ not\ the\ same\ as)\ that]^{c,w} = true$  iff  $\exists g \exists f (CF(g) \ \& \ CF(f) \ \& \ g([lump\ of\ clay]^{c,w}) \leq [this]^{c,w}(w) \ \& \ f([lump\ of\ clay]^{c,w}) \leq [that]^{c,w}(w) \ \& \ \langle g([lump\ of\ clay]^{c,w}), f([lump\ of\ clay]^{c,w}) \rangle \in [same]^{c,w}) \ \& \ \exists f \exists g (CF(f) \ \& \ CF(g) \ \& \ f([statue]^{c,w}) \leq [this]^{c,w}(w) \ \& \ g([statue]^{c,w}) \leq [that]^{c,w}(w) \ \& \ \neg \langle f([statue]^{c,w}), g([statue]^{c,w}) \rangle \in [same]^{c,w})$

The same analysis, with its distinction between referential and presentational denotations, will account for apparent relative-identity statements with free relative clauses describing objects of perception:

- (45) What John saw was the same river but not the same water as what Mary saw.

The referential denotation of *what John saw* will be the trope that is the direct object of John's visual experience, and the presentational denotation will be the function mapping any conceivable world to what according to that world are the bearers of that trope.

There are other more familiar cases of lack of bearer uniqueness that have been discussed in the literature. For example, the red of the sweater is intuitively exactly the same trope as the red of the wool of the sweater and the sharpness of the knife is intuitively exactly the same trope as the sharpness of the blade of the knife. (Levinson 1980, Schnieder 2004). These cases in fact both give rise to statements of apparent sortal-relative identity:

- (46) a. This is the same wool, but not the same sweater as that. (looking at two photographs of a sweater)  
 b. This (looking at a wound) was the same blade, but not the same knife as that (looking at another wound).

The view that tropes can have more than one bearer is not an uncontroversial ontological view. In fact, the common view is that tropes have a unique bearer (Schnieder 2004).<sup>26</sup> This is because tropes are ontologically dependent on their bearer, which is generally taken to mean both that a trope exists in a world at a time only if the bearer of the trope exists in the world at the time and that two tropes are identical only if they have the same bearer.

I would like to argue that multiple bearerhood of tropes is possible within strict limits. A trope can have multiple bearers in cases of constitution-related property inheritance or in certain other cases of property inheritance. An entity that is constituted by another may inherit certain properties from the latter. Thus, a statue inherits a range of properties from the clay from which it is made. This is what explains the similarity between the statue and the clay. The question which properties constituted objects 'inherit' from constituting ones has been discussed extensively in the philosophical literature, but only with respect to properties conceived of as universals (Fine 1982, 1999, Koslicki 2004). Thus, a statue inherits its location, weight, color, shape, texture, and chemical composition from the clay from which it is made. If properties are viewed as particulars rather than universals, then in fact constitution-related property-inheritance will yield tropes with multiple bearers, rather than generating different tropes with different bearers. For example, the brownness of the statue is the very same trope as the brownness of the clay because the former is inherited from the latter.

The case of the sharpness of the knife and the sharpness of the blade of the knife is a slightly different one, though the same sort of account will

apply here as well. Objects inherit certain kinds of properties from designated parts, and if properties are conceived as particularized properties, they will inherit tropes which have those designated parts as their bearers. Thus, just as the knife would inherit a property such as sharpness from its blade, the knife will inherit the trope of sharpness from the blade.

Several intuitions support the identity of such tropes. The brownness of the statue and the brownness of the clay appear to share all non-modal properties. They appear to share the very same spatial location and thus are spatially coincident and temporally at least overlapping entities. Furthermore, they appear to play exactly the same causal roles and are exactly similar.<sup>27</sup>

There is also an argument, though, in favour of tropes with different bearers being in principle distinct. It involves explicit complex trope-referring terms such as *the sharpness of the knife* and *the sharpness of the blade of the knife*. According to that argument, the trope 'the sharpness of the knife' and 'the sharpness of the blade of the knife' differ in that if the handle was separated from the blade, the former would not exist, but the latter would.

Conflicting intuitions of this sort may give rise to a third view, the view that tropes lack clear individuation conditions, that is, the view that the question whether two tropes are identical simply does not have an answer (Lowe 1998). But while intuitions about tropes may not be entirely sharp, they are very sharp when switching to events. The statue and the clay not only share properties; they also share the same role in various events, namely precisely those events that involve constitution-related derived properties. For example, any transport of the statue will be a transport of the clay from which the statue is made (change of location properties). Similarly, any touching of the statue will be a touching of the clay, and any weighing of the statue will be a weighing of the clay. Finally, any looking at the statue will be a looking at the clay. The intuitions with events are very clear: the transport of the statue is not an event distinct from the transport of the clay: there is one transport only, and so for the touching, the weighing, and the looking.

Why should appeal to events for the sharpening of the intuition help? First, recall that *this* and *that* can also make reference to events, and thus the corresponding question of the uniqueness of certain event participants will arise there as well. Second, events arguably are ontologically based on tropes: they arguably are temporal transitions among tropes (Mertz 1996). This means that the reason why events show a lack of uniqueness of event participants (in a particular role) must in fact be traced to the fact that the tropes involved in the event lack a unique bearer.

Let us then consider again the intuition that tropes do have a unique bearer based on the use of explicit complex trope-referring terms. It appears that when different terms are used, the intuition is much less clear. 'This particular sharpness feature', being a feature of the knife, would exist under the very same conditions as 'that particular sharpness feature', being a feature of the

blade of the knife; the former would continue to exist even if the handle of the knife was destroyed. Similarly, ‘this particular patch of brownness’, being a feature of the statue, would exist under the very same conditions as ‘that particular patch of brownness’, being a feature of the clay.

Thus, it is safe to conclude that tropes can have multiple bearers, namely just in case an object inherits a trope from an entity that constitutes it or that is a designated part relative to the kind of trope in question.<sup>28</sup> Tropes with multiple bearers have, it appears, a primary bearer, with the other bearers inheriting the trope in virtue of some or the other ontological (or perhaps semantic) condition.

Let me mention some further cases of apparent relative identity to which the present account straightforwardly applies. First, there are apparent relative-identity statements involving types and their tokens, such as (47), pointing at two pieces of clothing:

(47) This is the same dress, but not the same piece of clothing as that.

*This* and *that* in (47) in the relevant situation involve reference to the (visible) tropes of two tokens of a type, a particular type of dress. (47) can be true because the type inherits at least certain tropes from its tokens (such as typical color, shape etc)—or perhaps because as an immanent universal it shares, more immediately, certain tropes with its tokens.

Another case involves literary works, as in (48), pointing at two copies of a book:

(48) This is the same book, but not the same copy as that.

Again this sentence involves reference to two tropes, two visual appearances. The two tropes have distinct material objects, but the same literary work as bearers. Literary works have been viewed as types with the particular copies as their tokens (Woltersdorff 1970), in which case (48) would be just like (47). More plausibly, though, literary works are entities with multiple physical manifestations which will inherit relevant properties from their manifestations (perhaps as a form of variable embodiment in the sense of Fine 1999).

This might also hold for institutions. As entities with different physical manifestations, institutions also give rise to apparent relative-identity statements:

(49) This is the same bank, but not the same building as that.

*This* and *that* in (49), on the present view, will refer to the tropes of two physical manifestations of an institution which the institution itself will both inherit.

Geach's account of sortal-relative identity could in principle apply to all the apparent relative-identity statements discussed so far. However, there are statements of the same sort where that account would be inapplicable. An example is (50), looking at two photographs of the same woman, taken at the same time:

(50) This is the same woman as that.

*This* and *that* in this case can hardly be taken to stand for 'distinct' entities that are said to be identical relative to the sortal *woman* (such as temporal stages). Rather they stand for different tropes (or representations of tropes).

## 6. Conclusion

Identificational sentences, just like specificational sentences, have hardly been recognized as such in philosophical discussions, even though they play an important role both in what certain philosophical discussions are about and in what certain philosophical discussions routinely have to make use of. Recognizing that identificational sentences are not identity statements but involve the identification of the bearer of a trope sheds a new light on the discussions in which such sentences play a role. In particular, it sheds doubt on the common philosophical view that bare demonstratives involve some form of indeterminate reference, and it allows for an analysis of 'natural' apparent relative-identity statements that does away entirely with sortal-relative identity or indeterminate reference.<sup>29</sup>

## Notes

<sup>1</sup> Higgins (1973), who introduced the notion of an identificational sentence, took identificational sentences not to be subject-predicate sentences but identity statements of some sort. Identificational sentences are discussed at greater length in Mikkelsen (2004), who, though, takes identificational sentences to be specificational sentences (see Fn. 5).

<sup>2</sup> See Beyssade/Sorin (2005) and references therein for further discussion of such cases.

<sup>3</sup> German *das* 'that' is a presentational pronoun exhibiting the same peculiarities as English *this* and *that*.

<sup>4</sup> Another account that treats indefinites as of the same type as referential NPs is Discourse Representation Theory (Kamp 1981) and certain versions of dynamic semantics (Heim 1982). According to that tradition, roughly, indefinites have the semantic function of introducing variables into the logical form of a sentence: variables that later in the construction of the logical form will be bound by an independently introduced existential (or other) quantifier. As variable-introducing expressions, indefinites will thus be of the semantic type  $\langle e \rangle$ , the type of referential NPs.

<sup>5</sup> Higgins (1973) distinguishes identificational sentences from specificational sentences. Typical specificational sentences are those below:

- (i) a. What John ate was an apple.
- b. What John did was kiss Mary.
- c. The best player is John, isn't it?

(2a) would also be a specificational sentence. When discussing the differences between identificational and specificational sentences, Higgins, though, focuses on specificational sentences of the sort of (ib), where the subject characterizes the content of a nonreferential expression (a verb phrase in this case). Sentences like (2a) do not show the same behavior as specificational sentences of this sort and pattern in relevant respects with identificational sentences. Specificational sentences of the sort in (ib), for example, resist modal verbs, as Higgins shows. But this is not the case for sentences like (2a). For further discussion of specificational sentences see Romero (2005) and references therein.

<sup>6</sup> These problems will not go away if identity is taken to be only sometimes sortal-relative (Gupta 1980). Whether Leibniz' Law needs to be maintained is not undisputed, see Deutsch (2002) for discussion.

<sup>7</sup> Dummett (1973) makes a suggestion on which it would not be a relation, a suggestion which I will turn to later.

<sup>8</sup> Of course a sentence like the one below is unproblematic:

- (i) This statue is the same statue as that.

But this sentence does not state relative identity.

<sup>9</sup> More precisely, for Geach the following statement should also be acceptable:

- (i) The thing here that is a lump of clay is a different statue from the thing there that is a lump of clay.

But (i) is not any more acceptable than examples like (21).

<sup>10</sup> Sentences of the sort in (22a) are discussed by Geach (1962), sentences of the sort in (22b) by Hawthorne (2003) and Deutsch (2002), as well as by Noonan (1999), who also mentions the examples below:

- (i) a. The same piece of bronze is at different times different statues.
- b. The same ship is at different times two completely different collections of planks.

<sup>11</sup> Perry (1970) starts his discussing of relative identity with sentences like (22a), but then discusses sentences like those below:

- (i) a. What I bathed in yesterday and what I bathed in today are the same river.
- b. What I bathed in yesterday and what I bathed in today are the same water.

At the end of his paper, Perry mentions an example with *this*:

- (ii) This is the same piece of clay as the one you bought last week, but this is a different statue from the one you bought last week.

Dummett (1973, 1981) specifically discusses apparent relative-identity statements with bare demonstratives, and only those.

<sup>12</sup> Thus Dummett, argues that *this is a book* when *book* is used as a sortal for concrete copies has the same truth conditions as *this is a book* when *book* is used as a sortal for the type or literary work.

<sup>13</sup> This point relates also to a more recent debate whether 'visual reference' requires a sortal. Campbell (2002, 2006) argues that it does not, which would support the present point.

<sup>14</sup> Note that there are also count noun phrases that fail to have a sortal content, for example *the cause of John's distress* or *the target of John's attention*. Such noun phrases do not require sortal predicates:

- (i) a. The cause of his distress (his youngest child) could finally be identified.
- b. The target of his attention (namely Mary) is very beautiful.

Note that the constraints on the postcopula NP obtain also when the presentational pronoun is anaphoric to a proper name or full sortal NP in topic position, as is possible in German or

French:

- (ii) a. Diese Frau, das war meine Tante / \* das was schoen.

‘This woman, that was my ant / that was beautiful.’

- b. Cette femme, c’était ma tante / \* c’était belle.

‘This woman, that was my ant / that was beautiful.’

The use of *das* ‘that’ in (iia) leaves no doubt as to the identity conditions of the object at play. But the constraints on the postcopula expression hold nonetheless.

<sup>15</sup> And perhaps even if he does not, see Campbell (2006).

<sup>16</sup> Williams (1953) is the classical modern reference on tropes. Further references include Woltersdorff (1970), who uses the term ‘case of a property’ instead of the term ‘trope’, Lowe (1998), who uses the Aristotelian term ‘mode’, and Mulligan/Simons/Smith (2004), who use the Husserlian term ‘moment’. Other terms for tropes are ‘particularized properties’, ‘concrete properties’, and ‘abstract particulars’ (Campbell 1990). For the application of trope ontology to the semantics of adjectives see Moltmann (2009).

<sup>17</sup> As an anonymous referee has pointed out, there are cases where explicit trope-referring terms appear to act as subjects of identificational sentences:

- (i) a. That white speck in the horizon is my house.

b. The blue figure in the distance is Mary.

However, there is evidence that such statements are not in fact identificational sentences, but rather identity statements. First, unlike identificational sentences, the sentences in (i) allow for inversion:

- (ii) a. My house is that white speck in the horizon.

b. Mary is the blue figure in the distance.

Second, the NPs in the subject position in (ia,b), unlike identificational subjects, can be coordinated with ‘ordinary’ referential NPs, and moreover they can occur in object position:

- (iii) a. This car and that white speck in the horizon are my only possessions.

b. John wants to marry the blue figure there in the distance.

In fact, it seems that the NPs in the subject position of (ia, b) can act as descriptions of objects, rather than as trope descriptions, by describing the way an object appears from a distance. This is not an option for trope descriptions in general, as the examples in (27) make clear.

<sup>18</sup> *That* will have the same sort of denotation. *This* and *that* differ in proximal and distal features, which I will disregard.

<sup>19</sup> That a sentence is not an ordinary identity statement but a specificational sentence is indicated by the use of a tag question with the neutral pronoun *it* as well as a subsequent identificational sentence with discourse-related *it*, as below:

- (i) The winner is Bill, isn’t it? It is not John.

For specificational sentences, see Fn 5.

<sup>20</sup> I would like to thank the anonymous referee for drawing my attention to such sentences.

<sup>21</sup> A further differences between trope-related and location-related identificational sentences is that the latter have no event-related use (as expected) and cannot occur in apparent relative-identity statements:

- (i) ?? Here is the same statue, but not the same lump of clay as there.

On the analysis developed in the next section, apparent relative-identity statements are in fact about the bearers of tropes (not the occupiers of locations).

Furthermore, whereas trope-related identificational sentences may also contain free relative clauses with perception verbs in subject position, there are no free relative clauses for locations

that could act as identificational subjects:

- (ii) a. What John saw was Mary.
- b. ?? Where the light is is John.

<sup>22</sup> There are yet other types of identificational sentences in other languages. Latin *ecce* and French *voilà* appear to act as subjects of reduced identificational sentences:

- (i) a. *Ecce homo.*  
      here the man
- b. *Voilà une belle femme*  
      here a beautiful woman

<sup>23</sup> I will follow Lowe (1989, 1995), Fine (2003), Koslicki (2004) and others (such as Aristotle) in taking the lump of clay to be an entity distinct from the statue.

<sup>24</sup> This modification is needed also for tropes that take as bearers a plurality of entities that are not constitutionally related. *This* in the sentence below will make reference to such a trope:

- (i) This is John and Mary.

<sup>25</sup> This denotation of identificational *be* corresponds to Romero's (2005) analysis of *be* in specificational sentences such as (38b), repeated below:

- (38b) What John ate was an apple.

On Romero's analysis, a free relative clause as subject of a specificational sentence denotes a plurality-valued function and specificational *be* a relation between functions and pluralities of entities. This allows (38b) to be true in a situation in which John ate more than just an apple.

<sup>26</sup> Schnieder (2004) argues for a semantic account of apparent cases of lack of bearer uniqueness. On this account, the term *the sharpness of the knife* is able to refer to the same trope as the term *the sharpness of the blade of the knife* because the blade of the knife is part of the knife and as a general principle an object can be used to refer to the trope of a designated part of that object. This general principle is problematic, however. It depends entirely on the nature of the abundant property the predicate expresses which part may count as a designated part of an object, and thus whether an object and a part of it can be mentioned in two distinct expressions that refer to the same trope. For example, in contrast 'to the sharpness of the knife' and the 'sharpness of the blade' of the knife, 'the shortness of the knife' and 'the shortness of the blade of the knife' are certainly distinct tropes. Thus, there is no general semantic principle that allows *the A-ness of NP<sub>1</sub>* and *the A-ness of NP<sub>2</sub>* to refer to the same trope if NP<sub>2</sub> refers to a part of what NP<sub>1</sub> refers to. Levinson (1980), who is one of the first to observe cases of apparent lack of bearer uniqueness, argues for the relative independence of tropes from their bearers.

<sup>27</sup> I assume that tropes are determinates, not determinables. That is, 'the brownness of the statue' is not an entity that could differ in its manifestations from 'the brownness of the clay', for example by allowing a manifestation in which the statue is painted over, which would not be a manifestation of the brownness of the clay. Tropes are generally taken to be determinates because tropes are concrete entities in the world, unlike non-natural properties.

<sup>28</sup> If constitution-related entities may share the same tropes, this would allow for a novel conception of constitution itself, on a view of constituent ontology on which objects are just bundles of tropes (Williams 1953, Campbell 1990 and others). Within that view, one might say that only those objects are constitution-related that share tropes as constituents. For example, the clay would constitute the statue because a range of tropes that are constituents of the clay are also constituents of the statue.

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