



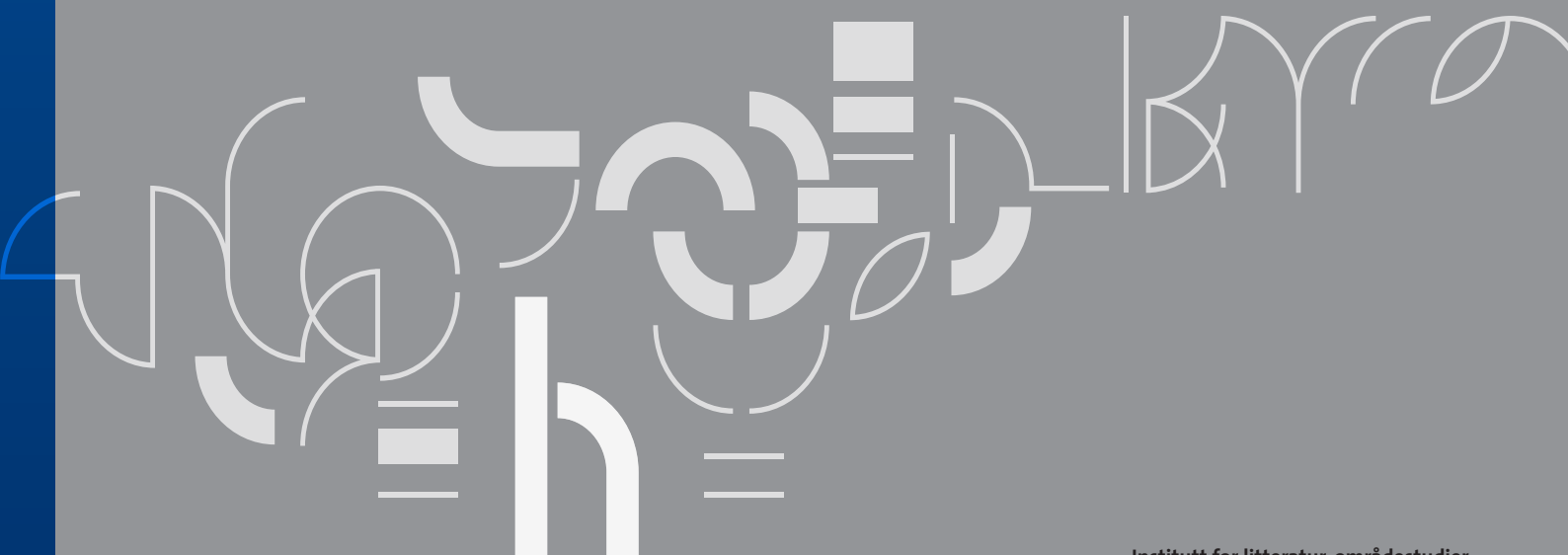
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That is Rosa Identificational Sentences as Intensional Predication

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Abstract

This paper presents an analysis of identificational sentences like *That is a woman* and *That is Rosa* as predicational sentences. We argue that the pre-copular demonstrative denotes an individual concept and that the post-copular phrase denotes a sort, in the sense of Gupta (1980): a function from worlds into sets of individual concepts. These sentences provide evidence for a model in which transworld identity is a nontrivial relation and is expressed by nouns.

Copular sentences in which the pre-copular phrase is a demonstrative and the post-copular phrase is a nominal have been classified by Higgins (1973) as identificational sentences.¹ These sentences, exemplified in (1), are used in presentational contexts.

- (1) a. That is Rosa.
b. That is a woman.

Higgins (1973) presents identificational sentences as part of his typology of copular sentences. The other three types are exemplified in (2).

- (2) a. Rosa is a doctor. Predicational
b. What I don't like about John is his tie. Specificational
c. Hesperus is Phosphorus. Identity

A predicational sentence can be intuitively described as picking out an entity (in (2-a), *Rosa*), and saying about that entity that it has a certain property (in (2-a), *doctor*). A specificational sentence can be characterized as a list with a single entry; here, the title is *What I don't like about John* and the single entry is *his tie*. An identity sentence

*We would like to thank Greg Carlson, Christine Gunlogson, David Braun, and the audience at Sinn und Bedeutung 12 for insightful comments. The authors' names are in alphabetical order.

¹Higgins also treats sentences of the form *That woman is Rosa* as identificational. These sentences are beyond the scope of the present paper.

like (2-c) expresses identity between the denotations of the pre- and the post-copular phrases.

Higgins suggests that identificational sentences like (1) also express identity. This allows a straightforward account of the fact that the post-copular position is restricted to nominals. However, analyzing identificational sentences as identity sentences does not account for their special use in presentational contexts. Furthermore, the demonstrative pronoun in identificational sentences is exceptional in that it appears to allow reference to humans, contrasting with demonstrative pronouns in other environments. For example, the demonstrative pronoun in (3) cannot be used to refer to humans.

- (3) a. #That [_{VP} had lunch outside].
 b. #That is [_{AP} tall].

In this paper we present an analysis of identificational sentences as predicational. In section 1 we use Higgins' diagnostics for distinguishing predicational and specificational sentences to argue that identificational sentences are predicational. We derive the special characteristics of identificational sentences from the compositional semantics of the pre- and post-copular phrases. In section 2 we consider the interpretation of the post-copular nominal, introducing Gupta's notion of *sort*; we argue that the post-copular nominals in identificational sentences denote sorts and discuss the implications of sorts for the notion of transworld identity in the model. In section 3 we examine the meaning of the pre-copular demonstrative in the light of our Gupta-style model. In section 4 we combine the pre- and post-copular elements in a compositional semantics and discuss a range of post-copular nominals.

1 Identificational sentences as predicational

Pursuing a different typology of copular sentences, Mikkelsen (2004) proposes that sentences like (1) are a special case of specificational sentences.² For Mikkelsen, specificational sentences are inverse predicational structures in which the pre-copular phrase is interpreted as a property and the post-copular expression denotes an entity. Mikkelsen argues that the property denotation of the pre-copular demonstrative pronoun in an identificational sentence is an anaphor whose value is determined by the context, and can be made explicit by a subsequent phrase. In particular, (4) can paraphrase (1) if, for example, the sentences in (1) are uttered at a party.

- (4) That is [a woman/Rosa] who is standing by the fireplace.

This analysis maintains the generalization that English demonstrative pronouns are [-human], as the denotation of a demonstrative pronoun in an identificational sentence is a property rather than a (human) individual.

²Mikkelsen pursues a different analysis of identificational sentences with a pre-nominal complex demonstrative like *That woman is Rosa*, arguing that they are identity sentences.

If sentences like (1) are indeed specificational, they should exhibit the same syntactic behavior as other specificational sentences. We follow Heller (2005) in testing this prediction using Higgins' (1973) diagnostics for distinguishing specificational and predicational sentences.³ To this end, the rest of this section applies these diagnostics to the identificational sentences in (1), comparing their behavior to the canonical predicational sentence in (5-a) and the canonical specificational sentence in (5-b).

- (5) a. Rosa is a doctor.
b. My next-door neighbor is Rosa.

Deleting the post-copular phrase. Predicational but not specificational sentences allow the post-copular phrase in a coordinate structure to be deleted, as in (6). Identificational sentences pattern with predicational sentences in allowing this deletion (7).

- (6) a. Rosa is a doctor and Matilda is too.
b. *My next-door neighbor is Rosa and your next-door neighbor is too.
- (7) a. (pointing at pictures) That is Rosa and that is too.
b. That is a woman and that is too.

Deleting the copula. Predicational sentences also differ from specificational ones in allowing the copula to be deleted in a coordinate structure, as in (8). The coordinated identificational sentences in (9) also allow for deleting the copula.

- (8) a. Rosa is a doctor and Matilda — a dentist.
b. *My next-door neighbor is Rosa and your next-door neighbor — Matilda.
- (9) a. That is Rosa and that — Matilda.
b. That is a woman and that — a man.

Extraction out of the post-copular phrase. Extraction out of the post-copular phrase is more acceptable in predicational sentences (10) than specificational sentences (11). As in the two previous tests, the identificational sentence in (12) patterns with the predicational ones, allowing extraction out of the post-copular phrase.

- (10) a. John said that what Mary was looking at appeared to be a picture of a cat.
b. ?What did John say that what Mary was looking at appeared to be a picture of _?
- (11) a. They say that what Mary was going to do was give the dog to John.
b. *Who did they say that what Mary was going to do was give the dog to _?
- (12) Who did Rosa say that that was a friend of _?

³Higgins himself applied these tests only to predicational and specificational sentences.

VP coordination. Finally, predicational sentences allow VP coordination and specificational sentences do not, as in (13). Identificational sentences do not allow VP coordination, patterning this time with specificational sentences.

- (13) a. Rosa is a doctor and is very smart.
 b. *My next-door neighbor is Rosa and is very smart.
- (14) a. *That is Rosa and is very smart.
 b. *That is a woman and is very smart.

The fact that identificational sentences like (1) pattern with predicational sentences on three of the four diagnostics presents a serious challenge for Mikkelsen’s analysis of (1) as specificational sentences. We take these tests to indicate that identificational sentences are in fact predicational. This leaves us with two puzzles. First, we need to explain why the post-copular position of identificational sentences is limited to nominals. Second, we need to account for the apparent exceptional human denotation of the pre-copular demonstrative pronoun. We take these up in order in the next two sections.

2 The interpretation of nominals

2.1 Two kinds of nominal predicates

Let us compare the identificational sentence in (15-a) with (15-b), which, on the surface, has the same post-copular nominal. At first glance, these sentences seem to have a similar interpretation: the pre-copular phrase picks out an entity and the sentence says about it that it is a camera.

- (15) a. That is a camera.
 b. The thing I want to buy is a camera.

However, when we examine the syntactic behavior of the two sentences with respect to Higgins’ deletion tests (it is not possible to apply the extraction test here) we find that they behave quite differently. While (15-a) is perfectly acceptable in coordinate structures with deletion of the post-copular phrase or of the copula, as in (16), (15-b) is not, revealing that (15-b) does not in fact have a predicational reading.

- (16) a. That is a camera and that is too.
 b. That is a camera and that — a clock.
- (17) a. ??The thing Rosa wants to buy is a camera and the thing Matilda wants to buy is too.
 b. *The thing Rosa wants to buy is a camera and the thing Matilda wants to buy — a clock.

The contrast between (16) and (17) is surprising given the intuitively similar meaning of the sentences in (15). It turns out, though, that the sentences in (17) can be improved with the right contextual support. Consider a situation in which Rosa and Matilda are in a cell phone store, shopping for new cell phones and discussing the features of various models. In this context, the salesperson can utter (18-a), and if Rosa likes the cell phone that the salesperson has shown her, (18-b) can be used to describe the situation.

- (18) a. The cell phone on the second shelf is a camera.
 b. The phone Rosa wants to buy is a camera.

Suppose Rosa has decided to buy a folding cell phone with a camera feature, whereas the more sophisticated Matilda has her heart set on an iPhone. In this context, both sentences in (19) are acceptable, showing that a predicational reading is available.

- (19) a. The cell phone Rosa wants to buy is a camera and the one Matilda wants to buy is too.
 b. The cell phone Rosa wants to buy is a camera and the one Matilda wants to buy — a web browser.

How is this context different from our original example? Under the most salient interpretation of (17), the entities the sentences talk about are cameras. In the context provided for (19), by contrast, the sentences are not about cameras, but rather objects that have a secondary function as a camera. This contrast can be illustrated if we consider possible answers to the question *What is that?* If the questioner points at one of the gadgets that Rosa and Matilda are considering, the correct answer is *a cell phone*, not *a camera*.

The contrast in acceptability between the sentences in (17) and (19) indicates that this meaning difference has an effect on the syntactic behavior of the sentences, and by extension on their compositional semantics. In particular, *a camera* is a predicate in (19) but not in (17). Equipped with this contrast, let us go back to identificational sentences, and compare the identificational (20-a) with the predicational (20-b).

- (20) a. That is a camera.
 b. The cell phone Rosa wants to buy is a camera.

Higgins' diagnostics reveal that the post-copular nominal is a predicate in both sentences. Nonetheless, these predicates express a rather different relation to the entity denoted by the pre-copular phrase. In (20-a), *a camera* describes the nature of the entity, providing an answer to the question *What is it?* In (20-b), by contrast, *a camera* is only a secondary property of the entity. We capture this contrast by assigning a different meaning to *a camera* in the two cases. We propose that the denotation of *a camera* in (20-b) is the standard denotation of predicates: a property at type $\langle s, \langle e, t \rangle \rangle$. In (20-a) *a camera* provides more information. In addition to expressing a property, it tells us something about the essence or nature of the entity. We will call such predicates

*quiddity predicates*⁴ and argue that they denote sorts, in the sense of Gupta (1980). Gupta’s (1980) semantics of sorts is based on a conception of transworld identity that differs from what is usually assumed. We discuss the motivation for Gupta’s conception of transworld identity in the next section.

2.2 Quiddity predicates and transworld identity

It is well-known in the philosophical literature that analyzing all nominals as properties (at type $\langle s, \langle e, t \rangle \rangle$), in parallel to verbal and adjectival predicates, is problematic, because it leads to problems of transworld identity. In this section, we illustrate this problem by considering the interpretation of *same* and *different*. Let us consider the actual world, where Michelangelo carved the statue David from a certain block of marble, and try to imagine how things might have been different. Two possibilities are characterized by the sentences in (21).

- (21) a. David could have been made of a different piece of marble.
 b. (Pointing at David) This piece of marble could have been a different statue.

While these sentences are easy to understand, the concepts of *same* and *different* are surprisingly difficult to represent in typical models. Consider Figure 1, where w^* is the actual world.

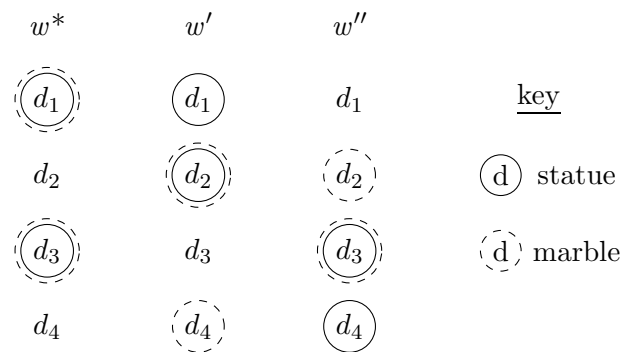


Figure 1: Information represented in a typical model

Suppose that d_3 in w^* is David. In order for (21-a) to be true, there has to be a world in which David is made of a different piece of marble. We can find David in other worlds — d_3 is the same entity throughout — and verify that d_3 is made of marble in w'' , but we don’t have a way to represent whether d_3 is made of the same marble in w^* and w'' or of different pieces of marble in the two worlds. Similarly, if d_3 in w^* is the referent of the demonstrative in (21-b), then to show that (21-b) is true, we need to find another world where d_3 is made into a different statue. We can easily verify that d_3 is a statue in w'' , but we don’t have a way to represent whether d_3 is the same statue in w^* and w'' or different statues in the two worlds. The problem rests in the fact that a typical model

⁴We are indebted to Greg Carlson for suggesting this term.

has only a single, trivial principle of identity where every entity is identical to itself, so *being the same statue* cannot be distinguished from *being the same marble*.

The solution proposed by Geach (1962, 1972), and elaborated by Gupta (1980), is to replace the single, trivial principle of identity with multiple, nontrivial principles of identity, as illustrated in Figure 2 (again, w^* is the actual world).

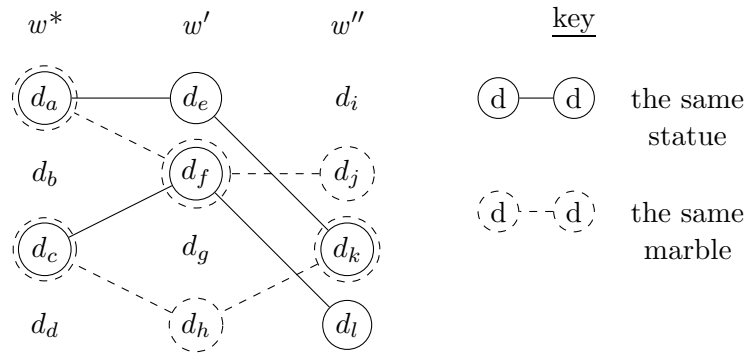


Figure 2: Information represented in a Geach-Gupta style model

The principles of identity for statues and pieces of marble are different: the solid lines connect the corresponding statues across worlds, and the dashed lines connect the corresponding pieces of marble across worlds. This allows us to represent a state of affairs in which d_a in w^* is the same statue as d_e in w' , but not the same piece of marble, while d_a in w^* is the same piece of marble as d_f in w' , but not the same statue. Note that while the subscripts in Figure 1 are meaningful as they represent the (trivial) principle of identity in a standard model, the subscripts in Figure 2 are not part of the model and are used here for ease of reference.

In a Geach-Gupta model, nouns differ from other predicates in that, in addition to providing a *principle of application*, i.e. saying whether an entity has a certain property, they also provide a *principle of identity*, i.e. provide information that tracks the entity across possible worlds. Gupta (1980) proposes that a “common noun” (roughly what we would consider to be the syntactic complement of a determiner) denotes a *sort*: a function from worlds into sets of individual concepts at type $\langle s, \langle \langle s, e \rangle, t \rangle \rangle$. Suppose we interpret the sort *woman* relative to w ; this will give us the set of woman individual concepts in w . The values of these individual concepts relative to w are the women in w . In addition, the individual concepts track the corresponding women across other possible worlds. By definition, the sets of individual concepts are *separated*: two distinct women in one world correspond to two distinct women in other worlds and will never collapse into a single woman.⁵

For Gupta, sorts are not predicative, and he analyzes a predicational sentence like *Rosa is a woman* as involving identity, i.e. as *Rosa = a woman*. We depart from Gupta and propose that sorts can, in fact, be predicative. Specifically, we propose that the

⁵Throughout the paper, an individual concept is used to mean a function from worlds into entities (type $\langle s, e \rangle$) and should not necessarily be taken to convey a concept or to return individuals as opposed to other entities.

post-copular nominal in an identificational sentence, which we characterized earlier as a quiddity predicate, denotes a sort. Recall that quiddity predicates provide information that addresses the question *What is it?*. Gupta's sorts capture this kind of information in addition to information about properties by expressing both a principle of identity and a principle of application.

If the predicate of an identificational sentence denotes a sort, this straightforwardly explains why this position is restricted to nouns, excluding VP, AP and PP predicates. This is because only nouns denote sorts, as only nouns provide a principle of identity in addition to the principle of application provided by all predicates.

3 Demonstrative pronouns

If an identificational sentence like *That is a woman* is predicational and the nominal predicate denotes a sort, then the pre-copular demonstrative is predicted to denote an individual concept. Because pronouns, including demonstrative pronouns, are standardly analyzed as referring expressions (denoting entities at type *e*), our predictions amount to a claim that the demonstrative pronoun in an identificational sentence contributes its intension. We therefore turn now to the intension of demonstrative pronouns.

In his classic work on demonstratives, Kaplan (1977) observes that although demonstrative pronouns are sensitive to speaker demonstrations (or referential intentions) and encode locative features, none of this information is part of the intension of a demonstrative. Consider (22) in a context where there is a gray cell phone near the speaker and a black cell phone farther away, and the speaker is pointing at the black cell phone.

- (22) If someone switched the places of the two cell phones...
- a. ...the thing that I would be pointing at would be gray.
 - b. ...the thing that would be in that location would be gray.
 - c. ...that would be gray.

Intuitively, (22-a) and (22-b) are true, contrasting with the false (22-c). If the intension of the demonstrative pronoun contained information about the speaker demonstration or the relevant locative feature, (22-c) would have a true reading like (22-a) or (22-b).

On Kaplan's account, therefore, information about demonstrations (or speaker intentions) and about the locative features is anchored to the context of utterance, and demonstrative pronouns contribute only an entity to the compositional semantics.⁶ The intension of a demonstrative pronoun is a rigid individual concept that, in each relevant possible world, picks out the entity that is identical to the referent in the actual world.

⁶More recent work on demonstratives has challenged Kaplan's view that demonstratives never interact with other elements in the compositional semantics. See King (2001) and Wolter (2006) for alternative approaches to demonstratives.

In a Geach-Gupta model, however, it is not meaningful to talk about rigidity in the same way, since transworld identity is relativized to a nominal sort. We therefore recast Kaplan's treatment of demonstrative pronouns in terms of rigidity relative to a nominal sort. First, the extension of a demonstrative pronoun is an entity that is determined by the context on the basis of a speaker demonstration, exactly like Kaplan's original treatment. The value of the intension in each possible world corresponds to the actual referent; again, just like a standard account. The difference lies in how transworld identity is defined. As a consequence of the nature of transworld identity in this model, the value of the intension is of the same sort in each world, and this is the case even though the demonstrative pronoun itself does not specify the sort of its referent. This is because an entity can only be the same across worlds if it is the same N across worlds. Notice that this recasting of the Kaplanian analysis still predicts that although (22-c) is scopally ambiguous, the two readings are semantically equivalent and false.

The demonstrative meaning sketched above places no restrictions on the sort of the referent, providing a way of understanding why a demonstrative pronoun can refer to a human in a sentence like *That is a woman*. The context in which this sentence would be uttered is such that the demonstrated entity is either hard to see or highly androgynous. In other words, it will be uttered in a context where it cannot be assumed that the interlocutors are able to infer the sort of the demonstrated entity. This is exactly what our demonstrative meaning does: places no restriction on the sort of the entity.

The obvious question is whether this demonstrative meaning is specific to presentational contexts. If this is the meaning of demonstrative pronouns across the board, one has to explain why demonstrative pronouns normally cannot be used to refer to humans. While a complete answer to this question is beyond the scope of this paper, our direction begins with the observation that there are special personal pronouns that refer only to humans, such as *she*. We believe that the existence of these pronouns limits the use of demonstrative pronouns that refer to humans to those special contexts where personal pronouns cannot be used. Preliminary evidence for this line of analysis comes from the fact that sentences like (23) cannot be used in presentational contexts.

(23) (pointing) She is Rosa.

This suggests that a complete analysis of the distribution of demonstrative pronouns requires a better understanding of the distribution of personal pronouns.

4 Composing identificational sentences

Having argued for the meaning contributed by the different parts of identificational sentences, we are now in a position to combine these in a compositional analysis of (24).

(24) That is a woman.

The post-copular noun *woman* denotes a sort, or function from worlds into sets of individual concepts, as shown in (25). (25-a) guarantees that the extension of each individual concept is a woman. (25-b) provides the principle of identity for *woman*. Finally, (25-c) makes sure that each woman in one world corresponds to one woman in another world, formalizing the intuition that two woman cannot collapse into one.⁷

- (25) $\llbracket \text{woman} \rrbracket^{M,w^*,g}$ (type $\langle s, \langle \langle s, e \rangle, t \rangle \rangle$) The function from worlds w to sets of individual concepts I such that:
- For each individual concept i in I , $i(w)$ is a woman
 - For all w', w'' such that $i(w')$ and $i(w'')$ are defined: $i(w')$ is the same woman as $i(w'')$
 - For all individual concepts i, i' that belong to $\llbracket \text{woman} \rrbracket^{M,w^*,g}$ at world w , if at some w' , $i(w') = i'(w')$ then $i = i'$. [separation]⁸

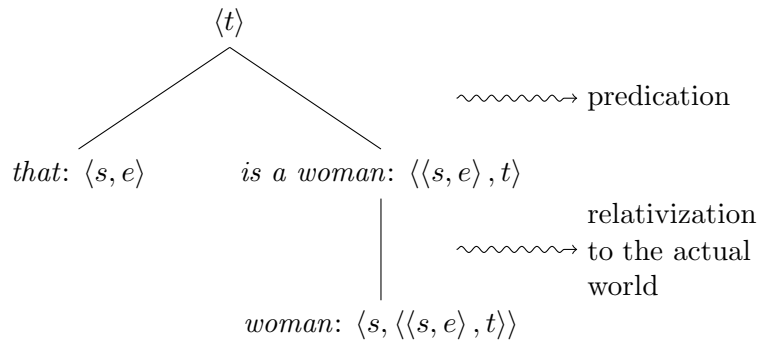
The pre-copular demonstrative pronoun contributes an individual concept at type $\langle s, e \rangle$, as in (26). (26-a) takes this individual concept to be a variable whose value is assigned by the context and (26-b) makes sure that the value of this individual concept in the actual world w^* is the entity demonstrated (or otherwise intended) by the speaker. (26-c) deals with the value of the individual concepts in other worlds. Remember that this individual concept denotes at each world the entity that corresponds to the entity in the actual world, but without specifying a noun that would provide the principle of identity. Imagine this individual concept can find in other worlds the entity that corresponds to the entity demonstrated in the actual world: then, by definition, this individual concept must be a member of some N (relative to the actual world w^*). The restriction is therefore that this individual concept is a member of the grand union of all sets of individual concepts that make up the meaning of all nouns.

- (26) $\llbracket \text{that} \rrbracket^{M,w^*,g}$ (type $\langle s, e \rangle$): i , such that
- the value of i is determined by the contextually provided assignment function g
 - $i(w^*)$ is demonstrated by the speaker in the context of utterance
 - i is a member of the grand union of nominal sorts S relativized to w^* .

The actual composition is shown in Figure 3. When the sentence is composed, the post-copular phrase is relativized to the actual world, just like other main predicates. Following standard assumptions for predicational copular sentences, we take the post-copular phrase to apply directly to the pre-copular phrase by function application (Partee 1987). The details of the contribution of the copula and the indefinite article depend on more general assumptions about copular sentences, which we will not discuss here.

⁷Note that (25) requires that all entities will exist in all worlds, which of course is a simplification. See Gupta (1980) for treatments of non-existent objects.

⁸Gupta (1980) adopts a stronger requirement where separation is not relativized to a world w : see p. 29ff for discussion.

Figure 3. Composing *That is a woman*

All in all, the meaning of an identificational sentence is such that it makes explicit the sort relative to which the demonstrated entity may be tracked across possible worlds.

We are now in a position to tie up a loose end from section 1. Recall that on the final diagnostic we considered for distinguishing predicational and specificational sentences, identificational sentences differ from canonical predicational sentences in not allowing VP coordination. On our analysis, the unacceptability of (14-b) is simply a type mismatch between the sort-denoting *woman* and the property-denoting *very smart*.

4.1 Proper names

As shown in example (27) and the title of our paper, proper names are one kind of post-copular nominals found in identificational sentences.

(27) That is Rosa.

For our analysis to apply to sentences like (27), proper names must have a sort denotation. But, standardly, proper names denote entities, and their intensions are rigid individual concepts (Kripke 1982). Our goal, then, is to examine whether there is a sort denotation that would maintain standard assumptions about the meaning of proper names.

As discussed earlier, rigidity in a Geach-Gupta model is relativized to a sort. If we want a proper name to denote an entity that is the same N across worlds, what would that N be? It is not desirable to base this sort on some common noun or a complex description, because that would amount to the description theory of proper names. If we use the name itself as the sort we avoid these problems. Evidence that proper names express a principle of identity — the defining characteristic of sorts — comes from (28), where proper names combine with *same/different* in a meaningful way (see again section 2.2).

- (28) a. This is the same Rosa we talked about yesterday.
 b. This is a different Rosa from the one we talked about yesterday.

Treating names as sorts gives us the denotation for *Rosa* shown in (29).

- (29) $\llbracket \text{Rosa} \rrbracket^{M,w*,g}$ (type $\langle s, \langle \langle s, e \rangle, t \rangle \rangle$): the function from worlds w to sets of individual concepts I such that:
- a. For all individual concepts i in I , $i(w)$ is Rosa
 - b. $\forall w', w''$ s.t. $i(w')$ and $i(w'')$ are defined: $i(w')$ is the same Rosa as $i(w'')$.
 - c. For all individual concepts i, i' that belong to $\llbracket \text{Rosa} \rrbracket^{M,w*,g}$ at world w , if at an arbitrary w' , $i(w') = i'(w')$ then $i = i'$. [separation]

The condition in (29-a) guarantees that the name picks out Rosa. (29-b) ensures that the same Rosa is picked out in each world. Note that nothing requires the set of individual concepts denoted by a proper name to be a singleton, allowing there to be more than one Rosa. Since transworld identity depends on a principle of identity provided by the name itself, the denotation of a proper name can collect all the individual concepts corresponding to the bearers of the name while maintaining the correct transworld identity relations. That is, allowing more than one bearer of a name does not compromise rigidity.⁹

In addition, treating names as sorts that may denote non-singleton sets of individual concepts sets the stage for a straightforward explanation of cases like (30), in which more than one person must bear the name *David*. This gives us an advantage over standard approaches to proper names, which must treat the proper names (30) as exceptional.

- (30) a. In my family, there are at least five Davids.
 b. Last night I met with (the) David from Oslo.

In sum, a sort denotation of a proper name: (i) is rigid (albeit in the somewhat different sense of rigidity given by the Geach-Gupta model) (ii) maintains an arbitrary or causal connection between a name and the individual it picks out, and (iii) allows for more than one bearer of the same name. This approach lays the groundwork for a unified treatment of ordinary uses of names and cases like (28) and (30). We leave the further development of this theory for future research and turn back to identificational sentences.

4.2 Stage-level nouns

Up to this point we have used Gupta's (1980) term "common nouns" without being explicit about what nominals are intended. For Gupta, this class does not include stage-level nouns like *passenger*, which denote spatio-temporal slices of individuals (Carlson 1977). Note that counting passengers is different from counting people: one person can correspond to more than one passenger at different points in time, as illustrated by the invalid argument in (31).

⁹As with common nouns, we need the separation condition in (29-c) to ensure that one Rosa in one world will not correspond to two Rosas in another.

- (31) a. National Airlines served at least two million passengers in 1975.
 b. Every passenger is a person.
 c. Therefore, National Airlines served at least two million persons in 1975.

Gupta argues that stage-level nouns do not belong to the class of “common nouns” because they do not provide a principle of identity like individual-level nouns. Indeed, stage-level nouns are not acceptable out of the blue as complements of *same*, as shown in (32), suggesting that nouns like *passenger* do not express principles of identity.

- (32) #This is the same passenger as that one.

Furthermore, if we can come up with a context where *being the same passenger* is interpretable, it seems to depend on the identity of individuals. For example, a security guard who utters (33) conveys that he has encountered the same person two days in a row, not that he has encountered the same passenger-stage.

- (33) Security guard: That’s the same passenger I searched yesterday.

But we would not expect *passenger* to express the same principle of identity as *person*, as we have seen that passengers and people are counted differently.

Combining Gupta’s observations about the lack of a principle of identity for stage-level nouns with our analysis predicts that stage-level nouns will not be licensed in identificational sentences. Indeed, (34) is quite odd.

- (34) #That is a passenger.

However, (34) can be improved with the right contextual support, where the demonstrated individual displays the characteristic behavior of passengers. For example, suppose I am at the airport with a small child. A man is boarding an airplane, ticket in hand, while another man is standing nearby in a pilot’s uniform. In this context (35) is perfectly acceptable.

- (35) Look, Johnny. That is a passenger. And that is a pilot.

In this context, the speaker seems to be demonstrating stages rather than individuals. That is, it is the time-slices of individuals that have the characteristic properties of passengers and pilots, not entities.¹⁰ Given that we have seen that stage-level nouns do not seem to provide a principle of identity, which is the defining characteristic of sorts, we are led to treat sentences involving the demonstration of stages separately from sentences involving the demonstration of individuals.

¹⁰See Carlson (1991) for an analysis of identificational sentences based on the assumption that speakers demonstrate stages.

Independent evidence for this approach comes from demonstrated non-individuals with non-nominal predicates. For example, although (36) below is unacceptable when the speaker points at a human out of the blue, it becomes better in a context where the interlocutors are arguing about the standard of tallness, as in (37).

(36) (pointing at a person) #That is tall.

(37) Rosa: Anyone over 1.8 meters counts as a tall person.
 Matilda: Nonsense. People who is 1.9 meters are merely average.
 Matilda (pointing at a 2.1-meter-tall person): Now THAT is tall.

Intuitively, in (37) Matilda does not really demonstrate the tall person, even though she is pointing toward that person. Instead, she seems to demonstrate an example of tallness (similar examples may be constructed with post-copular PPs and gerunds). The fact that sentences where stages and other abstract objects are demonstrated allow post-copular expressions other than nominals suggests that these differ from the identificational sentences we have concentrated on in this paper.

5 Conclusions and implications

We have presented an analysis of identificational sentences with three components. First, based on evidence from Higgins' (1973) syntactic diagnostics for the predicational vs. specificational distinction, we argued that the relation between the pre- and post-copular phrases in identificational sentences is one of predication. Second, we argued that the post-copular phrase in an identificational sentence denotes a sort, allowing us to capture the difference between ordinary predicates and quiddity predicates, and we showed how this analysis applies both to common nouns and to proper names. Finally, we showed that the pre-copular demonstrative can be taken to contribute an unsorted individual concept while maintaining a Kaplanian analysis of demonstrative pronouns.

Our analysis opens up a number of new questions that bear upon central issues in semantics. With regard to demonstratives, one question is whether the unsorted denotation we have adopted is peculiar to presentational contexts or more generally available, and to what extent the interpretation of demonstrative pronouns depends on the availability of personal pronouns. A related question concerns the status of demonstrated stages as contrasted with demonstrated entities. With regard to the typology of copular sentences, we are left with the question of whether sentences like *That woman is Rosa*, with a pre-copular complex demonstrative, are amenable to the analysis developed here.

The biggest new questions, though, concern the implications of the Geach-Gupta model for the interpretation of nominals. Our analysis succeeds in drawing parallels between common nouns and proper names; we should now consider how these differ. More generally, we have shown that there are two kinds of predicate nominals — ordinary predicates and quiddity predicates — and there is a typology beginning to emerge of nominals that have one or the other or both meanings. We have encountered ambiguous

nouns like *camera* with both readings, stage-level nouns like *passenger* that appear to express ordinary predicates only, and proper names like *Rosa* that so far we have only seen expressing quiddity predicates. We believe that it is of great interest to continue to explore how nominals in English and other languages fit into this emerging typology.

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