The semantics of predicate nominals*

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Abstract

Important semantic distinctions exist between sentences with 'referring' predicate nominals and sentences with 'predictional' predicate nominals, even in cases in which they are truth-conditionally equivalent. This paper develops a new diagnostic to distinguish the two uses of predicate nominals, based on anaphora in discourse. In addition, it reviews other diagnostics that have appeared in the literature. The paper also discusses particular examples of predicate nominals and their semantic interpretation in the framework of situation semantics.

1. Introduction

This paper is concerned with the semantic interpretation of predicate nominals. I am using the term *predicate nominal* (PN for short) as it is used traditionally, to denote a sentence predicate headed by a noun. I will advocate a distinction between *referring* PNs, such as in (1a), and *predicational* PNs, such as in (1b):

(1) a. The morning star is the evening star.
    b. The morning star is a bright star.

The distinction between *be of identity* (as in [1a]) and *be of predication* (as in [1b]) is a traditional one in philosophy. But there is no evidence for an ambiguity in a sentence like the following:

(2) John is a man standing outside the building.

It seems to make no difference for the truth value of (2) whether we interpret it as stating an identity between John and some man standing outside the building, or as predicating of John the property of being a man standing outside the building. Since sentences like (2) are not ambiguous, Montague (1974) proposes to unify the treatment of sentences

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such as (1a) and (1b). Montague attributes this approach to Quine. The following quotation is from Quine (1960: 118):

> The combination 'is an,' which we have been treating as a single copula, can be reanalyzed as a composite of 'is' and 'an' now that 'an' is seen as a particle for the formation of indefinite singular terms. 'Agnes is a lamb' then ceases to be seen as 'Fa,' and comes to be seen as 'a = b' where 'b' represents an indefinite singular term of the form 'an F.'

But Quine himself notes later in the same paragraph,

> In a way this treatment is juster to English, but it stresses an excessively local trait. In German and the Romance languages the pattern is simply 'a is F,' as often as not, even when the general term is a substantive; thus 'Il est médecin.' In Polish and Russian, articles do not exist at all.

I will argue that, even in English, it is misguided to treat as identity sentences copula constructions involving predicational PNs. Predicational PNs have semantic and syntactic properties that are distinct from those of referring PNs. In section 2.1.1, I develop a semantic diagnostic having to do with anaphora in discourse, to distinguish predicational from referring predicate nominals. I then show that in some cases we also find different truth conditions associated with a sentence, according to whether its predicate is construed as predicational or referring. In the rest of section 2, I review briefly other diagnostics, which have already appeared in the literature. Section 3 shows, using the theoretical apparatus of situation semantics, that the referring–predicational distinction for predicate nominals crosses Donnellan's referential–attributive distinction for singular terms. Section 4 contains special examples of predicate nominals, and in section 5 I argue that quantifiers cannot appear in predicate-nominal position.

2. Distinguishing identity from predicational sentences

2.1. *Semantic diagnostics*

2.1.1. *Diagnostic 1: anaphora in discourse.* The first distinction I would like to discuss has to do with anaphora in discourse. Noun phrases that can refer to individuals (sometimes called *singular NPs*), such as *John*, *the soldier*, *a soldier*, may be anaphorically related to pronouns outside their scope. This is a well-known property of singular NPs that sets them apart from quantifiers, which are noun phrases that do not refer, such as *every soldier*, *no soldier*. The following examples are from Chomsky (1976).[1]

(3) a. A soldier has a gun. Will he shoot?
b. #Every soldier has a gun. Will he shoot?

I shall assume the semantic framework of Barwise and Perry's *Situations and Attitudes* (1983), henceforth S&A. According to this theory, referring expressions are connected to their referents via functions called *speaker's connections*. Pronouns may be anaphorically related to a singular NP in the same discourse if they *pick up the same referent*, that is, are connected to the referent that the singular NP is connected to. Binding of pronouns by a quantifier is a different matter, one that I will not go into here. Binding is not possible in a case like (3b), where the pronoun is not in the scope of the quantifier. An alternative framework which could serve just as well for discussing reference and anaphora is the theory of discourse representation developed in Kamp (1981). According to this theory as well, both a referring expression and a pronoun anaphorically related to it are connected to the same referent, but here the term *referent* doesn't denote a real-world individual but its representation at the level of discourse representation.

Going back to predicate-nominal sentences, let us for the time being concentrate on sentences like (1) and (2), where neither subject nor predicate is a quantifier. If in these sentences the predicate is referring, we expect it to be possible for the predicate (as well of course as for the subject) to be anaphorically related to a pronoun in the next sentence. If this turns out to be impossible for the predicate, it would count as strong evidence that the predicate is not being interpreted in the way singular NPs normally are, in particular that it is not referring.

In practice, it turns out to be hard to establish whether or not a given pronoun is anaphorically related to the predicate rather than to the subject. In most cases, as in (4), the pronoun in the second sentence could be related to the subject and therefore cannot serve to distinguish between referring and nonreferring predicates:

(4) John is a man standing outside the building. He is waiting for someone.

But in the following case, for example, it is clear that the pronoun is related to the predicate rather than to the subject, because of gender agreement:

(5) What John visited is the Queen Mary. She is docked in Long Beach.

That the pronoun *she* cannot be anaphorically related to the NP *what John visited* is shown by the oddity of the following discourse:

(6) #What John visited is a floating museum. She is docked in Long Beach.

Therefore, according to the diagnostic we are trying to develop, the

predicate in the first sentence in (5) has a predicate that actually refers to an individual, since this referent can be picked up by a pronoun in the next sentence.

The only way to find an example that fails our test is to choose a sentence where the predicate nominal is unambiguously predicational. In English, the only such PNs are 'role' predicates. We will discuss such predicates in more detail in section 4.1.1, but an example follows here:

(7) John is president of the club.

These predicates cannot be anaphorically related to pronouns in another sentence later in the discourse:

(8) #John, Daniel, and Morris have all three been president of the club. He is always a distinguished member of the community.

The pronoun *he* in (8) cannot be anaphorically related to the predicate *president of the club*. It cannot be related to the subject of this predicate either, because of lack of number agreement. As a result, the discourse in (8) is infelicitous.

Another example of a discourse where the pronoun in the second sentence cannot be anaphorically related to the predicate of the first sentence is (9):

(9) John is president of the club. He cannot be reelected.

(9) says that John cannot be reelected, not that there is a rule according to which a president cannot be reelected. From the failure of the pronoun to pick up the referent of the predicate, we deduce that no such referent is available. The predicate *president of the club* is interpreted in a way that does not include any referring. This is strong evidence that it is impossible to construe every predicate-nominal sentence as a statement of identity.[2]

A potential criticism of the above discussion is that role predicates may be special in that they are arguably not NPs (see Hankamer 1973). But bona fide NPs can be shown to fail the anaphora test as well. In order to 'neutralize' their referring reading, they have to be looked at in an environment where, according to other diagnostics, they cannot be referring. See section 2.2.2, particularly example (35).

In section 3, I will propose that the interpretation of the predicate in (7) is a 'property' — a partial function from situations to individuals which assigns to a given situation the individual who is president of the club in that situation. A question that rises therefore is, why can't the pronoun in examples such as (8) or (9) be anaphorically related to that function? After all, personal pronouns can in general be related to functions, as (10) shows:

(10) The president of the club is elected every year. He cannot be reelected.

(10) can be understood as being about a function which assigns different values to situations which are a year apart. Moreover, it is even possible for a pronoun to be connected to a function when its antecedent is connected to a particular value of that function:

(11) The president of the club died last night. Since he is elected by the general assembly, we will have to call up a special meeting right away.

The difference between (10) and (11) on the one hand and (8) and (9) on the other seems to be related to the fact that the NP denoting a function is in subject position in the former and in predicate position in the latter. Reversing the subject–predicate relation in (9) makes the function *the president of the club* available as an antecedent:

(12) The president of the club is John. He cannot be reelected.

It seems to me that (12), unlike (9), can mean that the function *president of the club* has the property that any two consecutive elections for it yield different results.

It seems therefore that under certain conditions, NPs denoting functions can be antecedents of personal pronouns, probably through a common connection to a complex individual which is a function. But what is important here is that such NPs in predicate position, namely predicational PNs, cannot be the antecedents of personal pronouns. This is not surprising, since, as we shall see in section 3, these NPs are of the same semantic type as VPs, which never serve as antecedents to personal pronouns (and see note 2). I will therefore maintain that predicational PNs do not refer, that is, are not connected to any referents whatsoever.

I have argued so far for a diagnostic for distinguishing referring from predicational PNs, based on the possibilities for anaphora that are available only with referring predicates. Equipped with this diagnostic, we turn to an example noticed by Jespersen. NPs with possessive determiners are interpreted differently in subject and predicate positions. The following examples are from Jespersen (1965: 153):

(13) a. The captain of the vessel was my brother.
b. My brother was captain of the vessel.

Jespersen says that *my brother* in (13a) is indefinite, meaning *one of my brothers*, or leaving it unspecified whether the speaker has more than one brother, whereas *my brother* in (13b) is definite, that is, the speaker's only

brother, or the only brother relevant in the context of utterance. The contrast is stronger in a larger discourse:

(14) a. You knew that the captain of the vessel was my brother, but you didn't know that the admiral of the fleet was my brother.
b. You knew that my brother was captain of the vessel, but you didn't know that my brother was admiral of the fleet.

It seems to me that only one brother is discussed in (14b), but possibly two in (14a). NPs with possessive determiners in nonpredicate position display a characteristic of definite NPs in discourse, namely their subsequent occurrences must pick up the same referent that their first occurrence is connected to. In (14b), the first occurrence of *my brother* is connected to a referent, and every subsequent occurrence of *my brother* in the same discourse picks up the same referent. In contrast, *my brother* in (14a) is not connected to a referent at all. *The captain of the vessel* and *the admiral of the fleet* are connected to two referents, but it is natural to assume that these referents are distinct. Indeed, under the natural reading of (14a), the speaker has two brothers.

It follows that the predicational PN *my brother* (as in [14a]) holds of individuals who have the property of being brother of the speaker, not necessarily the only one. The referring expression *my brother* (as in [14b]) designates the speaker's only brother (in the relevant context). I will now show that *my brother* as a referring expression can also be found in predicate position. To do that I will use the diagnostic developed above. Consider the following discourse:

(15) I am not sure that this guy is my brother. I haven't seen him for many years.

Under the natural reading of (15), the pronoun *him* in the second sentence is anaphorically related to *my brother*. This shows that *my brother* here is interpreted as a singular NP, that is, it picks up the speaker's only (contextually relevant) brother.

I have demonstrated that sentences like (16) are ambiguous:

(16) John is my brother.

Under the predicational reading, the sentence is true iff John is a brother of the speaker. Under the identity reading, it is true iff John is the speaker's only (contextually relevant) brother.

2.1.2. *Diagnostic 2: demonstrative pronouns.* Another distinction between referring and predicational PNs is due to Higgins (1976: 147). He proposes the demonstrative pronouns *this* and *that* in subject position as a diagnostic that distinguishes predicates that refer, as in (17a), from those that don't, such as the one in (17b):

(17) a. That is Joe Smith.
b. That is heavy.

The diagnostic is based on the observation that *that* in subject position can serve to point at an animate being only if the predicate is a referring PN, as in (17a). In (17b), where the predicate is not referring, *that* must point to something inanimate; for example, it could not point at Joe Smith.

Demonstrative pronouns in subject position can serve to disambiguate NPs such as *my brother*, which can be either referring or predicational in PN position:

(18) This is my brother.

This in (18) is pointing at the speaker's brother, an animate being, which is possible only if the predicate is a referring PN. Therefore *my brother* in (18) must be referring. As argued in the preceding section, when *my brother* is referring, it refers to the speaker's contextually unique brother. The following sentence is therefore anomalous:

(19) #This is my brother and that is my brother.

The speaker of (19) is pointing at two different people, saying they are both his brothers, which contradicts his saying about each that he is his unique brother.

2.1.3. *Diagnostic 3: predicational* what. Fodor (1970) proposes another diagnostic for distinguishing between referring and predicational predicates. The idea is that *what*, if it corresponds to a predicate position, always stands for a predicative rather than a referring predicate.[3]

(20) a. What Bill is is a fool.
b. *What Bill is is Mr. Smith.

Assume, whatever the right analysis for pseudoclefts is, that *what* in (20) corresponds to the predicate position of some 'original' sentence of the form *Bill is X*. Then X must be a predicational PN and cannot be a referring PN. The difference in acceptability between (20a) and (20b) depends on the fact that *a fool* can be predicational but *Mr. Smith* cannot.[4]

Higgins's and Fodor's diagnostics predict that *that* in (21) cannot point to an animate being:

(21) What is that?

The reason is that *what* can only correspond to a predicational predicate, whereas for *that* to point to an animate being, the predicate must be referring.

2.1.4. *Diagnostic 4: mass terms.* Another diagnostic has to do with the difference in the interpretation of mass terms depending on whether or not they are in predicate position. As noted in Quine (1960: 98), 'in general, a mass term in predicative position may be viewed as a general term which is true of each portion of the stuff in question excluding only the parts too small to count.' On the other hand, 'a mass term used in subject position differs none from such singular terms as "mama" or "Agnes"' (1960: 98). In (22a), *gold* is a general term in predicate position, whereas in (22b), it is a singular term in subject position. This is why (22c) does not follow form (22a) and (22b), as noticed by ter Meulen (1981):

(22) a. This ring is gold.
b. Gold is hard to find.
c. This ring is hard to find.

But there is clearly another use of *gold* in predicative position, as in (23a), where it names the same scattered object it does in the subject of (22b). In this case, (23c) does follow from (23a) and (23b):[5]

(23) a. The metal most coveted by jewelers is gold.
b. Gold is hard to find.
c. The metal most coveted by jewelers is hard to find.

In our terminology, *gold* in (22a) is predicational, whereas it is referring in (23a).

2.1.5. *Diagnostic 5: 'backward' pronominalization.* Where 'backward' pronominalization is involved, predicate nominal sentences allow only predicational readings:

(24) His mother is John's best friend.

Only if the reference of *his* is picked up from the context can (24) be an identity statement, as in the case it is an answer to (25):

(25) I wonder who John's best friend is.

A striking example is (26), which is an adaptation of an example attributed by Higgins (1976) to Emmon Bach.

(26) The argument he wrote is the proof of Descartes' existence.

Unless the referent of *he* can be picked up from the context, for example

from a previous mention of Descartes, (26) only has a predicational reading, synonymous to (27):

(27) The argument Descartes wrote proves that Descartes existed.

(26) does not have an identity reading, synonymous to (28):

(28) The argument Descartes wrote constitutes a proof of his own existence.

(26) differs from (29), which involves 'forward' pronominalization, and which has both readings (27) and (28):

(29) The argument Descartes wrote is the proof of his existence.

In this context, we can integrate the fact noted previously by Postal (1971) and Wasow (1979), that 'backward' pronominalization is impossible in (30), unless of course the referent of *his* is picked up from the context:

(30) *His best friend is John.

The reason is that when 'backward' pronominalization takes place, the predicate cannot be referring, but a noun phrase like *John* does not lend itself easily to a predicational reading.

2.2. *Syntactic diagnostics*

2.2.1. *Diagnostic 6: nonrestrictive relative clauses.* Nonrestrictive relative clauses with *who* can occur only in conjunction with referring predicates:

(31) a. John is Mr. Smith, who I was telling you about.
b. ?John is a man, who I was telling you about.

Predicational predicates can only occur with nonrestrictive relative clauses with *which* that have a gap in predicate position:

(32) John is a considerate man, which is a rare thing to be.

Relative clauses with *which* are not confined to NPs; they can appear with adjectives and verbs too:

(33) a. John is considerate, which is a rare thing to be.
b. John talks quietly, which is a good thing to do.

2.2.2. *Diagnostic 7: predicates of 'small clauses'.* Predicates of 'small clauses' (in the sense of Chomsky 1981) are predicational rather than referring:[6]

(34) Everyone considers [$_S$ him {the president of the club / a fool / temperamental / *a certain man / *this man / *Bill}]

The predicates which are acceptable in (34) are predicational only. *The president of the club*, for example, is not referring in (34), as it fails diagnostic 1:

(35) Everyone considers John the president of the club. He will be elected in November.

In (35), the pronoun can only refer back to *John*, not to *the president of the club*.

3. Crossing the referential–attributive distinction

I have argued above for two distinct interpretations for PNs such as the one in (36):

(36) The guest of honor is the president of the club.

The interpretations differ in whether the PN is connected to a referent. Under the predicational interpretation, the PN is not connected to a referent, but it is under the referring interpretation. I shall now explicate this distinction in the S&A framework.

A(n abstract) situation is defined in S&A as a set of tuples of the form $\langle r^n, a_1, \ldots, a_n, 1(/\text{or } 0)\rangle$ (ignoring locations for simplicity), namely a partial function from n-place relations r^n and n individuals a_i to the values 1 ('true') and 0 ('false'). An indicative sentence α is interpreted as a set of situations s (the situations 'described' by α). The interpretation depends on several factors:

A. the expression α itself;

B. the discourse situation d, which plays an important role in the interpretation of deixis, but which I shall ignore here for simplicity;

C. speaker's connections c, which map the referring expressions in α to the referents or resource situations the speaker is using. For example,

[Jackie is biting Molly] (s) (read: s is a situation described by the utterance *Jackie is biting Molly* with speaker's connections c (given implicitly)) iff $\langle$bite, Jackie, Molly, 1$\rangle \in$ s, c(*Jackie*) = Jackie and c(*Molly*) = Molly.

I will take advantage of the fact that the interpretation of VP and N′

(nominal) is the same kind of relation as the VALUE-FREE interpretation of singular NPs, namely a relation between situations and individuals. The interpretation of the nominal *president of the club* for example is the following relation (ignoring the oversimplification in treating *president-of-the-club* as a primitive property):

[president of the club] (s,a)
iff
$\langle$president-of-the-club, a, 1$\rangle \in$ s.

The value-free interpretation of the singular NP *the president of the club* is also a relation between situations and individuals:

[the president of the club] (s,a)
iff
$\forall$b ([president of the club] (s,b) iff b = a).

This last relation can also be represented as a partial function from situations to individuals:

[the president of the club] (s) = a
iff
[the president of the club] (s,a)

When a singular NP β is used to refer to an individual, what gets into the interpretation of the sentence is not its value-free interpretation, but a VALUE-LOADED interpretation. Namely, not the above relation, but its value at some particular situation, called the resource situation, and designated c(β). It is the choice of the resource situation which determines whether a singular NP is used referentially or attributively, in Donnellan's sense.[7] If the NP is value-loaded at a resource situation s_i which is different from the situation s described by the sentence, then it is being used referentially (and will be marked with a superscript larger than 0). For example,

(37) a. [[the president of the club]^1 is drunk] (s)
iff
$\langle$drunk, [the president of the club]^1], 1$\rangle \in$ s,
where [[the president of the club]^1] = [the president of the club] (s_1), where s_1 = c(*the president of the club*).

s_1 could be, for example, a situation visually accessible to the speaker, or a situation compatible with the speaker's beliefs but not actual — as in a case where she is referring to somebody who is not actually the president of the club, but whom she mistakenly believes to hold that position. The property of being president of the club is not part of the described

situations s, but each s contains the individual a referred to by the speaker.

The attributive use of a singular NP corresponds to value-loading it at the same situation s described in the sentence, and this will be indicated with the superscript 0:

(37) b. [[the president of the club]^0 is drunk] (s)
iff
$\langle$drunk, [[the president of the club]^0], 1$\rangle$ $\in$ s,
where [[the president of the club]^0] = [the president of the club] (s).

In the attributive case, each s described by the sentence contains an individual with the property of being the president of the club, but not the same individual for each s.

Singular NPs have uses other than the referential use and the attributive use. For example, they can be used to contribute their value-free interpretation to the described situations; this is called the functional use. When a singular NP is used functionally, it is the function itself from situations to individuals which is described by the sentence. Consider the following example:

(37) c. The president of the club is getting younger all the time.

If meant literally, (37c) doesn't involve a particular value of the function *the president of the club*, but a comparison between several values of that function.

Going back to example (36), let us consider all its possible interpretations, first under the assumption that the PN is referring. There are several such interpretations, depending on how the two NPs are used. Assume for example that the subject NP *the guest of honor* is used attributively. Then there are two identity interpretations — one where the PN is used referentially and one where it is used attributively:

(36) a. [[the guest of honor]^0 is [the president of the club]^1] (s)
iff
[[the guest of honor]^0] = [[the president of the club]^1]
b. [[the guest of honor]^0 is [[the president of the club]^0] (s)
iff
[[the guest of honor]^0] = [[the president of the club]^0]

In addition to (36a)–(36b) there are two identity interpretations where *the guest of honor* is used referentially. But these four identity interpretations do not exhaust the interpretations of (36) with a referring PN. To see this, consider the following question, to which (36) is a possible answer: *Who is the guest of honor?* It is possible to interpret this question as being about a particular individual, namely about a particular value of the function [the guest of honor]. All the interpretations of (36) discussed so far are appropriate for such an interpretation of the question. But this question could also be interpreted as being about the function [the guest of honor] itself: namely the speaker is asking for the value of the function [the guest of honor] at a particular situation. This is very different from the former case, where the speaker is already using the value of the function and is asking for more information about that value. To see that these are indeed two different interpretations of the question, note that pointing at the guest of honor is informative as an answer in the second case, where the question is interpreted as being about the function, but not necessarily so in the first case.

I shall therefore assume that there are two additional interpretations of (36) with a referring PN: those where the subject NP is used functionally. If the PN is attributive, for example, the situations described are as in (36c):

(36) c. [the guest of honor is [the president of the club]^0] (s)
iff
[the guest of honor] (s) = [[the president of the club]^0]

Namely, each situation described is such that the guest of honor is the president of the club at that situation. If the PN is used referentially, the guest of honor in all described situations will be the same person — the president of the club at a given resource situation. These last two interpretations do not involve identity but functional application, and are what Higgins has called the identificational reading, namely, the identity of the guest of honor depends on that of the president of the club. As we shall see below, (36c) is indeed an interpretation different from (36b), even though they are truth-conditionally equivalent.

We have so far examined only interpretations of (36) where the PN is referring. I will now show that the predicational interpretation of the PN is another case where the value-free interpretation of NPs is used (assume for the sake of the example that the subject is used attributively):

(36) d. [[the guest of honor]^0 is the president of the club] (s)
iff
[the president of the club] (s) = [[the guest of honor]^0]

This interpretation is truth-conditionally equivalent to (36b), though of course not to (36a). Namely, the predicational interpretation is equivalent to the identity interpretation for the case where the PN is used attributively. The discussion in S&A of predicational PNs (Barwise and Perry

1983: 154) treats them as NPs used attributively. But I see (36b) as different from the predicational interpretation which I propose in (36d), despite the equivalence. In (36b) there are two NP interpretations being value-loaded (in the terminology of discourse representation theory — there are two discourse referents introduced). In (36d), the predicational reading, only the interpretation of the subject is value-loaded (only one discourse referent in the discourse-representation structure), whereas the function which is the value-free interpretation of the PN relates this value to the described situation.

The present account of predicational PNs and the S&A account actually make different predictions in case the subject is used functionally. To see that, we will consider a role PN, one which can only be used predicationally:

(36) e. The guest of honor is president of the club.

According to S&A, it should be possible for the subject in (36e) to be used functionally, as in (36c). (36e) should then mean exactly what (36c) means, namely that the function [the guest of honor] has at *s* a certain value, contributed by the PN. But notice that (36e) doesn't have that interpretation at all; it doesn't state that the guest of honor is whoever is the president of the club, namely, it doesn't identify the guest of honor on the basis of the identity of the president of the club. This is explained by the account provided above: the predicational PN isn't value-loaded, therefore it cannot contribute a value to identify the subject. In that it differs from (36c), where such a value is provided by the PN. By treating a predicational PN as denoting a function rather than one of its values, we explain why, in a sentence where the PN is predicational and the subject is also used functionally, none of the functions can be applied to get an individual, which is what happens in (36e).

4. Examples

4.1. *Predicational predicates*

4.1.1. *Role predicates.* In making the distinction between referring and predicational predicates we are hindered by the fact that many predicates can be either. A class of predicates that are only predicational is the role predicates, as in (38). These predicates are also discussed in Fodor (1970) and Higgins (1976).

(38) John is vice-president of the club.

The truth conditions of (38) are more like those of (39a) than of (39b).

(39) a. John is the vice-president of the club.
b. John is a vice-president of the club.

Truth-conditionally role predicates are equivalent to definite NPs. I therefore propose that they have the following meaning:

$[[_{PN}N']]$ (s,a)
iff
[N'] is a role or title and $\forall$b ([N'] (s,b) iff b = a)

We saw in (8) and (9) that role predicates cannot be the antecedent of a pronoun. Therefore, according to diagnostic 1 they are not referring.

The role predicate in (40b) belongs to nonreferring predicates according to diagnostic 2 as well. It does not cooccur with a *that* that points to an animate being. This observation is due to Higgins (1976: 149):

(40) a. That is the mayor of Cambridge.
b. *That is mayor of Cambridge.

Diagnostic 3 is inconclusive for role predicates:

(41) ?What she is is mayor of Cambridge.

As diagnostic 6 shows, role predicates are not referring, since they cannot occur with a nonrestrictive relative clause with *who*:

(42) *John is vice-president of the club, who cannot be reelected.

By diagnostic 7 as well, role predicates are predicational:

(43) Everyone treats him as president, even though he has not been sworn in yet.

4.1.2 *Proper names.* It turns out that proper names can be predicational, if they are interpreted as roles:

(44) Richard Burton is Beckett.

In that case, they cannot be anaphorically related to a pronoun. The second sentence in (45) seems to asserts of Burton, not of Beckett, that he lived in the 12th century.

(45) Richard Burton is Beckett. He lived in the 12th century.

On the other hand they can be related to predicate *what*:

(46) What Burton is in this play is Beckett.

They cannot appear with a nonrestrictive relative clause with *who*:

(47) *Richard Burton is Beckett, who didn't obey the King.

They are predicational by diagnostic 7 as well.

(48) Everyone treated Richard Burton as Beckett.

It is clear that in the context of a play or a movie about the life of Thomas of Beckett, asserting (44) is not normally taken as an assertion that c(Burton), the referent picked up by *Burton*, is the same as c(Beckett), the referent picked up by *Beckett*. This would be false. All (44) asserts is that in a context that includes the play, Burton has the property of having the role *Beckett*. The predicational use of *Beckett* does not include picking up a referent.

[Burton is Beckett] (s)
iff
c(*Burton*) = a
and ⟨[Beckett], a, 1⟩∈s, where [Beckett] is a role

4.1.3. *N′ predicates that are not roles.* Romance languages and German have PNs of the form N′, that are not necessarily interpreted as roles. The following French examples are from Pollock (1982):

(49) a. Cet homme est un professeur.
b. Cet homme est professeur.

Pollock says of (49b) that it has only a predicational reading, not an identity reading. Diagnostic 2 corroborates that:

(50) a. *C'est bon linguiste.

According to Pollock, (49a) only has an identity reading, not a predicational reading. His argument is based on the following symmetry between English and French:

(51) a. I consider [John a fool]
b. *I consider [John Peter]
(52) a. Je crois [Jean idiot]
b. *Je crois [Jean un idiot]

Pollock assumes that just as the English *consider* allows small-clause complements freely, so does the French *croire*. In general the predicate of a small clause cannot be referential, and Pollock attributes the ungrammaticality of (52b) to this property of small clauses. But it may simply be due to the fact that *croire* requires adjectival clauses as complements.

Indeed, the ungrammaticality of (53) seems to indicate that a small clause headed by a noun is unacceptable as the complement of *croire*.[8]

(53) *Je crois [Jean médecin]

I conclude that French has PNs both of the form N′ and of the form [un N′], both with the same meaning, that of N′.

4.2. *Referring predicates*

I have argued that PNs have an interpretation under which they do not refer, that is, where they are not connected to discourse referents. Among the singular NPs, there are two notable varieties that are barred from having such an interpretation: pronouns and demonstrative NPs. The use of these always involves connecting to a discourse referent, either a new one when used deictically, or one already connected to some other NP in the case of anaphora. Some indefinite NPs such as *a certain man* also seem to always connect to a discourse referent, as suggested by Fodor and Sag (1982). To prove this point we use the relevant diagnostics to show that a PN is not predicational, namely 3 and 6.

(54) *What he is is { me / that man / a certain man }
(55) *Everyone treats him as { me / that man / a certain man }

5. Quantifiers and predicate nominals

So far we have discussed semantically singular NPs in predicate position and seen that they may be either referring or predicational. A natural question is whether the same is true of quantifiers. (56) is an example of a sentence with a quantifier in predicate position. It does not have any reading, either identity or predicational, even in case John happens to be the only member of the club.

(56) *John is every member of the club.

It may seem that the unacceptability of (56) could be due to an implicature of plurality associated with *every*, which contradicts the

uniqueness entailment of *John*. But the sentence does not improve when one replaces *John* with an indefinite NP or with another quantifier:

(57) a. *A man is every member of the club.
b. *Every student in the department is every member of the club.

Williams (1983) proposes the sentences in (58) (his [9]) as examples of predicational sentences.

(58) a. John is everything we wanted him to become.
b. John is everything I despise.[9]
c. At one time or another, John has been everything.
d. This house has been every color.

As noted by Partee (1987), this phenomenon is restricted to 'attributive' nouns, such as *color*, *size*, *price*, and the stem *-thing*. Attributive nouns are special in that they do not denote properties of individuals but properties of properties; for example, things which are colors are not objects but are themselves properties such as *blue*, *red*, etc. Quantifying-in into a predicational PN position, according to Partee's account, is allowed in English but restricted to PNs with attributive nouns.

There also seem to be examples with quantifiers in predicate position which are identity sentences:

(59) a. This is everything I have.
b. This is everyone we invited.

Notice that all the above examples involve *everything* or *everyone*. It seems to me that these particular quantifiers are the exception rather than the rule, and that their behavior should not be taken as indicative of that of quantifiers in general. Among other things, *everything* and *everyone* do not give rise to the same scope ambiguities as other quantifiers. In (60), *every sandwich* but not *everything* can have wide scope relative to *a man*.

(60) a. A man ate everything.
b. A man ate every sandwich.

I therefore do not consider the examples in (58) and (59) to be counterexamples to my claim that quantifiers do not in general appear in predicate position.

Another apparent counterexample is (61a). It seems that its only reading is one of emphatic negation. This is peculiar to English; the French (61b) with a quantifier in predicate position has no reading at all.

(61) a. John is no friend of mine.
b. *Jean n'est aucun ami à moi.

I conclude that, unlike singular NPs, quantifiers do not appear in predicate position.

6. Conclusion

I have shown that the predicate position in a sentence can be occupied by a singular noun phrase, but generally not by a quantifier. Singular noun phrases in predicate position can be used in various ways: to refer to an individual (either attributively or referentially), or to denote a property. The semantic literature has been biased in favor of viewing singular noun phrases as referring. Even though in most cases truth conditions are not affected by ignoring the property reading, there are several semantic distinctions which are missed.

One of them involves anaphora: a referring predicate nominal differs from a predicate nominal denoting a property in its availability as an antecedent to anaphoric elements. This paper thus demonstrates the importance of developing semantic theories which can account for non-truth-conditional aspects of natural language.

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Notes

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1. The symbol # will be used to mark anomalous discourse.
2. The impersonal pronoun *it* can be anaphorically related to the predicate *president of the club*, as in

   (i) John is president of the club. It is a prestigious position.

   I do not have an account for how anaphora with *it* works, but *it* certainly does not have to pick up discourse referents. In the following examples, *it* is anaphorically related to an AP and a VP:

   (ii) John is considerate. It is a rare thing to be.
   (iii) John talks quietly. It is a good thing to do.

3. As pointed out to me by Lauri Karttunen, this is not true to the same extent for all predicative predicates. The following examples are not as good as (20a):

   (i) ?What Bill is is my brother.
   (ii) ?What Bill is is the president of the club.

4. There is no explanation for why *the man who murdered Smith* in (i) cannot be construed as predicational:

   (i) *What Bill is is the man who murdered Smith.

   Higgins (1976) notices that an NP containing a relative clause cannot be construed as predicational unless the gap itself is in predicate position. This is of course not the case in the relative clause *who murdered Smith*, where the gap is in subject position. (i) contrasts with the following acceptable sentences:

   (ii) a. What Bill is is what his father was.
   b. What Bill is is the man his father wanted to be.

   In (ii), the gaps in the relative clauses in the predicate are themselves in predicate position.
5. The following problem has been pointed out to me by Lauri Karttunen. Even though *gold* is referring in (i) below, (iii) does not follow from (i) and (ii):

   (i) The topic is gold.
   (ii) Gold is hard to find.
   (iii) The topic is hard to find.

   This seems to me to be a case where *the topic* is a function, and *gold* one of its values. (i) is therefore not an identity sentence, and it is not surprising that the properties of the function are different from the properties of the function value.
6. A small clause is 'a clausal structure lacking INFL and the copula' (Chomsky 1981: 107). In Hebrew, for example, where such clauses can appear as main clauses, the predicate has to be predicational as well:

   (i) dani more
   Dani teacher
   'Dani is a teacher.'
   (ii) *dani mar kohen
   Dani Mr. Cohen

   In a sentence like (ii), a 'pronominal copula' must appear (for an analysis see Doron 1983, 1986):

   (iii) dani hu mar kohen
   Dani he Mr. Cohen
   'Dani is Mr. Cohen.'

7. According to Donnellan (1966), a definite description is *used attributively* in an assertion if the speaker wishes to make the assertion true of whatever fits that description. The attributive use contrasts with another use of definite descriptions — the *referential use*. The speaker uses a definite description referentially if he wishes to make his assertion true of a particular individual. In this case, he uses the definite description as a tool that enables the audience to pick out what individual it is that the assertion is about.
8. I am grateful to Patrick Henass for his judgements on the French data.
9. The gap in the relative clause is not in predicate position. According to Higgins's generalization discussed in section 2.1.3, this should prevent *everything* from being predicational.

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