"Pseudo-extraction" and problems of binding: a case study in
the syntax of predicative nominals *

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1. Introduction: when noun phrases are predicates

If we consider the development of generative grammar since the beginning the fact can
be noticed that although the syntax of Noun Phrases, in the broad sense of the
distribution of such constituents and their internal architecture, received much attention,
the study of Noun Phrases as playing the role of predicates has been mostly neglected.

This is not only true for most introductory texts but also for a leading specific treatise
like The Syntax of Noun Phrases by Giorgi and Longobardi (1991), where the term
"predicative nominal" is not even listed as an entry in the index. 1 Of course, such a
major gap with respect to traditional grammars where predicative nominals played a
central role cannot be accidental. One could think of many reasons for this gap.
Arguably, this state of affairs is deeply related to a constitutive assumption of generative
grammar (in fact, an assumption which is common to distributionalism), namely that
linguistics should avoid "semantic" notions as predication. 2 In other words, it can
plausibly be that the scarcity of studies in the field of predicative nominals is due to the
effort of deriving their status from more general properties (government, binding,
control, etc.). However, although such an approach might eventually turn out to be
correct, it seems to me that current models suffer from a more primitive lack at the very
superficial level of descriptive adequacy.

Of course, this paper will not even attempt to remedy such a gap. Its very limited aim
is just that of highlighting that two modules of grammar, namely \( \theta \)-theory and Binding
theory cannot be immediately employed to understand the syntax of predicative nominals
and that they deserve some refinements.

By anticipating some central piece of data, let's see how this paper is organized: in the
first part, we will see that there exist a striking similarity between passive structures and a
class of copular sentences with predicative nominals, like the following:

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1. Of course, this is not to say that there are no references to predicative nominals in this and other
texts. What I am remarking here is that the class of predicative nominals is at best marginally taken into
account, if not just considered as a mere taxonomical label.

2. For an historical survey of the relevance of the notion of predication within generative grammar one
can see the Appendix of Moro (1993) and references cited there.

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(1) a. Beatrice è desiderata da Dante
   "Beatrice is desired by Dante"

b. Beatrice è il desiderio di Dante
   "Beatrice is the desire of Dante"

It will be shown that this similarity might be misleading. The canonical treatment of passives as involving extraction of the object cannot be plausibly extended to the case of predicative nominals, unless one wants to run against some major and powerful generalization. 3

In the second part, we will approach the identification of the local domain for binding. In particular, it will be shown that there are contexts where an anaphor contained in a predicative nominal can refer to the subject of the matrix clause skipping the subject of predication of the embedded clause it is contained, like in the following sharp case:

(2) Giannì ritiene [SC queste [DP le migliori foto di se stesso]]

Again, this paper will not try to provide solutions but just show what kind of problems one has to face with predicative nominals.

2. On θ-role assignment: the phenomenon of "pseudo-extraction"

Traditionally, θ-role assignment has been studied in relation to VP predicates. Picking up from the lexicon the verbal head desider- (desire), we can project the following maximal projection:

(3) a. [VP [DP Dante],θ1 [v^ [v^ desider-] [DP Beatrice],θ2]]

b. θ1 (experiencer) ≠ θ2 (goal)

As indicated here, this verb is compatible with the presence of two distinct arguments: the DP adjacent to the head (the object), and the DP in spec-VP (the subject; as nowadays widely assumed following Koopman-Sportische (1980)). The lexical entry of desiderare contains two distinct θ-roles, call them the <experiencer> and the <goal>, labeled here as θ1 and θ2. These θ-roles are rigidly assigned to specific structural positions (see references in Moro (1993) chapter IV for a synthetic presentation of a new approach to θ-theory).

What happens to these two DPs and to their θ-roles when the VP is combined with other phrases to yield a clausal structure is a well known fact. For example, we can produce a full inflected sentence like the following:

(4) [IP [DP Dante],θ1 [v^ desider]-a [VP t_i [DP Beatrice],θ2]]
   "Dante desire-s Beatrice"

In this simple case, the subject DP is raised from spec-VP to spec-IP preserving its θ-role (i.e. the <experiencer> θ1); the other θ-role (i.e. the <goal> θ2) is maintained by the

3. I am referring in particular to the so called "Cinque's Generalization" after the original paper by Guglielmo Cinque (here, Cinque (1980)) was published. See also Giorgi and Longobardi (1991) for a detailed discussion about this issue.
Another common possibility is given by passive sentences:

\[(5) \qquad [IP \{DP \text{Beatrice}\}_{+\theta_2} \{\text{v}^o \text{desidero}\}_{-\text{ata}} [VP \text{ti da} \{DP \text{Dante}\}_{+\theta_1}] \]

"Beatrice is desired by Dante"

Interestingly, by no means can \(\theta_2\) be assigned to the DP in preverbal position if the verb is not passivized nor can \(\theta_1\) be assigned to the DP in preverbal position if the verb is passive. \(^5\) Compare (6a) with (4) and (6b) with (5):

\[(6) \quad \text{a.} \quad \ast [IP \{DP \text{Dante}\}_{+\theta_2} \{\text{v}^o \text{desidero}\}_{-\text{ata}} [VP \text{ti da} \{DP \text{Beatrice}\}_{+\theta_1}]]
\]
\[\text{b.} \quad \ast [IP \{DP \text{Beatrice}\}_{+\theta_1} \{\text{v}^o \text{desidero}\}_{-\text{ata}} [VP \text{ti da} \{DP \text{Dante}\}_{+\theta_2}]]
\]

The next step is to see what happens when the maximal projection playing the role of a predicate is a DP rather than a VP.

First of all, let's now construe a DP headed by the N\(^o\) desiderio (desire), parallelizing what we did with V\(^o\) when construing the VP:

\[(7) \quad [DP \text{il [NP [N\(^o\) desiderio] di [DP \text{Dante}\}_{+\theta_1} per [DP \text{Beatrice}\}_{+\theta_2}]] \]

"the desire of Dante for Beatrice"

As indicated in (7), the N\(^o\) desiderio, preserves the same \(\theta\)-role pattern as the corresponding V\(^o\), that is both the <experiencer> \(\theta_1\) and the <goal> \(\theta_2\) can be assigned to the arguments of the biargumental nominal head. \(^6\)

This DP can occur as an argument like in the following cases:

\[(8) \quad \text{a.} \quad [DP \text{il [N\(^o\) desiderio] di [DP \text{Dante}\}_{+\theta_1} per [DP \text{Beatrice}\}_{+\theta_2}]] \text{ stupi Bonifacio}
\]
\["the desire of Dante for Beatrice astonished Bonifacio"
\]
\[\text{b.} \quad \text{Virgilio conobbe [DP \text{il [N\(^o\)desiderio] di [DP \text{Dante}\}_{+\theta_1} per [DP \text{Beatrice}\}_{+\theta_2}]]}
\]
["Virgilio knew the desire of Dante for Beatrice"

The central question that I would like to address here is the following: what happens to \(\theta\)-role assignment when this DP occurs as a predicative element? There are two major contexts to consider here: a small clause complement of a believe-type verb like ritenere (believe) and the most typical context for predicative nominals, i.e. a copular sentence.

To avoid confusion for the case of copular sentences notice that the linear order of a DP with respect to the copula is not sufficient to identify its grammatical function. In other words, the mere fact that a DP precedes or follows the copula is not sufficient to know whether this DP is a predicate or a subject. This is due to the existence of a class of copular sentences which I called "inverse" (to be opposed to the canonical variety). We

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4. For the sake of simplicity we avoid indicating the trace of the arguments within VP.

5. In fact, the rigid assignation of \(\theta\)-roles is generally assumed to already hold at the more primitive level of \(d\)-structure.

6. We indicated both arguments within the NP to the right of the head N\(^o\). This contrasts with the case of VPs, where the subject is on the left (in spec-VP) while the object is on the right (adjacent to V\(^o\)). For the linear and hierarchical order of arguments within NPs see Giorgi and Longobardi (1991): to our purpose, this assumption will have no empirical effects.
will leave a detailed treatment of such constructs aside (see for example Moro (1993) chapter I), the following pair will suffice to illustrate the point:

(9)  a.  [DP il desiderio di [DP Dante]₉₁ per [DP Beatrice]₉₂] t₁ [SC t₁ [DP la vera novità]]
      "the desire of Dante for Beatrice is the true novelty"

      "the true novelty is the desire of Dante for Beatrice"

In (9a), a canonical sentence, the DP under discussion precedes the copula and plays the role of a subject of predication. On the other hand, in (9b), the same DP still plays the role of a subject of predication although it does follow the copula. The new structure, thus, is (9b) in that spec-IP is occupied by a predicate while the subject is left in situ within the small clause.

Let's now focus on the context where the DP we are considering here does play the role of a predicate, namely on a small clause complement of a believe-type verb and a copular sentence.

We have a first result: apparently, in both contexts, this DP cannot occur in a predicative position if a third argument, say Laura, occurs in the sentence:

(10)  a.  *ritengo [SC [DP Laura] [DP il desiderio di [DP Dante]₉₁ per [DP Beatrice]₉₂]]
      "pro believe Laura the desire of Dante for Beatrice"

b.  *[IP [DP Laura] t₁ [SC t₁ [DP il desiderio di [DP Dante]₉₁ per [DP Beatrice]₉₂]]]
      "Laura is the desire of Dante for Beatrice"

Shall we conclude that this DP cannot play the role of predicative? The answer cannot be straightforward. Consider first the following contrast:

      "pro believe Dante the desire for Beatrice"

b.  ritengo [SC [DP Beatrice]₉₂ [DP il desiderio di [DP Dante]₉₁]]
      "pro believe Beatrice the desire of Dante"

c.  *[IP [DP Dante]₉₂ t₁ [SC t₁ [DP il desiderio per [DP Beatrice]₉₁]]]
      "Dante is the desire for Beatrice"

d.  [IP [DP Beatrice]₉₂ t₁ [SC t₁ [DP il desiderio di [DP Dante]₉₁]]]
      "Beatrice is the desire of Dante"

This shows that if the predicative DP under discussion is deprived of one argument, specifically the one assigned θ₂, it can play the role of a predicative nominal and the subject of predication is assigned θ₂. This is precisely what happens in (11b-d). A first major question suggests itself: why can only one θ-role be assigned outside the predicative DP to the subject DP in spec-IP? In fact, this pair of sentences, offers a further interesting piece of data. It is easy to realize that the sentence in (11d) has the same meaning as the passive sentence in (5). That is, the subject is assigned what in general is considered to be the "internal θ-role" of the corresponding transitive verb. How can we explain this analogy?

At this point we are not in a position to offer a structural interpretation of this rather striking fact and we will leave it as an open question. What I would like to show here is that a very appealing analysis that naturally comes to mind must be refuted. I am referring
to the idea of reproducing the classic analysis given for passive structure to this case involving a predicative nominal. More explicitly, we cannot hypothesize that the subject *Beatrice* in (11b-d) is extracted from an internal DP position as represented in (12a) paralleling what we normally say for passives structure like (12b): 7

(12) a. ... [DP Beatrice]_{462} ... [DP il [NP [N desiderio] di [DP Dante]_{461} t]]
b. ... [DP Beatrice]_{462} ... [VP [v desiderata] t] [PP da [DP Dante]_{461}]

The reason of this refusal lies in the fact that this analysis involving extraction from a DP would run against a rather well established generalization stemming from Cinque’s (1980) original observation. This generalization requires that a constituent be extracted from a DP only if it can be possessivized (see Giorgi and Longobardi (1990) for an updated discussion and a new derivation of this phenomenon). Unfortunately, if we apply this to the DP under discussion, we happen to obtain just the opposite result we need to support the analysis in (12):

(13) a. * [DP il suo_{462} desiderio di [DP Dante]_{461} t ]
   "the his desire of Dante"
b. [DP il suo_{461} desiderio t per [DP Beatrice]_{462} ]
   "the his desire for Beatrice"

This contrast shows that the only argument that can undergo possessivization is *Dante*, bearing θ₁ role, exactly the one which cannot occur as a subject in (11a-c). 8 Thus, the hypothesis that *Beatrice* is extracted from the predicative nominal in (11b-d) cannot be consistently maintained. At this point, as I already remarked earlier, I cannot give an interpretation to this fact. By the moment, it seems to me that it would be useful to label this phenomenon as "pseudo-extraction", aiming to both emphasize the similarity with the case of passive and the distance.

In fact, before attempt any solution to the puzzle of pseudo-extraction, the preliminary step should be made of verifying the extension of such a phenomenon within the class of noun phrases. Even this would go far beyond our limits, however, we can at least attempt a first survey, checking some other noun heads which are compatible with two arguments (henceforth, biargumental nouns).

Thus, it is easy to notice that along with *desiderio*, other nouns like *paura* (fear), *timore* (fear), *preoccupazione* (worry), *piacere* (pleasure) do allow pseudo-extraction:

(14) a. l’inferno è la paura di Dante
   "the Inferno is the fear of Dante"
b. la città di Dite è il timore di Dante
   "the city of Dite is the fear of Dante"
c. Cerbero è il timore di Dante
   "Cerbero is the fear of Dante"
d. la luce è il piacere di Dante
   "the light is the pleasure of Dante"

On the contrary, not all biargumental nouns do allow pseudo-extraction: for example, *descrizione* (description), *racconto* (narration), *fotografia* (photograph), *apparizione* 

7. For the sake of clarity we do not indicate verb movement to the 1⁰-system in (12b).

8. To avoid confusions, notice that the string *il suo desiderio di Dante* is grammatical, but with the reading "he or she desires Dante"), that is with *Dante* bearing θ₂ and *suo* θ₁.
(apparition) yield ungrammatical sentences:

(15) a. * l'inferno è la descrizione di Dante
   "the inferno is the description of Dante"

b. * la città di Dite è il racconto di Dante
   "the city of Dite is the narration of Dante"

c. * Cerbero è la foto di Dante
   "Cerbero is the photograph of Dante"

d. * la luce è l'apparizione di Dante
   "the light is the apparition of Dante"

A first rough generalization suggests itself here. It seems that pseudo-extraction is allowed only for those noun phrases expressing psychological attitudes but not for those "extentional" verbs expressing activities like describe, narrate, etc. Thus, paralleling the terminology proposed for VPs by Belletti and Rizzi (1988), it is tempting to call this class of noun phrases "psych-nouns". The provisory generalization can be formulated as (16):

(16) Only psych-nouns allow pseudo-extraction

By maintaining the discussion at a descriptive level, we can even push this generalization to the limit asking whether it can be turned into an "if-and-only-if" clause. In other words, we can check whether all (and only) psych-nouns do allow pseudo-extraction. In fact, it seems that the answer is on the negative. For example, there are cases like cruccio (worry) that are psych-nouns from a semantic point of view but that have a different pattern with respect to elements like desiderio (desire): 9

(17) a. Beatrice è il cruccio di Dante
   "Beatrice is the worry of Dante"

b. [dp il cruccio di Dante (*per Beatrice))] è noto a tutti
   "the worry of Dante for Beatrice is known to everybody"

On the one hand, they allow construct like (17a) strongly resembling the pseudo-extraction cases. On the other, they are not biargumental, thus the very idea of extraction is to be refused in principle.

This (and other possible cases) suggest that (16) is too strong, if not wrong.

Summarizing, we have already highlighted three major questions: first, why can only one θ-role be assigned to the subject of predication when the predicate is a DP? Second, why is there a difference between psych-nouns and those nouns indicating activity? Third, what is the subclass of psych-nouns that allows pseudo-extraction? 10

9. I am indebted to Guglielmo Cinque for this example.

10. Although I will not pursue this idea here, one can explore the possibility that the class of nouns allowing pseudo-extraction is that one corresponding to those verbs allowing internal object constructions. Thus, we could distinguish desiderio (desire) from foto (photograph) because the corresponding verbs behave differently:

(i) a. desidero un desiderio impossibile
   "pro desire a desire impossible"

b. * fotografo una foto impossibile
   "pro photograph a photograph impossible"

I am grateful to Liliane Haegeman and Luigi Rizzi for a discussion about this topic.
purpose here so far successful. As we see here, as soon as predicative nominals come into the arena many specific problems are raised that do not seem to allow immediate solutions. We can now shift to a different but closely related topic.

So far, we have seen cases where for a DP to become a predicate one of its arguments must be absent within its maximal projection. The relevant minimal pair is represented by two previous examples (i.e.: (10b) and (11d)) reproduced here:

(18) a. *[IP [DP Laura] è [SC t [DP il desiderio di [DP Dante],∅₁ per [DP Beatrice],∅₂]]]
   "Laura is the desire of Dante for Beatrice"
b. [IP [DP Beatrice],∅₂ è [SC t [DP il desiderio di [DP Dante],∅₁]]]
   "Beatrice is the desire of Dante"

Shall we conclude that a biargumental noun phrase must always be deprived\(^\text{11}\) of one argument to play the role of a predicate? Apparently, this seems to be the natural prediction. Whether or not the subject is literally extracted from the DP, it is clear that its \(\theta\)-role belongs to the \(\theta\)-grid of the nominal head N\(^o\). Thus, if both arguments are present within the maximal projection of N\(^o\), one should expect that any DP in spec-IP would lack such a \(\theta\)-role since there are no other \(\theta\)-role assigner around and a violation of the \(\theta\)-criterion would be produced.\(^\text{12}\)

Surprisingly enough, there are contexts where this prediction fails to hold:

(19) a. ritengo [SC [DP questo] [DP il desiderio di [DP Dante],∅₁ per [DP Beatrice],∅₂]]
   "pro believe this the fear of Dante for Beatrice"
b. [IP [questo] è [SC t [DP il desiderio di [DP Dante],∅₁ per [DP Beatrice],∅₂]]]
   "this is the fear of Dante for Beatrice"

In both sentences, the DP under discussion can indeed play the role of a predicate without missing any argument. In other words, both Beatrice and Dante can stay within the DP without preventing it to play the role of a predicative nominal.

Notice that we have an indirect test to support the idea that the DP under discussion is playing the role of a predicate. We can reproduce in synthesis an argument developed in detail in Moro (1993).

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11. I say "deprived" to be neutral with respect to the hypothesis of extraction. In a certain sense, the idea the a noun phrase should be deprived of one argument in order to play the role of a predicate could be considered as indirect evidence in favour of the theory of predication as saturation. The kernel assumption of this theory is that predication is in fact established whenever an argument saturates the empty slots contained in a maximal projection. This theory developed in Fregian-style analysis was adopted in modern grammatical models; in Montague grammar (see for example Montague (1973)) as well as in generative grammar (see Williams (1980), Rothstein (1983) and Chomsky (1986); for a critical approach to this topic see also Moro (1983)).

12. I am maintaining the canonical assumption that the copula cannot assign any \(\theta\)-role, it being just the support (or the spell out) of the \(\Gamma\)-system. Weren't it so, a sentence like:

(i) \[Beatrice è il desiderio di Dante\]
   "Beatrice is the desire of Dante"

would now violate the \(\theta\)-criterion, for Beatrice would receive two \(\theta\)-roles, one from the N\(^o\) and one from the copula.
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In a construct like (19b), the DP il desiderio di Dante per Beatrice can be cliticized by lo yielding:

(20) \[ \text{IP [DP questo]i [lo]j [SC ti tj]} \]

"this lo is"

This is sufficient to allow us to say that the DP il desiderio di Dante per Beatrice is playing the role of a predicative nominal. We independently know that this cliticization in a copular sentence is possible only if the corresponding DP plays the role of a predicative nominal. 13

Although we are not going to offer an explanation to these phenomena, notice that the sentence in (19b) has a quite non-trivial implication. The only \( \theta \)-role assigner here is the N\(^o\) desiderio. Now, since the two arguments of the N\(^o\) are Dante and Beatrice and since the role of the subject of predication is played by questo (this), the immediate conclusion is that predication here is disconnected from \( \theta \)-role assignment.

It is interesting to notice that this state of affairs is not uniquely instantiated in syntax. In fact, unaccusative constructs involving expletives of the subject of predication share this same property with cases like (19b). 14 Consider for example the following simplified analysis of a classic unaccusative construct:

(21) \[ \text{IP [DP there]i-\( \theta \) [VP arrived [DP many girls]i-\( \theta \)]} \]

Paralleling (19b), the head of the predicate, here the V\(^o\) arrive, assigns its \( \theta \)-role to its argument within its maximal projection; the position of the subject of predication is held here by an expletive DP, namely there, which doesn't receive any \( \theta \)-role. The resemblance between (19b) and unaccusatives stops here, though: by no means should one say that questo (this) is an expletive. On the contrary, it is a fully referential element, it being a deictic. Moreover, current models (after Chomsky (1986)) assume that at LF the DP many girls in the unaccusative construct raise to spec-IP to replace the expletive. 15

There is no way to propose replacement of questo (this) in the example involving the predicative nominal.

Let's now shift to a different topic.

2. On the identification of the minimal domain for Binding

The possibility for the subject of a predicative nominal to occur without being assigned

13. In fact, it can only be cliticized by the invariant form lo as opposed to the other cases of cliticization of argumental DPs which can be associated to a range of full inflected clitics. In Moro (1993) I proposed that lo is to be associated to the inner NP as opposed to the other clitics which are to be associated to the D\(^o\)-system (possibly extended to include AGR\(^o\), Num\(^o\) etc. as proposed by many authors like, for example Cinque (1992)). Since this assumption does not affect our argument we will leave the issue aside. For unclear reasons, the predicative nominal cannot be cliticized in (19a) yielding lo ritengo questo. Again, this doesn't seem to have any empirical effect on our argument.

14. For a different approach to unaccusativity see Moro (1993), chapter IV\(^o\).

15. Since Chomsky (1988) replacement has been substituted by affixation. This does not affect our argument here.
a $\theta$-role, suggests a further inquiry concerning Binding theory. Again, recall we are not going to offer a solution here, but rather single out a potential problem for the current theory.

In general, a minimal requirement that any version of Binding theory is expected to fulfill is that an anaphor can never escape the subject of the clause it occurs in. From an abstract point of view, one wants that for any anaphor $\alpha$ in a structure like:

$$\text{(22)} \quad \ldots \ \text{DP}_i \ldots \ [\text{s} \ \text{DP}] \ldots \ \alpha \ldots$$

the index assigned to $\alpha$ cannot be the same as the one of the first DP. 16 This is generally expressed by saying that a clausal structure is a local domain for an anaphor and that an anaphor must be bound within its local domain (Condition A of Binding theory).

There have been several attempts to capture this fact. Efforts have been specifically devoted to deriving the identification of the minimal domain from independent structural properties. An influential approach was proposed by Chomsky (1980). The local domain for an anaphor or a pronoun $\alpha$ is defined as the least Complete Functional Complex (CFC) containing a lexical governor for $\alpha$ (see Chomsky (1986):169). Let's reproduce the more refined definition of CFC given in Giorgi and Longobardi (1991): 54-55):

$$\text{(23)} \quad \beta \text{ is a Complete Functional Complex iff it meets at least one of the following requirements:}$$

a. it is the domain in which all the $\theta$-roles pertaining to a lexical head are assigned
b. it is the domain in which all the grammatical functions pertaining to that head are realized (where the R-relation counts as the structural subject of the NP)

The principal aim of this section is to show that predicative nominals challenge the theory of the CFC in quite a sharp way. To do so, let's consider the following example:

$$\text{(24)} \quad \text{Gianni_{i} ritiene } [\text{SC } [\text{DP queste}]_f [\text{DP PRO}_{h,j} \text{ le migliori foto di se stesso}_{i} /^{*} \text{se stesso}_{f}]]$$

"Gianni-mas.sing. believes these-fem.plur pictures of himself mas.sing./ themselves fem.plur."

This example is close to the ones we examined in the end of the first part. Namely, the subject of predication of the embedded clause, namely queste (these), does not receive any $\theta$-role from the predicative nominal. In fact the $\theta$-grid of foto (including, say, $<$agent$>$ and $<$patient$>$) is completed within the maximal projection of the NP itself.

The question now is: does the definition of CFC given in (23) individuate the local domain for the anaphor? It doesn't seem so; let's see why.

The anaphor contained in the predicative nominal can in fact refer to the subject of the matrix clause, i.e. Gianni, as indicated by the agreement features of se stesso which is masculine singular. Notice that the subject of the predicate headed by foto (pictures) is

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16. We are implicitly assuming that $i$ is different from $j$. That is we exclude cases like:

(i) John$_i$ thinks that he$_j$ loves himself$_j$

where $i$ can be interpreted a equal to $j$. 

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*queste* (these). If we apply the definition of CFC given in (23), the prediction is that the subject of predication *queste* creates opacity for the anaphoric linking (23b). In fact, the anaphor cannot be bound by *queste*, as shown by the impossibility to have *se stesse* bearing feminine and plural features. Assuming that DPs can contain a *PRO* subject will not be much helpful. In fact, it might be that the anaphor is rather bound by *PRO* controlled by *Gianni*, but the sentence can also be interpreted with an arbitrary *PRO*, as if someone else shot a picture of *Gianni*. In this case, (23a) should block the coreference between the anaphor and *Gianni*, because *PRO* completes the functional complex of the head *foto*, it being assigned the agent θ-role. 17

Interestingly, if the subject of the predicative nominal is an overt DP (as opposed to *PRO*) there is no possibility to the anaphor to be bound by *Gianni*:

(25)  \[ \text{Gianni_i ritiene [SC [DP *queste]_i [DP le migliori foto di Maria_j di se stesso/j*]}} \]

"Gianni-mas.sing. believes these the best pictures of Maria-fem. sing. of herself/himself"

In this case, the anaphor must be bound by *Maria* within the projection of the predicative nominal.

This latter case deserve more attention. In general, Binding theory never makes any difference between lexical DPs and pronominal empty categories (i.e. *PRO* and *pro*). In particular, any version based on the notion of CFC does in principle avoid any recourse to phonological features. The only relevant notions seems to be that of θ-role assignment and that of Grammatical Function (cf. (23a-b)). This seems to be implicit in the scope of Binding theory: this module is devoted to explaining referential dependencies. Why should overt phonological realization be relevant, since pronominal empty category can play the role of fully referential elements ? 18

Again I do not see any immediate solution to this problem but, indeed, this was not the

17. For an example that doesn't involve *PRO* consider the following English case:

(i)  \[ \text{[John and Mary]_i considered [SC [these]_k [(each other)_j 's best performances]]} \]

The anaphor *each other* is bound by *John and Mary* crossing over the subject of predication (I am indebted to David Pesetsky for having suggested this example to me).

18. That predicative nominals behave differently with respect to argumental DPs is a rather well known fact. In Moro (1988), for example, the following asymmetries were reported (see also Giorgi and Longobardi (1991) among others for references and discussion):

(i)  \[ \begin{align*}
\text{a. Gianni_i conosce [DP un suo_j ammiratore]} & \quad \text{"Gianni knows a his admirer"} \\
\text{b. * Gianni_i è [DP un suo_j ammiratore]} & \quad \text{"Gianni is a his admirer"} \\
\text{c. * Gianni_i conosce [DP un ammiratore di se stesso_j]} & \quad \text{"Gianni knows an admirer of himself"} \\
\text{d. * Maria_j conosce [DP un ammiratore di se stesso_j]} & \quad \text{"Maria knows an admirer of herself"} \\
\text{e. Gianni_i è [DP un ammiratore di se stesso_j]} & \quad \text{"Gianni is an admirer of himself"} 
\end{align*} \]

These contrasts show that the predicative nominal extend its CFC to include the subject of the matrix clause (as opposed to the argumental DP). Unfortunately, these asymmetries do not seems to be much helpful in understanding the problem of Binding theory which is presented here.
goal of this paper.

3. Conclusion

In this paper we have seen that when predicative nominals come into the arena the current framework doesn't seem well adapted to derive the whole range of empirical facts. We have explored facts concerning θ-role assignment and Binding theory and we have shown why some traditional assumptions are challenged in a rather sharp and puzzling way.

Let's briefly summarize the main issues explored here:

(I) There is a class of predicative nominals we called "psych-nouns" like desiderio (desire) which can be construed in such a way that one of the θ-roles assigned by the head N° can be assigned to the subject of predication they occur with. Three questions are raised by this fact: first, why only one θ-role can be assigned to the subject of predication? Second, why other nouns expressing non psychological activities, like descrizione (description), do not allow such a process? Third, what is the subclass of psych-nouns displaying such a phenomenon?

Moreover, we have seen that in spite of the similarity with passive constructs an explanation involving extraction cannot be pursued unless we undermine "Cinque's Generalization".

All in all, we called this phenomenon "pseudo-extraction" aiming at highlighting the similarities and the differences with object extraction in passive constructs.

(II) Whatever is the version of the theory of Binding one adopts, it is commonly assumed that a clausal subject creates opacity for anaphoric binding. Predicative nominals challenge this assumption by showing a context where the anaphor contained in an embedded clause may be bound by the subject of a matrix clause, while skipping the subject of the embedded clause.

This happens when the subject of the predicative nominal does not receive a θ-role from the head of the predicative nominal itself. Equivalently, when the θ-grid of the nominal head is completed within the maximal projection of the nominal itself.

Interestingly, this phenomenon occurs only if the internal subject of the predicative nominal is either absent or realized as PRO but not if it is realized as an overt DP. This seems even more puzzling since Binding theory should not in principle distinguish between null or overt lexical realization, PRO being fully referential.

Whether or not these facts can be explained without distinguishing predicative DPs from argumental DPs is a question which lies far beyond the purpose of this paper. It might turn out that the specific properties of predicative nominals are just the reflex of the specific structural position they occur in. However, even from this brief survey it is clear that this field of inquiry will deserve a specific attention.
References