The structure of copular clauses in Norwegian

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Abstract
In this paper we investigate how copulas are to be analyzed within a framework assuming a predication phrase (PrP). It is discussed in the literature whether copulas move from a verb phrase to the predication phrase, or whether they are directly merged in the predication phrase. We present arguments in favor of both views and conclude that both options have to be allowed by Universal Grammar. We discuss the claim that copulas have semantic content in relation to our analysis, and we further discuss the consequences for our analysis of an important difference between predication mediated by copulas and "pure" non-verbal predication as to the licensing of argument positions.

1. Introduction•

Stowell (1981, 1983) proposed that non-finite subject – predicate relations should be analyzed as small clauses, not only semantically, but also syntactically, i.e. non-finite subject – predicate relations should be analysed as clausal constituents configurationally. Thus, the bracketed portions in (1) show adjectival, prepositional, nominal, and verbal small clauses that each consists of a syntactic small clause subject and a syntactic small clause predicate, as indicated.

(1)   a. John finds [AP Bill [absolutely crazy]]   (Stowell 1983)

       b. I expect [PP that man [off my ship]]   (Stowell 1983)

       c. I consider [NP him [a perfect partner]]

       d. Mary had [VP her brother [open the door]]   (Stowell 1983)

Bowers (1993, 2001) developed the small clause analysis proposing that the subject – predicate relation is mediated by a predication projection, PrP, with the small clause subject in the <Spec, PrP> position. The Pr head contains a

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predication operator that turns a property phrase in the complement position of Pr (the property phrase corresponds to Stowell's small clause predicate) into a predicate. Thus, all small clauses have a uniform structure, as shown in (2), where the property phrase XP is AP, PP, NP, or VP, cf. (3) (Bowers 1993: 596-597).

(2)   PrP

          / \

       SU   Pr'   (= the predicate)

          /   \

        Pr   XP   (= the property phrase)
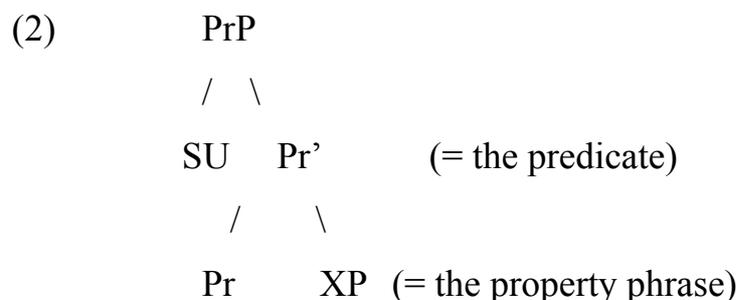
(3)   a. [$_{PrP}$ SU [Pr + AP]]   →   [$_{PrP}$ Bill [[$_{Pr}$ Ø] [$_{AP}$ absolutely crazy]]]
       b. [$_{PrP}$ SU [Pr + PP]]   →   [$_{PrP}$ that man [[$_{Pr}$ Ø] [$_{PP}$ off my ship]]]

       c. [$_{PrP}$ SU [Pr + NP]]   →   [$_{PrP}$ him [[$_{Pr}$ Ø] [$_{NP}$ a perfect partner]]]

       d. [$_{PrP}$ SU [Pr + VP]]   →   [$_{PrP}$ her brother [[$_{Pr}$ Ø] [$_{VP}$ open the door]]][1]

One of the more striking arguments in Bowers (1993) is that the PrP-analysis readily accommodates predication particles, like English *as* or Norwegian *som* 'as', that sometimes pop up between the small clause subject and the rest of the small clause (Eide 1996; Eide & Åfarli 1999), cf. (4).

(4)   a. Jeg anser lånet **som** stort

          'I consider the loan as big.'

       b. Jeg regner sofaen **som** kostbar

          'I count the sofa as expensive.'

In Stowell's analysis, these particles are not easily explained, but in the PrP-analysis they are naturally explained as lexicalizations of the Pr head, as indicated in (5) for the small clause in (4a).

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[1] We will assume in section 2 that when the property phrase is headed by a finite V, the verb is raised to the Pr head. That is probably the case for non-finite V as in (3d), as well.

(5)   PrP
            /   \
        SU   Pr'
     lånet /   \
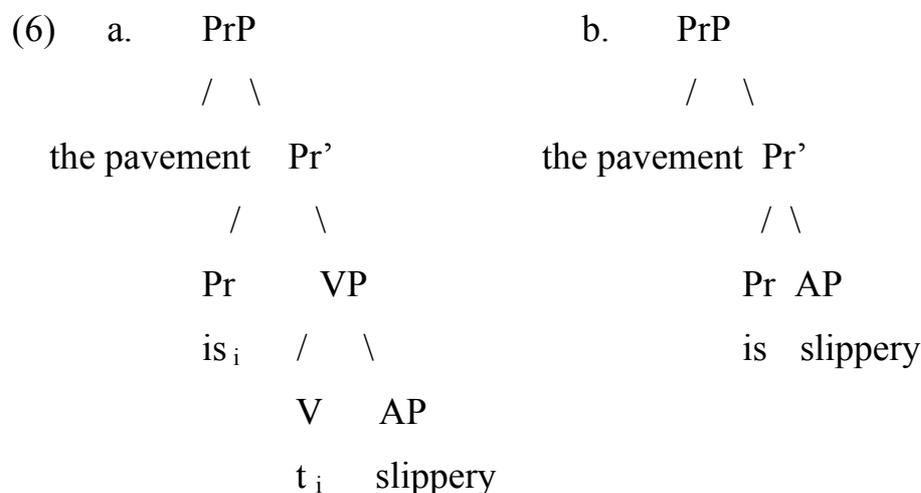   Pr   AP
        som   stort
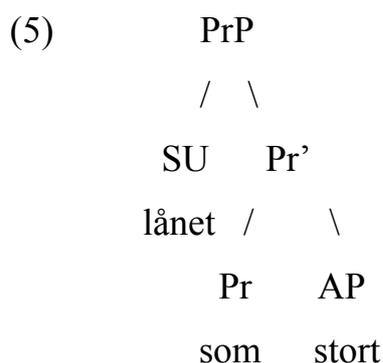
Assuming the syntactic small clause analysis and in particular Bowers' development of it, the problem that we will deal with in this article is how copular constructions in Norwegian should be analysed given the PrP analysis. In particular, should the copula be analysed as a Pr element, like the predication particle *som* 'as', or should it be analysed as a verb heading a VP and subsequently raised to Pr?

The article is organized as follows. Section 2 discusses whether the copula raises to the head of the predication phrase or whether it is merged directly, concluding by supporting the latter alternative. Section 3 then presents possible arguments in favor of the raising analysis, which we nevertheless argue are compatible with the direct insertion analysis. In section 4 we discuss case alternations on the predicate, and we also show that copulas differ crucially from predication particles as to the licensing of (non-subject) arguments, arguing that a raising analysis must be assumed for a subset of copula constructions. Section 5 concludes the paper.

2. The copula: Raising to Pr or insertion in Pr?

In non-finite small clauses, the Pr head remains empty or is filled by a predication particle like *som* in Norwegian or *as* in English. In full clauses, the main verb raises from V to Pr (and further to T and sometimes to C), cf. Bowers (1993, 2001), Åfarli (2008). However, among researchers adopting the PrP analysis, there is some controversy over the proper analysis of copular constructions. Specifically, should the copula be generated under a V-projection and then be raised to Pr (like other main verbs), or should it be directly inserted in Pr (similarly to predication particles) so that copular constructions lack a VP? The two options are sketched in (6) for the copular clause *the pavement is*

slippery. Notice that PrP in finite clauses is embedded as a complement of a T-projection, not shown here or later.

```
(6)   a.    PrP                      b.    PrP
           / \                            / \
  the pavement   Pr'          the pavement  Pr'
             /    \                       / \
           Pr     VP                    Pr  AP
           is i   /  \                  is   slippery
                 V    AP
                 t i    slippery
```

We shall argue that (6b) is the unmarked option (see e.g. Baker 2003, Bailyn 2001). One reason for this is that it contains less structure and therefore it is the more economical alternative. On the assumption that copulas do not require (non-subject) arguments, no VP is required (VP being the locus of the display of non-subject arguments), and the possibility of generating the copula directly in Pr is available and therefore allowed, and even required given economy. However, we will not assume a rigid economy metric, and therefore we do not consider the option in (6a) to be excluded in principle. In fact, in section 4, we will show empirical evidence that the more elaborate structure (6a) must be allowed in certain cases.

What are the arguments for adopting (6b), apart from economy considerations? Notice first that it is commonly assumed that full verbs raise to the functional Pr head, and thus the Pr head accommodates verbs in the first place. As for direct generation of verbs in functional heads, it is commonly assumed that English modals and supporting verbs like English *do* are directly inserted in the T head. Thus, there is nothing that prohibits direct insertion of verbs into functional head positions.

A consideration of the distribution of copulas among different languages seems to lend support to the direct insertion structure in (6b). Pustet (2003) is a study of copular constructions in some 160 languages worldwide. She divides languages into groups according to which types of property phrases (AP, NP or VP; Pustet does not discuss PP) co-occur with a copula (Pustet 2003: 64). Thus,

Tagalog does not have copulas at all, i.e. not with AP, NP, or with VP. Burmese uses copulas only with NPs, but not with APs or VPs. German (like e.g. English and Norwegian) uses copulas with both AP and NP, but not with VP. Last, Bambara uses copulas with all three: AP, NP, and VP. The German type (copula only with AP and NP) is the most common type worldwide, but the Tagalog and Burmese types (non-copularizing and NP-copularizing types, respectively) are also very common. The Bambara type (fully copularizing) is, however, quite rare (Pustet 2003: 72).

Crucially however, even though this fully copularizing type is rare, it is attested, and it is quite interesting in the context of determining between the structures (6a) and (6b). In languages like Bambara, even main verbs require a copula. An example is shown in (7).

(7)   ne bɛ   taa.

        1SG COP leave

        'I am leaving.'   (Pustet 2003: 65)

Then, assuming that copulas are generated in V and raise to Pr, i.e. as in the structure (6a), we either find the structure PrP+VP+PrP+VP or the structures PrP+VP+VP/VP+PrP+VP, where the first VP is the copular VP, and the second VP is the main verb VP. Of these representations, the former is the more likely, since presumably both the copula and the main verb require a PrP, given the assumptions made earlier. Now, these structures are quite complex, and thus they are dubious on economical grounds, given that there is a simpler structure available. And a simpler structure is of course available, namely (6b). According to (6b), the structure of Bambara clauses with copula and main verb is PrP+VP, with the copula directly inserted in Pr and the main verb generated in V.

Besides being simpler, this structure also has the great advantage of being completely parallel to clauses with copularizing NP and AP. Thus, the general structure of copular constructions in a fully copularizing language like Bambara is PrP+XP, where X = A, N, V, as shown in (8) (PP should also be included, but is not shown here since Pustet does not take it into account).

(8)   PrP
    / \
     Pr'
    /   \
   Pr AP/NP/VP
  copula
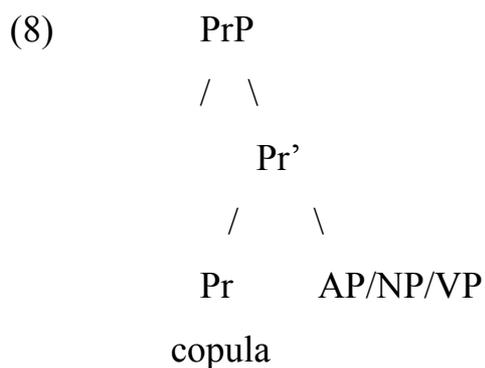
This analysis now sets the stage for a simple analysis of the difference between languages with and without copularizing VP. A language with copularizing VP (like Bambara) lexicalizes Pr by inserting a copula, whereas a language without copularizing VP (like Norwegian and English) lexicalizes Pr by verb raising. This is shown in (9a,b), respectively.

(9) a. PrP   b. PrP
    / \   / \
     Pr'   Pr'
    /   \   /   \
   Pr VP   Pr VP
  copula verb …   verb$_i$ t$_i$ …
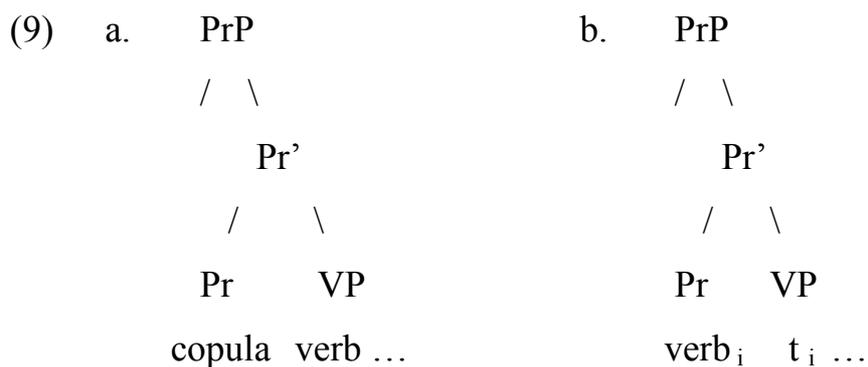
In other words, whereas (9b) is the correct structure for languages like Norwegian and English that do not have a copularizing VP, (10) is the correct structure for copularizing AP, PP, and NP in such languages.

(10)   PrP
    / \
     Pr'
    /   \
   Pr AP/NP
  copula
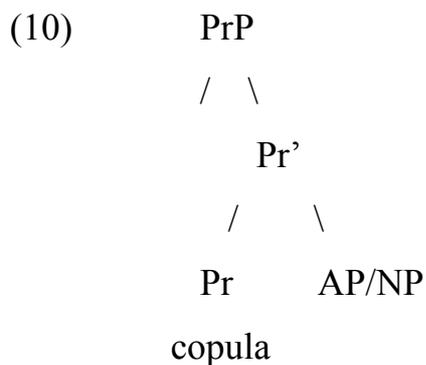
That is, a natural approach to cross-linguistic copular phenomena suggests that the copula is directly inserted in Pr, i.e. option (6b) above.[2]

To wrap up this section, if we turn the non-finite small clauses in (1) into finite copular main clauses, we get the following:

(11)   a. [PrP Bill [Pr' [Pr **is**] [AP absolutely crazy]]

   b. [PrP That man [Pr' [Pr **is**] [PP off my ship]]

   d. [PrP He [Pr' [Pr **is**] [NP a perfect partner]]

   c. [PrP Her brother [Pr' [Pr **opens**ᵢ] [VP tᵢ the door]]

3. Semantic considerations

There are arguments in the literature that indicate that the copula has semantic content. The assumption then seems to be that this shows that the copula must be generated as an independent verb, i.e. heading a V-projection. In effect, these arguments are taken as motivation that the raising structure (6a) should be preferred over the direct insertion structure (6b). For instance, Bowers (2001: note 4) argues against the structure in (6b), claiming that it would make it difficult to account for the difference in meaning between pairs such as *I made John a good teacher/I made John be a good teacher*, and he refers to Rothstein (1997) for arguments that the copula makes an identifiable semantic contribution to the meaning of sentences, and hence cannot be merely a semantically empty realization of the category Pr. However, even though evidence may support the claim that copulas have semantic content, we argue in this section that that contention is compatible with the direct insertion analysis of the copula.

Rothstein (1999) presents several arguments in favor of the claim that copulas are not semantically empty. Here we will focus on four puzzles for the view that the copula does not add any meaning to a structure that it occurs in.

The first argument is that there is a semantic difference between (12a) and (12b).

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[2] Another possible argument in favor of the copula being base-generated in Pr comes from historical data. Full verbs may develop into copulas, which can be analyzed as the result of a process where the verb changes its merge position from V to Pr. See Lohndal (to appear) for details and illustration.

(12)   a. Mary considers Jane very clever.

b. Mary considers Jane to be very clever.

Rothstein (1999: 349) remarks that "it has often been commented that small clauses like [(12a)] 'feel' more 'individual level', inherent, or general than their inflected verbal counterparts in [(12b)]". She further points out that this cannot be due to the stage/individual-level distinction itself. (13a) shows that a temporary stage-level property is predicated of the subject in a bare small clause, whereas in (13b) the inflected form is used to make an individual-level predication.

(13)   a. The doctor considers Mary quite sick/very fluish.

b. I believe Mt. Everest to be the highest mountain in the world.

Rothstein's second argument is that if *be* expresses just function application, we should be able to either add it freely (14a), or delete it (14b). Neither is possible.

(14)   a. Mary considered Jane (*be) polite.

b. Mary let Bill *(be) rude.

The third argument is that there is a clear semantic difference between (15a) and (15b).

(15)   a. Mary made Jane polite.

b. Mary made Jane be polite.

(15b) strongly implies that Jane is an agent, whereas this is not the case in (15a).

Fourthly, and finally, *be* in the progressive can only have certain predicates as its complement (Lakoff 1970 proposed that only non-stative complements are allowed).

(16)   a. Mary is being noisy/mean/*awake/*healthy.

b. John is being a nuisance/*a murderer.

Partee (1977) also pointed out that these sentences depend on the subject having a [+animate] feature, cf. (17).

(17)   a. John is noisy/is being noisy.

b. The river is noisy/*is being noisy.

Notice, however, that generally there is no restriction on animate subjects occurring with verbs in the progressive.

(18)   a. John makes/is making a lot of noise.

b. The river makes/is making a lot of noise.

Thus, the difference must be related to the copula.

Rothstein (1999, 2001) concludes on the basis of the three first properties that *be* denotes a packaging function, i.e. a function that maps from the mass domain to the count domain. The verb introduces a Davidsonian eventuality argument, but it gives no property of the eventuality and introduces no thematic roles. Rothstein's proposal is based on the hypothesis that there is a basic difference in the kinds of entities that adjectives and verbs denote. She argues that the domain of eventualities is divided into two, analogously to the division of the nominal domain into count and mass entities. The domain of adjectives, in this analysis, is a set of non-atomic, mass, state-like eventualities. Verbs, on the other hand, denote properties ranging over atomic, count-like eventualities. Rothstein (1999: 363) then argues that the verb *be* denotes a function from the domain of mass-states to the domain of Davidsonian eventualities, and has the effect of "packaging" a non-atomic mass-state into an atomic eventuality. We can illustrate this, as Rothstein does, with *be* combining with an AP, e.g. *be polite*. Here *be* introduces the eventuality argument and *polite* expresses a property of that eventuality. In other words: "The AP *polite* denotes the politeness property, and the VP expression *be polite* denotes the set of eventualities that instantiate the politeness property" (Rothstein 1999: 363). We

will not discuss the theoretical aspects of Rothstein's proposal, mainly because we think that her claim that the copula introduces no thematic roles is not completely correct, see the next section.

However, Rothstein's data clearly indicate that the copula has semantic content. The point we want to make here is that this fact does not at all exclude the direct insertion structure (6b). The direct insertion of English modals under T is a comparable case. The fact that each modal verb has individual semantic content does not require that it is generated under a V-projection. Independent semantic content is compatible with direct insertion under a functional projection. Therefore, the meaning differences between small clauses with and without a copula verb that are discussed by Bowers and Rothstein, are readily accounted for given the direct insertion structure in (6b). Thus, the possibility that the copula has a semantic contribution of its own, does not particularly favor generation under V as opposed to Pr, as long as this semantic contribution does not imply specific argument positions, in which case a VP is required to accommodate those positions. The take-home message at this point is that the fact that copulas have semantic content does not require a raising analysis. However, there are cases that we are unable to analyze if we do not assume the raising analysis. In the next section, we will see a number of such examples.

4. The complex structure of copular clauses

Assuming the direct insertion in Pr approach to copular constructions, Norwegian copular constructions like those in (19) have the (partial) structures in (20).

(19)   a. Jon er flink.

'Jon is clever.'

b. Jon er skreddar.

'Jon is a tailor.'

(20) a.   PrP   b.   PrP

```
(20)  a.      PrP                          b.      PrP
             /  \                                 /  \
          Jon    Pr'                           Jon    Pr'
              /    \                               /    \
           Pr      AP                           Pr     NP
           er     flink                         er     skreddar
```

However, there are some problems with the direct insertion approach which we now turn to. One problem has to do with equative predicatives with a pronoun in the post-copular position. Typically, the post-copular pronoun is in the accusative, cf. (21) (Lohndal 2006):

(21)   Dette er meg.

       'This is me."

If accusative is assigned/licensed by V, that implies that there is a VP in (21), contrary to what is assumed in the direct insertion approach. Specifically, (21) suggests the structure shown in (22), cf. (6a).

```
(22)        PrP
           /  \
       dette   Pr'
           /     \
        Pr       VP
        er i    /  \
               V    DP
               t i   meg
```

Notice, however, that some Norwegian dialects allow a nominative pronoun instead of an accusative pronoun in these constructions, cf. (23) (see also

Sigurðsson 2006 for a comprehensive discussion of this variation across the Germanic languages).

(23)   Dette er eg.

       'This is I.'

This suggests the following structure, because it is typically the case that <Spec, PrP> and <Comp, PrP> show case agreement in languages where both the subject and the property phrase bear case, e.g. as in German (cf. Flaathe 2007).

(24)   PrP
              / \
         dette   Pr'
                 /   \
              Pr   DP
               er   eg

In fact, we will hypothesize that both possibilities are allowed, i.e. both the type (22), cf. (6a), and the type (24), cf. (6b). We thus take the grammaticality of both (21) and (23) as initial evidence that both structural representations must be allowed by universal grammar.

       Given what we have argued earlier, the structure in (22) is of course the surprising one. It is possible to conjecture that the raising type (22)/(6a) is only relevant for the equative copula. However, there are other data that suggest that that is not so, and that the structure with PrP+VP, i.e. the raising type (6a), contrary to what we have been arguing so far, can be extended to the core copula type, e.g. to the copularizing AP type. We now turn to the relevant data to show this; consider (25)-(29).

(25)   a. Jeg mener/anser at lånet er litt i største laget for oss.

           I think/consider that the loan is a little too big for us

    b. Jeg mener/anser at lånet er **oss** litt i største laget.

       I think/consider that the loan is us a little too big

    c. Jeg anser lånet som litt i største laget for oss.

       I consider the loan as a little too big for us

    d. ??/* Jeg anser lånet som **oss** litt i største laget.

          I consider the loan as us a little too big

(26) a. Jeg mener/anser at denne sofaen er for kostbar for oss.

         I think/consider that this sofa is too expensive for us

    b. Jeg mener/anser at denne sofaen er **oss** for kostbar.

         I think/consider that this sofa is us too expensive

    c. Jeg anser denne sofaen som for kostbar for oss.

         I consider this sofa as too expensive for us

    d. ??/* Jeg anser denne sofaen som **oss** for kostbar.

           I consider this sofa as us too expensive

(27) a. Jeg regner med at hunden er trofast mot meg.

         I count on that the dog is faithful to me

    b. Jeg regner med at hunden er **meg** trofast.

         I count on that the dog is me faithful

    c. Jeg regner hunden som trofast mot meg.

         I count the dog as faithful to me

    d. ??/* Jeg regner hunden som **meg** trofast.

           I count the dog as me faithful

(28) a. Jeg regner med at hunden er trofast mot sin herre.

         I count on that the dog is faithful to his master

    b. Jeg regner med at hunden er **sin herre** trofast.

         I count on that the dog is his master faithful

    c. Jeg regner hunden som trofast mot sin herre.

       I count the dog as faithful to his master

    d. ??/* Jeg regner hunden som **sin herre** trofast.

         I count the dog as his master faithful

(29)   a. Jeg regner med at djevelens lunefullhet er fremmed for henne.

       I count on that the devil's capriciousness is foreign to her

    b. Jeg regner med at djevelens lunefullhet er **henne** fremmed.

       I count on that the devil's capriciousness is her foreign

    c. Jeg regner djevelens lunefullhet som fremmed for henne.

       I count the devil's capriciousness as foreign to her

    d. ??/* Jeg regner djevelens lunefullhet som **henne** fremmed.

         I count the devil's capriciousness as her foreign

The data given here show that there is a systematic difference between the copula (the a- and b-versions) and predication particles like *som* 'as' (the c- and d-versions) when it comes to licensing an indirect object type goal argument (in **bold**). The copula licenses such an argument (the b-versions), whereas the predication particle does not (the d-versions).

     Assuming that indirect object type goal arguments are by definition generated in <Spec, VP> (cf. Åfarli 2008), this means that copular clauses must allow the possibility that they contain a VP, whereas predication particle clauses cannot. This means that the copular clauses must allow the raising structure (6a).

     Consider the embedded portion of (27a), shown here as (30), with the putative structure (31).
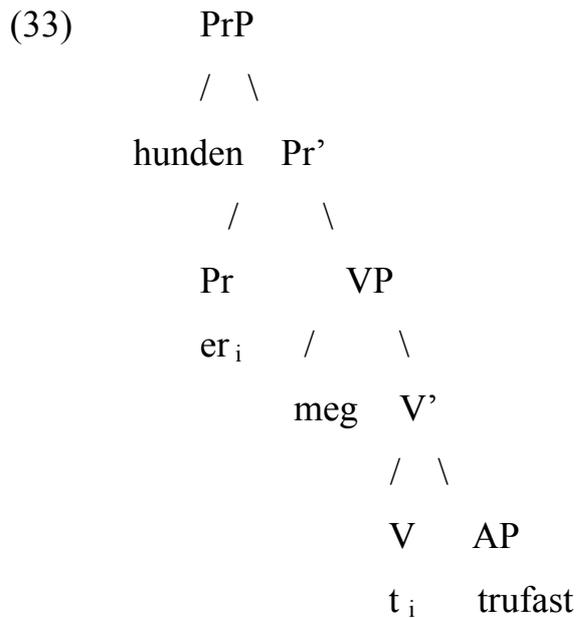
(30)   …at hunden er trofast mot meg.

     '…that the dog is faithful to me.'

(31)   PrP
             / \
      hunden   Pr'
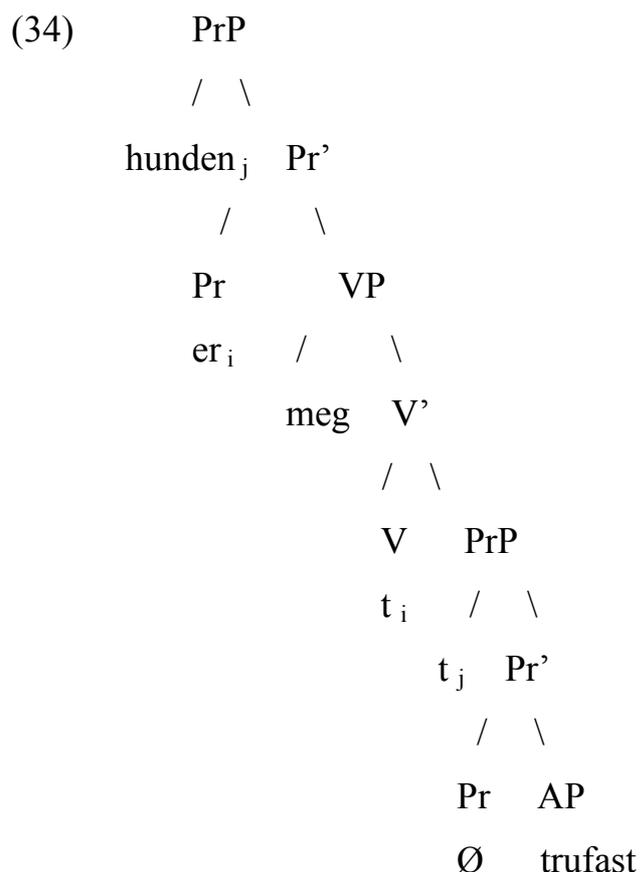   /   \
       Pr   AP
        er   trofast mot meg

In (30) the PP *mot meg* is an adjunct. However, the argument of P may assume argument status, as shown in (27b), shown as (32).

(32) …at hunden er **meg** trofast.

     …that the dog is me faithful

Since copulas (normally) do not require non-subject arguments, no VP is required (VP being the locus of the display of non-subject arguments), and the possibility of generating the copula directly in Pr is possible and therefore allowed, and perhaps even required given economy. Now we see in the type (32) an example of a copular construction that contains an argument. By comparable reasoning this construction must contain a VP to accommodate the new argument. Specifically, the position that accommodates the argument must be <Spec, VP>, since the argument has the canonical goal role associated with that position. In other words, (32) must have the structure in (33).

(33)   PrP
            / \
      hunden   Pr'
           /   \
        Pr   VP
        er$_i$ /   \
             meg   V'
                  / \
                V   AP
                t$_i$ trufast

Now, notice that (33) poses a serious problem. Semantically, *trufast* 'faithful' in (33) is a predicational property of *hunden* 'the dog,' but that does not follow from the structure. Even though *trufast* is included in the complex predicate *er meg trufast*, that is not sufficient for making *trufast* in particular a property ascribed to *hunden*, because if it were, *meg* should also be a property of *hunden*, which it is not (and cannot be). What is needed to make *trufast* the property ascribed to *hunden*, is that *trufast* is a property phrase in the complement position of a predication operator in Pr, which has *hunden* in its specifier position. Therefore, (33) must be revised, and (34) is the structure that is more likely to be the correct one.

(34)   PrP
                     / \
           hunden_j   Pr'
                    /   \
             Pr   VP
             er_i   /   \
                  meg   V'
                        / \
                       V   PrP
                      t_i   / \
                          t_j   Pr'
                              /   \
                            Pr   AP
                            Ø   trufast

In (34), all the predication relationships are correctly derived by assuming two PrPs.

In this section we have argued that the two different structures for copulas, viz. raising to Pr or base-generation in Pr, are able to accommodate case alternations on the property phrase. Furthermore, we have also shown that copulas and predication particles differ in their ability to license arguments. Last, we have shown how complex copula constructions can be analyzed on the basis of the predication framework. Specifically, we have shown empirical motivation for the raising analysis of the copula by showing that the VP is necessary in order to license enough argument positions. Predication particles do not license an extra argument position, which follows from the claim that these particles only allow for the direct merging alternative. That is, predication particles can never raise from a lower phrase and into Pr. This asymmetry between copulas and core cases of non-verbal predication like the use of predication particles is a good argument in favor of distinguishing copulas from non-verbal predication in general.

5. Conclusion

In this paper we have shown that the copula and the predication particle *som* differ in their ability to license argument positions. These data have been taken to support an analysis of copular clauses whereby the copula may be generated as the head of a VP and raised to Pr. At the same time, there is also evidence that a structure where the copula is directly inserted in Pr is available.

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