

## Subregular prenominal constructions

A subregular construction is one which shows a mixture of idiosyncratic and regular properties, such as the prenominal in *so big a mess*. This AP is exceptional, in that it does not take the usual position of adjectival modifiers, exemplified by *a very big house*, but its internal structure is regular, having an adjectival head which is preceded by a degree marking adverb. Modeling such constructions is a challenge, since the resulting analysis should simultaneously do justice to both the regular and the idiosyncratic properties. This kind of flexibility, I claim, can be ensured by employing a phrase type hierarchy, in the style of (Ginzburg and Sag 2000). To illustrate this I will discuss two subregular prenominal constructions: the Big Mess construction<sup>1</sup>, exemplified above, and the phrasal possessive. To pave the way I first present a treatment of the internal structure of the noun phrase.

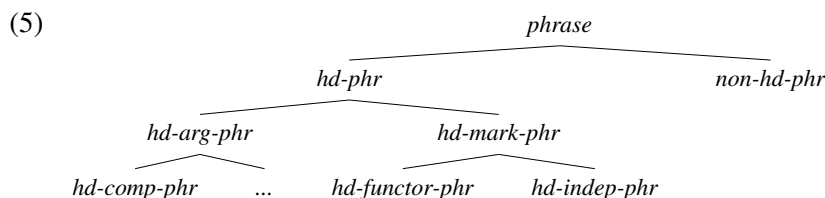
### 1 The functor treatment of the noun phrase

I assume that the head of the noun phrase is the noun, and not the determiner. Some evidence is provided by:

- (1) My neighbors are/\*am rich.
- (2) Whose horse do you want to buy ?
- (3) a. What birds have/\*has two wings and four legs ?  
b. What comes/\*come next ?
- (4) a. A few pages are/\*is missing.  
b. A good many pages are/\*is lost forever.

Since a headed phrase shares its HEAD value and its index with its head daughter, it follows that the third person plural NP in (1) has *neighbours* as its head, rather than the first person singular *my*, and that the accusative NP in (2) has *horse* as its head, rather than the genitive *whose*. Similarly, the plural NP in (3a) must have *birds* as its head, since the interrogative *what* is, by itself, singular, as shown by (3b), and the plural NPs in (4) must have *pages* as their head, since the quantifying nominal determiners are singular, as shown by the presence of the indefinite article.

Following (Allegranza 1998) and (Van Eynde 2006), I treat the prenominal dependents of the noun as functors, obliterating the distinction between specifiers and modifiers. To spell out the properties of this type of combination, I integrate it in a phrase type hierarchy, adapted from (Ginzburg and Sag 2000).



<sup>1</sup>The term is from (Berman 1974).

All headed phrases have a head daughter and the head-marker phrases, of which the head-functor phrases are a subtype, also have a marker daughter.

$$(6) \left[ \begin{array}{l} hd-phr \\ HEAD-DTR \quad sign \end{array} \right] \quad \left[ \begin{array}{l} hd-mark-phr \\ MARK-DTR \quad sign \end{array} \right]$$

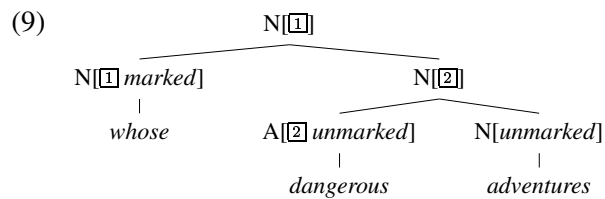
The difference between head-argument phrases and head-marker-phrases is that in the former the head daughter lexically selects its non-head sister(s), whereas in the latter there is no such selection. The name and the main properties of the head-marker type of combination are taken from (Pollard and Sag 1994, 44-46), and so is the role of the MARKING feature and its inventory of values, but its range of application is much wider, since I do not adopt the extra constraints of PS-94: the markers need not be words, but can also be phrases, they can belong to any part of speech, they can express any kind of meaning, and their head sister need not be a phrase. For this reason, I use the term GENERALIZED MARKING PRINCIPLE for the constraint which models the propagation of the MARKING values.

$$(7) \left[ \begin{array}{l} hd-mark-phr \\ SS | LOC | CAT | MARKING \quad \boxed{1} \textit{marking} \\ MARK-DTR | SS | LOC | CAT | MARK \quad \boxed{1} \end{array} \right] \quad \left[ \begin{array}{l} hd-arg-phr \\ SS | LOC | CAT | MARKING \quad \boxed{1} \textit{marking} \\ HEAD-DTR | SS | LOC | CAT | MARK \quad \boxed{1} \end{array} \right]$$

Functors now are markers which select their head sister.<sup>2</sup> The determiner *every*, for instance, selects a singular count noun. This is modeled by the feature SELECT. It is part of the head value of all signs and takes an object of type *synsem* as its value,<sup>3</sup> which is shared with the SYNSEM value of the head sister, as stipulated in the SELECTOR PRINCIPLE.<sup>4</sup>

$$(8) \left[ \begin{array}{l} hd-functor-phr \\ MARK-DTR | SS | LOC | CAT | HEAD | SELECT \quad \boxed{1} \\ HEAD-DTR | SS \quad \boxed{1} \textit{synsem} \end{array} \right]$$

Assuming that the prenominals select an unmarked nominal as their head, and that their own marking value is *marked* in the case of the determiners and *unmarked* in the case of the adjectives, we get the following kind of analysis for NPs.



The noun itself is unmarked and the addition of the adjective does not change this, since the adjective is unmarked too, but the addition of the possessive pronoun turns the nominal into a marked NP.<sup>5</sup> At that point, it is no longer possible to add

<sup>2</sup>In this respect, they differ from the arguments: a complement does not select its head sister, but is selected by it.

<sup>3</sup>Most signs which are used as functors can also be used in other ways. Adjectives, for instance, are functors in prenominal position, but in predicate position they are complements of copular verbs. In that case their SELECT value is *none*.

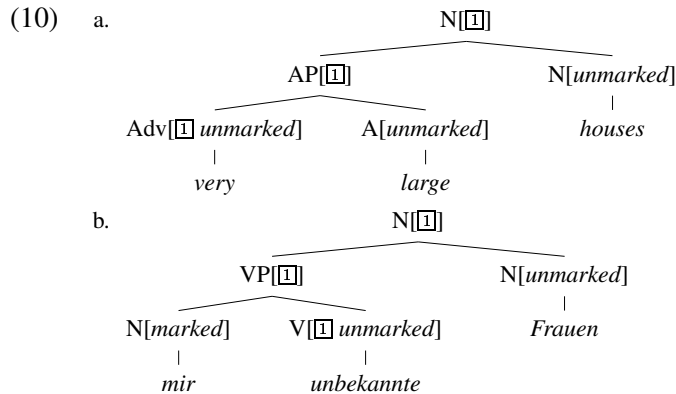
<sup>4</sup>This principle subsumes both the Spec Principle of (Pollard and Sag 1994) and the constraint that in a head-adjunct phrase the MOD value of the adjunct is token-identical to the SYNSEM value of its head sister. The SELECT feature, hence, replaces and subsumes both SPEC and MOD.

<sup>5</sup>Nouns which do not take a determiner, such as the pronouns and most of the proper nouns, are inherently marked.

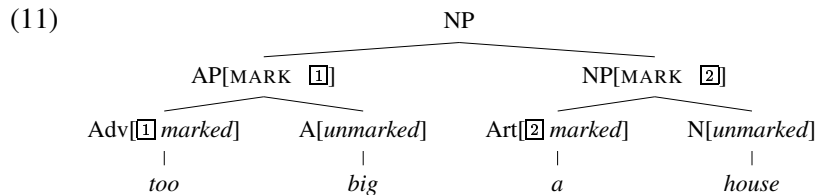
a determiner or an adjective which selects an unmarked nominal, as in *the whose adventures* and *dangerous whose adventures*.

## 2 Phrasal prenominals

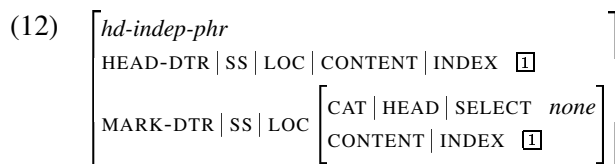
If a prenominal is a phrase, then its MARKING value is determined by its marker daughter, if there is one, and otherwise by its head daughter (see (7)). The former is exemplified by *very large houses*, the latter by the participial in the German *mir unbekannte Frauen* ‘(to) me unknown women’.



Let us now turn to the prenominal APs in the Big Mess construction. Blocking the ill-formed *a so/too/how big house* is straightforward: if we treat the relevant degree words as *marked*, then the AP and the dominating nominal are also *marked*, so that the latter is not compatible with the article. Licensing the well-formed *so/too/how big a house* is more complex. One possibility is to treat the AP as a specifier of the indefinite article, as in  $[[[how\ big]\ a]\ house]$  (Ginzburg and Sag 2000, 201). This left branching structure, though, is at odds with the usual tests for constituency: if the AP is put in postnominal position, as in *a house too big to clean in a day*, or in predicative position, as in *a house will never be too big for her*, it does not take the article along. More plausible is the structure in:



To model this combination of an AP with an NP we cannot use the head-functor type of combination, for if we allow the head daughter of the AP to select a marked NP, we inadvertently license *(very) big a house* as well. As an alternative, I will model the combination in terms of another subtype of the head-marker type of combination, i.e. the head-independent phrase type (see (5)). It differs from the head-functor type of combination in two ways: first, the nonhead daughter does not select its head sister; second, the link between the daughters is defined in terms of index sharing.

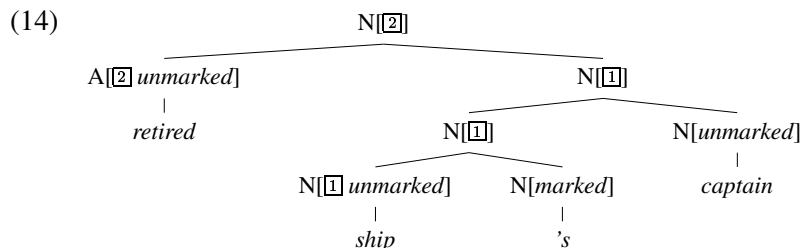


This type of combination was originally introduced to model instances of asymmetric coordination and apposition (Van Eynde 2005), but its defining properties are also applicable to (11), for the lack of selection is just what we need, and the index sharing models the fact that the AP denotes a property of the referent of the NP. All we need, is a subtype of *hd-indep-phr* which models the constraints which differentiate (11) from the other head-independent phrases. Let us call this the *big-mess-phr(ase)*.

$$(13) \left[ \begin{array}{l} \textit{big-mess-phr} \\ \text{MARK-DTR} \mid \text{SS} \mid \text{LOC} \mid \text{CAT} \left[ \begin{array}{l} \text{HEAD} \quad \textit{adj} \\ \text{MARKING} \quad \textit{degree} \end{array} \right] \\ \text{HEAD-DTR} \mid \text{SS} \mid \text{LOC} \mid \text{CAT} \left[ \begin{array}{l} \text{HEAD} \quad \textit{noun} \\ \text{MARKING} \quad \textit{a} \end{array} \right] \end{array} \right]$$

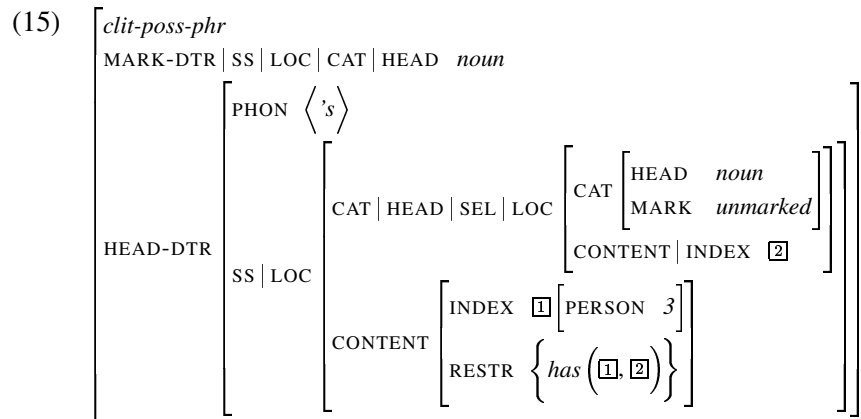
The marker daughter is required to have a MARKING value of type *degree*. This is a subtype of *marked*, which subsumes a.o. *so*, *how*, *too*, *this*, *that* and *as*. This excludes single adjectives, as in *big a house*, and adjectives with an unmarked functor, as in *very big a house*. The head daughter's MARKING value is required to be *a*, another subtype of *marked*; this excludes unmarked nominals, as in *how warm (nice) water*, as well as otherwise marked nominals, as in *too big some house*, *how big anyone* and *so big Teddy*. In sum, this construction is modeled in a way which captures both its idiosyncratic properties, spelled out in *big-mess-phr*, and its more regular properties, which are spelled out in the constraints which hold for its supertypes *hd-indep-phr*, *hd-mark-phr* and *hd-phr*.

To show the potential of this approach I apply it to another prenominal with idiosyncratic properties: the phrasal possessive, as in *the Queen of England's crown*. In the specifier treatment of (Pollard and Sag 1994, 53) and (Ginzburg and Sag 2000, 193), the clitic takes the lower NP as its specifier, forming a DETP, which is in turn the specifier of the nominal which heads the higher NP. Problematic for this analysis is the use of the possessive in modifier positions, as in *an evil retired ship's captain*, quoted from (Diamond 2005, 259). If *ship's* is a DETP that specifies *captain*, then it should not be possible to add other prenominals, but it is. The marker treatment fares better, since it provides a uniform analysis of specifying and modifying possessives: if the nominal sister of the clitic is marked, as in *the Queen of England's*, then the possessive is marked and the dominating nominal as well, so that the latter cannot be combined with a determiner, as in *a the Queen of England's crown*, but if the nominal sister of the clitic is unmarked, as in *ship's*, then the possessive and the dominating nominal are unmarked, and hence compatible with another prenominal.



Making the plausible assumption that the clitic lexically selects an unmarked nominal as its head sister, we can treat the combination of the phrasal possessive with

the head as an instance of the head-functor phrase type, but this treatment is less plausible for the internal structure of the possessive, since it would imply that all English nouns (optionally) select the possessive clitic as their head sister. More promising is an analysis in terms of a subtype of the head-independent type of combination.



The head daughter is the clitic pronoun 's. It has a third person index which stands in a relation of possession to the index of the nominal which it selects. Since the index of the clitic is shared with the one of its nominal marker sister (see (12)), it follows that the latter must be third person as well, and that its semantic restrictions apply to the possessor.<sup>6</sup> In sum, we have captured the idiosyncratic properties of the phrasal possessive in terms of *clit-poss-phr*, but at the same time we also capture its regular properties in terms of the constraints which are associated with its supertypes *hd-indep-phr*, *hd-mark-phr* and *hd-phr*.

## References

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<sup>6</sup>Further constraints on the marker daughter should exclude the personal, demonstrative and reflexive pronouns, but not the reciprocal or indefinite ones, as in *each other's car* and *nobody's fault*.