

Adjective Classes and Syntactic Ordering Restrictions

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There is a lack of consensus in the literature as to which classification of adjectives is directly relevant for the observed syntactic restrictions on their ordering. In this paper, I argue that adjectives are divided into four classes of relevance for syntactic ordering. I propose that adjective ordering restrictions (AOR) are the result of adjectival constituents raising or not raising in the structure as a consequence of their complexity, rather than stipulating that semantic properties correlate to syntactic heads. A structural explanation for these differences motivates AOR as a part of a more general observation that larger constituents in the DP merge higher (Vergnaud 1974, Kayne 1994, Cinque 2009, etc), rather than as a separate phenomenon.

Adjective Ordering Data/ Background:

In English, non-intersective adjectives precede intersective adjectives (Svenonius 2008, Truswell 2009):

- (1) (a) the big red car
(b) *the red big car

Additionally, gradable adjectives precede non-gradable, or *classifying*, adjectives (cf. Bosque & Picallo 1996, Kennedy & McNally 2008):

- (2) (a) red wine (a type of wine)
(b) a small dog (a breed/type of dog)
(c) the long/brown small dog (one of a small breed of dog, that is long/brown)
(d) *the small long/brown dog (with the same reading as (c))

There are two empirical approaches to AOR in the literature. The first approach bases AOR on fine-grained semantic subclasses, such as size or color (Cinque 1994, Scott 2002, Laenzlinger 2005). The second argues that AOR is based on functional properties of the DP, which are less fine-grained (Svenonius 2008, Truswell 2009). This paper adopts a more restricted classification of adjectives, similar to those in Svenonius (2008) and Truswell (2009), but provides evidence that the semantic classes relevant to syntactic AOR are:¹

NON-INTERSECTIVE > INTERSECTIVE > NON-GRADABLE
└──────────────────────────────────┘
GRADABLE

Non-intersective (i.e. *big*) adjectives merge with a silent quantificational degree head, that raises and pied pipes the non-intersective adjective to a position higher than intersective (i.e. *red/square*) adjectives. Non-intersective adjectives merge with a non-*wh* degree morpheme, and do not raise. Finally, classifying adjectives do not merge with degree morphology and are interpreted as a ‘correlated property’ (as in Kennedy & McNally 2008).

¹ The fourth class of adjectives that is relevant to AOR, NON-PREDICATIVE adjectives (i.e. *former*), is not ordered with respect to the above hierarchy; rather, when stacked, non-predicative adjectives have scope effects over one another: (1) *The future former mayor (will finish his term soon) / The former future mayor (is now the mayor)*. When combined with other classes adjectives in cases of multiple stacked adjectives, the non-predicative adjective can fall anywhere between predicative adjectives, taking scope accordingly: (2) *(former) beautiful (former) tall (former) model* (see also Truswell 2009).

Higginbotham (1985) notes the difference between the attributive and the predicative use of *big*:

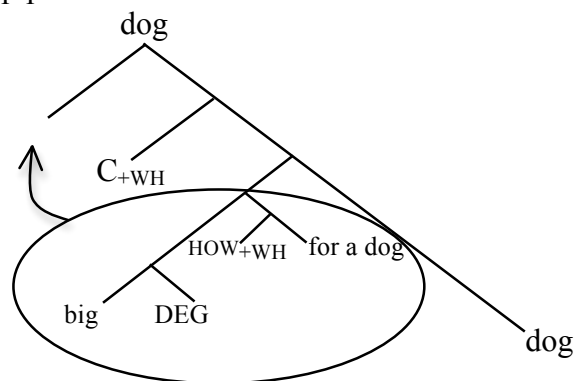
That is a butterfly, and it is big for a butterfly

That butterfly is big (for an X /creature)

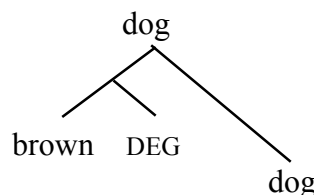
(Higginbotham 1985: 563). Essentially, there is a difference between the restriction on the comparison class for attributive and predicative *big*. In contrast, it is not natural to paraphrase intersective adjectives with a *for*-phrase:

- (5) *That is a plant, and it is green for a plant
(6) *That plant is green for a plant
(7) That plant is very/too green for a plant

(8) Non-Intersective adjectives:



(9) Intersective adjectives:



(10) #That butterfly is big, but it is not big.²

(i) That butterfly is big, but it is not BIG.

I leave these examples for this presentation, as focus quantification plays a different with (i) and with adjective ordering restrictions (the AOR disappear under focus conditions, and change with degree morphology, i.e. *the RED big dog*; *the very red big dog*).

(11) That is a big butterfly, but it is not big.
 (12) That butterfly is big for a butterfly, but it is not big.
 (10) results in a contradiction (without focus), whereas (11) and (12) do not. For intersective adjectives, both attributive and predicative *red* result in a contradiction:

- (13) That sunset is red. (13) #That sunset is red, but it is not red.
 (14) That is a red sunset. (14) #That is a red sunset, but it is not red.

The difference between attributive and predicative uses of non-intersective adjectives lies in the fact that attributive *big* merges with a silent *for*-PP. This explains the parallel behavior of attributive *big* and the predicative *big* with an overt *for*-PP containing *butterfly*. This *for*-PP relates to how the semantic comparison class is set with non-intersective adjectives. On the other hand, bare predicative *big* does not have the same type of silent *for*-PP, as it behaves differently from its overt *for*-PP counterpart (see McKinney-Bock 2009). As a consequence, the interpretation of the comparison class is less restricted than it is in the case of attributive *big*, whose comparison class is syntactically specified. Finally, intersective adjectives do not have a *for*-PP in attributive or predicative position.³

Motivating the *Wh*-Operator

A similar construction to the English *for*-PP in Polish contains an overt *wh*-word *how*:⁴

- | | | |
|--------------------------|------------------------------------|----------|
| (15) duży jak na kota | (16) ?czerwony jak na truskawkę | (Polish) |
| big how on cat | red how on strawberry | |
| 'big for a cat' | '?red for a strawberry' | |

Also, in English, the *for*-PP is similar to a degree question that overtly pied-pipes *big*:

- | | |
|--|---|
| (17) Q: How long (of) a dress did she buy? | (18) Q: How red (of) a dress did she buy? |
| A: A very long dress. | A: A very red dress. |
| A: A short/long dress. | A: #A yellow/red dress. |

While the position of raising in the overt degree question seems to differ from the LF raising with the *for*-PP, the overt and silent *how* have similar PP restrictors *of a dress/for a dress* across the two constructions. The Polish and English data lead to an analysis of attributive *big* merging with a +WH-quantifier, with a *for*-PP restrictor. With intersective adjectives, the answer to a similar question must contain overt degree morphology or focus (see fn 3), but does not allow for a bare adjective, so the **bare intersective** *red* does not seem to have the +WH-quantifier.

Non-Gradable (Classifying) Adjectives

There is a class of classifying adjectives that appears closest to the noun, which have a type or kind interpretation (following Bosque & Picallo 1996). This class of adjectives is non-gradable, and does not merge with DEG.

- (19) *the very red wine (type of wine)
 *the very small dog (small type of dog)

Following Kennedy & McNally (2008), the semantics of non-gradable, classifying adjectives follows the 'correlated property' reading; however, rather than restricting this to non-gradable color adjectives I propose to expand this semantics to any attributive adjective that merges as classifying adjectives do.

³ When intersective adjectives merge with overt degree morphology (e.g. *too*), this introduces a comparison class using an overt *for*-PP, but the absoluteness of *red* remains (note again that adjective ordering changes with overt degree morphology as well).

⁴ Barbara Tomaszewicz, p.c.

Comparison with previous approaches

Svenonius (2008): AOR match up with specific functional heads in the DP that are independently motivated. Of *Svenonius' (2008)* three semantic properties, it can be shown that the mass/count and gradability dimensions are independent of the unmarked ordering between *big* and *green*, as they predict ordering where it is not seen and/or do not predict ordering that is seen.

1) Mass/Count appears independent of AOR:

big red table	*red big table	red water
big square table	*square big table	*square water

2) Gradability is not directly correlated with ordering between non-intersective/intersective adjectives:

Following *Kennedy & McNally (2008)*, non-gradable color adjectives have a ‘correlated property’ or classifying meaning, while color quality/quantity have the same gradable semantics as other gradable adjectives: *The leaves are (half/completely/very) green*. If the syntax were sensitive to gradability between *big* and *green* adjectives, we would expect AOR to occur in (20), but not in (21). However, AOR appear in both:

NON-GRADABLE/CLASSIFYING (20) The big green/*green big light is flashing

GRADABLE (21) The big green/*green big cat just tipped over a can of paint

3) Intersectivity: I follow *Svenonius' claim* regarding intersectivity, and have provided further evidence that AOR between *big* and *green* are correlated with intersectivity.

Conclusion

There is a general observation about the DP that larger adjuncts tend to merge higher (*Vergnaud 1974, Kayne 1994, Cinque 2009, Prinzhorn & Vergnaud forthcoming, etc*). In English, reduced relative clauses merge closer to the noun than full relative clauses, and PPs merge closer to the noun than both reduced and full relative clauses. A natural claim, then, is that ordered adjectives are structurally different, and that the higher adjectives are structurally more complex than lower adjectives. This paper has provided evidence that *big* is indeed more complex than *red*, and that the higher/lower positions for these adjectives are motivated by movement. Also, *big/red* are more complex than a classifying reading of these adjectives, as they merge with a degree head. Syntactic AOR between non-intersective (*big*) and intersective (*red/square*) adjectives are correlated with the semantic property of intersectivity, and not gradability or the mass/count distinction. AOR between classifying adjectives and non-classifying adjectives is correlated with gradability. Finally, a *wh*-operator requires movement of bare non-intersective adjectives to a higher position than bare intersective adjectives, driving AOR with non-focused attributive adjectives.

Selected References

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