

Adjectives are in Phrasal Positions¹

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1. Introduction

In the literature on adjectives, there are three main structural analyses of these elements. Traditionally, they are assumed to be adjoined (1a) (e.g., Radford 1988: 210, cf. also Jackendoff 1977: 105, Bošković 2005 for the Slavic languages,² Bošković 2016 more generally, and others for different versions of this adjunction structure). Second, Abney (1987) proposes that adjectives are in head positions inside the DP above NP (1b) (also Bošković 2005 for the Germanic languages). Finally, Cinque (1994) argues that adjectives form phrases hosted in the specifier position of a recursive AgrP (1c) (also Cinque 2010 and many others):

- | | | | |
|-----|----|---|-------------------|
| (1) | a. | [_{NP} D [_{N'} AP [_{N'} AP [_{N'} N]]]] | (A as adjuncts) |
| | b. | [_{DP} D [_{AP} A [_{AP} A [_{NP} N]]]] | (A as heads) |
| | c. | [_{DP} D [_{AgrP} [AP] Agr [_{AgrP} [AP] Agr [_{NP} N]]]] | (A as specifiers) |

Adjectives are in head positions in (1b) but in phrasal positions in (1a) and (1c). The difference between (1a) and (1c) is the presence of intervening heads (i.e., Agr) in (1c).

In this paper, I take stock of some of the arguments for or against these different structural analyses concluding that Abney's proposal in (1b) faces a number of serious challenges and showing that (1c) has at least one advantage over (1a). I start by discussing some merits of the head analysis in (1b), put forth by Abney (1987) and further developed by Bošković (2005), showcasing that these do not hold upon closer examination.

2. Adjectives as Heads

Abney (1987: 324) argues that adjectives are heads that can take a predicative (i.e., non-referential) NP (2a) or a PP (2b) as a complement:

- | | | | |
|-----|----|----------------------|-----------|
| (2) | a. | too big a/*the house | (English) |
| | b. | too big of a house | |

Assuming this type of structural relation, this immediately provides a position for *of* in (2b) being the head of the selected PP. The possibility of *too big* to be located in a specifier position is dismissed as that would leave *of* dangling in the structure. Although strings like (2a-b) behave

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² Actually, Bošković (2005: 20) assumes that adjectives are in Spec,NP but he explicitly states that adjoining them to NP, as in the traditional account, would make no relevant difference. Bošković (2014) points out that binding facts suggest that adjunction has actually some advantages. Since adjunction seems more advantageous, I will focus on this option (rather than adjectives in Spec,NP).

like noun phrases, it is proposed that adjectives inherit features from the lower noun. The complement structure in (2) provides a second argument in favor of adjectives as heads. Basing his discussion on English, Abney (1987: 326) argues that if adjectives are heads taking the head noun as part of their complement, it follows that prenominal adjectives cannot take other arguments, elements directly related to the adjective itself; compare the postnominal adjective in (3a) to the prenominal adjective in (3b):

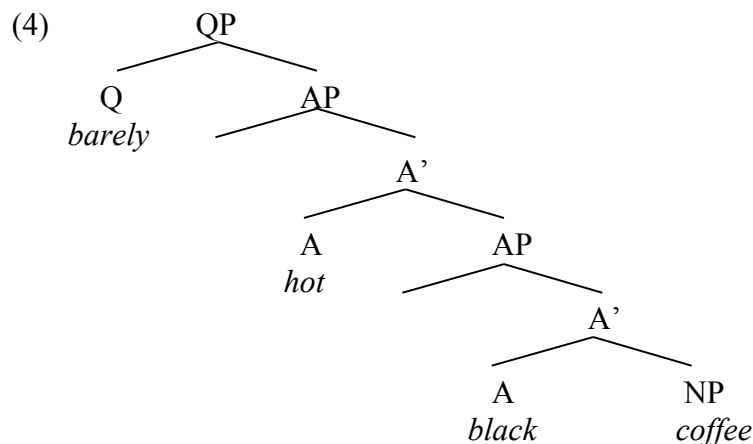
- (3) a. the man [proud of his son] (English)
 b. * the [proud of his son] man

In Abney's view, these constitute arguments for adjectives as heads.

Abney proposes two structures for adjectives as heads. He argues against – what I call here – Proposal A discussed below in section 2.1 and decides in favor of Proposal B taken up in section 2.2. The difference between the two proposals has to do with the position of the degree word.

2.1. *Adjectives as Heads: Proposal A*

First, Abney (1987: 335) proposes the following structure where adjectives are in head positions and a degree element is in the head position of QP:



Although Abney argues against this structure (see section 2.2), note that there is one potential argument in favor of it. Abney only discusses English, which does not allow prenominal adjectives to occur with an argument at all; compare (3b) and (5a). However, it is often observed that arguments of adjectives can precede their heads in other Germanic languages (5b):

- (5) a. * the [of his son proud] man (English)
 b. der [auf seinen Sohn stolze] Vater (German)
 the of his son proud father
 'the father proud of his son'

In fact, the claim is that these arguments can only precede the adjective when the latter is inside the noun phrase; compare (6a) to (6b) on the one hand, and (5b) to (6b) on the other:

- (6) a. der Vater [stolz auf seinen Sohn] (German)
the father proud of his son
‘the father proud of his son’
b. * der [stolze auf seinen Sohn] Vater
the proud of his son father

Similar facts hold for other Germanic languages here illustrated with two more examples paralleling (5b) (the Yiddish examples are from Aptroot & Gruschka 2010: 149, (7b) is taken from Julien 2005: 6):

- (7) a. di [farn oylem nit varshtendlekhe] frage (Yiddish)
the for.the people not comprehensible question
‘the question not comprehensible for the people’
b. den [af sin datter stolte] mor (Danish)
the of her daughter proud mother
‘the mother proud of her daughter’

Assuming the structure in (4), one could suggest that with the head noun in the complement position of the adjective, the argument of the adjective is in Spec,AP. This would explain why arguments of adjectives can only precede their head.

While initially attractive, other languages do allow adjectives with a following argument. For instance, the Germanic language Yiddish and the Slavic language Russian are cases in point ((8b) is from Pereltsvaig 2007: 65):

- (8) a. di [nit varshtendlekhe farn oylem] frage (Yiddish)
the not comprehensive for.the people question
‘the question not comprehensible for the people’
b. [skupaja na cveta] severnaja priroda (Russian)
scanty on colors northern nature
‘scantly-colored northern landscape’

However, given the structure in (4), it is not clear how an argument can follow its adjectival head and precede the head noun as the complement position is taken up by NP.

Furthermore, there are indications that degree words are not in a head position as in (4) above. Haider (1992: 320) notes that degree elements such as *sehr* ‘very’ cannot be stranded in Split Topicalizations where the lower part of a noun phrase appears to the left:

- (9) a. [Kostbare Vasen] besitzt er nur [drei (*sehr)]. (German)
precious vases owns he only three very
‘He owns only three very precious vases.’
b. [Sehr kostbare Vasen] besitzt er nur [drei].
very precious vases owns he only three
‘He owns only three very precious vases.’

In the structure in (4) above, the adjective and noun form a constituent to the exclusion of the degree word. Assuming a movement analysis (e.g., van Riemsdijk 1989, Bhatt 1990), the Split Topicalization facts follow only if one *stipulates* that AP cannot move if QP is present.

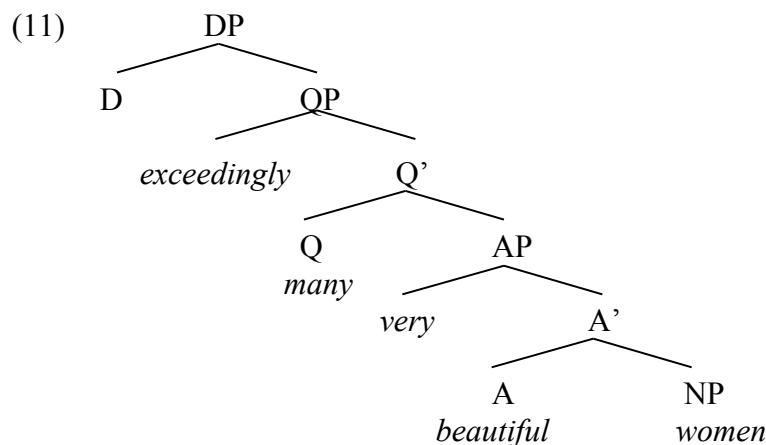
Moreover, every adjective can, at least in principle, be modified:

- (10) sehr liebe ziemlich kleine Kinder (German)
 very good fairly small children
 ‘very good fairly small children’

This implies that every AP has a QP on top of it leading to a structural alternation of QP and AP. At the very least, this is not an attractive state of affairs and might raise questions about the building of phrase structure in general (see also section 3).

2.2. *Adjectives as Heads: Proposal B*

The second proposal, the one argued in favor of by Abney (1987: 339), involves degree elements in Spec,AP:



Abney argues that positing degree elements in Spec,AP has certain advantages. Focusing on German again, the Split Topicalization facts in (9) follow immediately as *sehr* is in Spec,AP. Assuming that A' is invisible for syntactic operations, the adjective and noun do not form a constituent to the exclusion of the degree word; only AP (which includes the degree word) or NP can be moved.

A second advantage has been put forth by Bošković (2005: 33). He argues that the – in his terms – AP-over-NP analysis in (11) accounts for the ban on left-branch extraction in Germanic, specifically AP left-branch extraction.³ Assuming phrasal movement, adjectives do not form (phrasal) constituents to the exclusion of NPs accounting for the ungrammaticality of the example in (12a). For other elements in the left periphery of the noun phrase, Bošković (2005: 15 fn. 19) suggests that determiners, including demonstratives, and presumably numerals

³ Bošković (2005) also briefly discusses the possibility of adjectives as adjuncts in Germanic (but crucially below DP). The latter possibility is opted for in Bošković (2016: 7). More generally, Bošković winds up suggesting a difference between Germanic as involving DP languages and Slavic as NP languages (also Bošković 2012, but see Lyutikova & Pereltsvaig 2015 and work cited therein).

are also heads (12b-c). Saxon Genitives like *Peters* in (12d) are taken to be non-constituents with the possessor in Spec,DP and the possessive morpheme *-s* in D.

- (12) a. ?? [Rote]_i habe ich nur [t_i Autos] gesehen. (German)
 red have I only cars seen
 b. * [Dieses]_i habe ich nur [t_i Auto] gesehen.
 this have I only car seen
 c. * [Ein([e)s]_i habe ich nur [t_i Auto] gesehen.
 a/one have I only car seen
 d. * [Peters]_i habe ich nur [t_i Auto(s)] gesehen.
 Peter's have I only car(s) seen

While the German demonstrative in (12b) is (and must be) analyzed as a head in this type of account (but see Roehrs 2010a, 2013a), Norwegian provides clear evidence that (reinforced) demonstratives are more complex. There are three options: the free-standing determiner can combine with inflected *herre* (13a); it can co-occur with both *herre* and uninflected *her* (13b); and it can surface with just *her* (13c) (data set slightly adapted from Leu 2015: 32):

- (13) a. **den herre** klokka (Eastern Norwegian)
 the here-INFL watch-DEF
 'this watch'
 b. **den herre her** klokka
 the here-INFL here watch-DEF
 c. **den her** klokka
 the here watch-DEF

The demonstrative and its reinforcers cannot be separated by other elements. Interpreting reinforcers as a kind of modifier, this immediately follows if both elements are part of the same specifier (see Roehrs 2010a). In addition, with an inflection on an internal element (*herre*) as in (13b), these strings are unlikely to be complex heads.

Like the German demonstrative in (12b), these complex elements (or parts thereof) cannot undergo left-branch extraction. First, *den* itself cannot be separated from its reinforcer(s) (not shown here). Second, left-branch extraction of the demonstrative and its reinforcer(s) is not possible either (similar facts hold in Swedish):

- (14) a. * [Den herre]_i har jeg kjøpt [t_i klokka]. (Eastern Norwegian)
 the here have I bought watch-DEF
 'I have bought this watch.'
 b. * [Den herre her]_i har jeg kjøpt [t_i klokka].
 c. * [Den her]_i har jeg kjøpt [t_i klokka].

Above, we concluded that demonstratives are not heads. As phrases, though, they should be able to move in this constituency-based account, contrary to fact. Thus, Bošković's (2005) explanation of the ban on left-branch extraction in Germanic, which is based on adjectives as

heads, cannot be extended to other elements (e.g., complex demonstratives). An account different from that of the adjectives is needed (see section 7 for a tentative proposal).⁴

A clear argument against the structure in (11) can be gleaned from the fact that it leaves no room at all for arguments of adjectives, neither for one preceding the adjective nor for one following the adjective. Note that Bošković (2005) does not discuss arguments of adjectives at all (Bošković 2016 only discusses Slavic in this respect focusing on adjectives with one argument, but see section 4). These arguments are constituents by themselves. Without further assumptions, they, as phrases, are expected to move. I return to this in more detail below.

2.3. *Preliminary Summary*

We discussed two initial merits of adjectives as heads: prenominal adjectives show restrictions in the way they take arguments and they cannot undergo left-branch extraction. With regard to the first initial advantage, we wind up with the following picture. Abney's Proposal A accounts for the possibility of a preceding argument of an adjective; however, it does not allow a following argument. Abney's Proposal B leaves room for neither a preceding argument of an adjective nor a following argument. In short, both proposals have no account for an argument following its related adjective, a state of affairs witnessed in both the Germanic and Slavic languages.

Returning to English, which does not allow any referential arguments with prenominal adjectives (cf. (3b) and (5a)), the very fact that other languages do allow such constructions militates against a purely structural account of this restriction in English. This seriously undermines the claim that adjectives are heads taking head nouns as part of their complement (for an alternative proposal of the data in (2), see Hendrick 1990 arguing for operator movement to Spec,DP). As a consequence, we no longer have to accept the claim that the adjective inherits features of the noun.⁵ In fact, as pointed out by Giusti (2002: 84 fn. 15), an adjective as a lexical head in the extended projection of the noun goes against Grimshaw's (1991) proposal of extended projections.

As for the second initial advantage, Bošković's (2005) proposal for the ban on left-branch extraction cannot be extended to other cases explaining their ungrammaticality. While not problematic in and of itself, the absence of such a limitation would make the proposal stronger. In the next sections, we turn to the two other structural analyses of adjectives illustrating a number of advantageous points. As part of this discussion, we will have the opportunity to return to adjectives as heads pointing out more shortcomings.

⁴ This issue remains in Bošković's more recent work. Assuming phase theory (Chomsky 2001), note that if the highest phrasal position of an extended projection (here: Spec,DP) is relevant for the Phase Impenetrability Condition (Bošković 2014), then extraction of demonstratives out of the DP should be fine, contrary to fact. If demonstratives are indeed phrasal and in the highest specifier, a different account is needed also in this type of analysis.

⁵ Note in this respect that for examples like (2b), the PP headed by *of* does not block this inheritance of features: it is as if the PP were not present at all. Considering that this *of* is a grammatical preposition, we could suggest that it is not present in syntax but is inserted later. In other words, *of* is not 'dangling' in any syntactic sense.

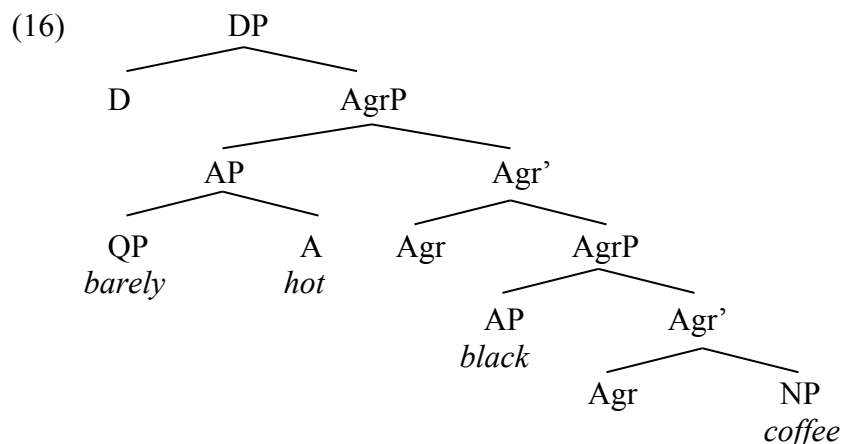
3. Adjectives as Specifiers

Svenonius (1994: 445-446) observes for English (see also Alexiadou et al. 2007: 348ff.; Julien 2005: 7-8) that scopal facts indicate that degree elements such as *barely* take scope over the adjective immediately to their right (*hot*) but not a second one further on their right (*black*):⁶

- (15) a. *some barely hot black coffee* (English)
 # ‘some barely hot, barely black coffee’
 b. *sehr heißer schwarzer Kaffee* (German)
 very hot black coffee
 ‘very hot black coffee’
 # ‘very hot, very black coffee’

If adjectives were heads in the extended projection of the noun as in section 2, *barely* would c-command both adjectives and thus take scope over both.⁷

In a different context (see section 5), Cinque (1994, 2010) proposes that adjectives are in specifiers (see also Kester 1996: 30-50 and many others). Corver (1991, 1997) and Zamparelli (1993, 2000: Chap. 7) argue that degree words are part of the extended projection of the adjective. One option is to put the degree word in Spec,AP:



Notice now that the Split Topicalization facts in (9) follow as the adjective *kostbaren* and the noun *Vasen* cannot be moved to the exclusion of the degree word *sehr*. Note that the same holds for adjectives that are adjoined. So far, adjectives in specifier or adjoined positions fare better than adjectives as heads. The next section is dedicated to the discussion of arguments of adjectives.

⁶ There is a similar argument with focus particles (see Roehrs & Sapp 2016: 15).

⁷ This line of reasoning for adjectives applies both to the NP located in the complement position of the adjective as in Abney (1987: 326-7) and Barbiers (1992) or to the NP being in the specifier position on the right as in Bhatt (1990) and Delsing (1991, 1993: 81). The structural relation between the adjectives themselves is the same.

4. Adjectives with two Arguments

Adjectives may take not only one argument as shown above but two. Importantly, these arguments can appear in different orders before the adjective (17a-b):

- (17) a. ein [den meisten an Kenntnissen überlegener] Student (German)
a to.the most in knowledge superior student
'a student superior to most (others) with regard to knowledge'
b. ein [an Kenntnissen den meisten überlegener] Student
a in knowledge to.the most superior student
'a student superior to most (others) with regard to knowledge'

Considering the different word order possibilities in (17), there are at least three phrasal positions associated with the adjective.⁸ Below are some more examples: (18a) involves two prepositional phrases where one preposition (*an*) is selected (see also (17) above for an even clearer case of selection); the example in (18b) contains a spatial adjunct where the argument *ihm* 'him' must have moved left of that adjunct:

- (18) a. ein [an Peter für die Mutter verfaßter] Brief (German)
a to Peter for the mother written letter
'a letter written to Peter for the/my mother'
b. der [ihm im Institut begegnete] Mann
the him in.the institute encountered man
'the man meeting him in the institute'

Furthermore, if degree words are in a specifier position, then a degree element intervening between the arguments of the adjective and the adjective itself also indicates that there are several phrasal positions. Similar to (17), different word orders are possible:⁹

- (19) a. ein [den meisten an Kenntnissen sehr überlegener] Student (German)
a to.the most in knowledge very superior student
'a student very superior to most (others) with regard to knowledge'
b. ein [an Kenntnissen den meisten sehr überlegener] Student
a in knowledge to.the most very superior student
'a student very superior to most (others) with regard to knowledge'

In light of these facts, I consider the three structural analyses of adjectives in more detail. I will focus on adjectives with two arguments and only briefly comment on adjuncts and degree words.

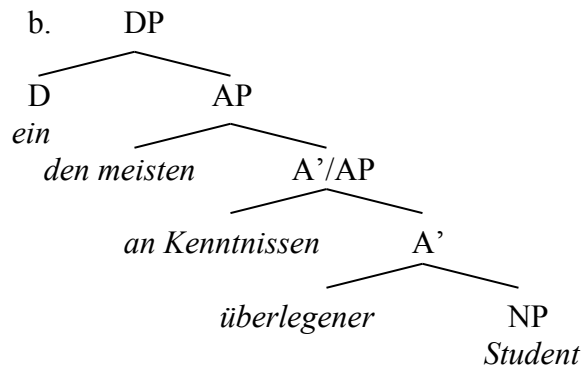
4.1. Adjectives as Heads - Revisited

For the structure in (1b) above (specifically Proposal A), one could assume that the arguments are base-generated in multiple specifiers/left adjunctions:

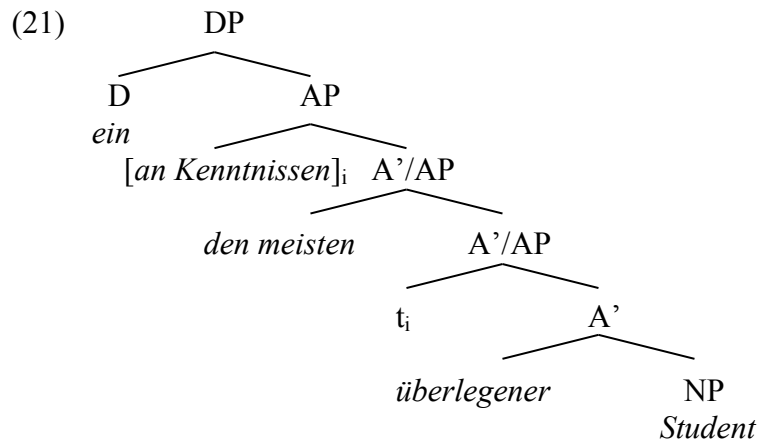
⁸ This point was inspired by a discussion with Michael Putnam.

⁹ If degree elements are in a higher head position inside the complex specifier in (16), then we still need at least three phrasal positions above the AP.

(20) a. [DP D [AP A [AP A [NP N]]]]



The dislocated argument could be assumed to have scrambled to a higher phrasal position:



On this analysis, we have at least three specifiers or one specifier and two adjunctions. Note though that the reordering of arguments involves anti-local movement (i.e., the movement is too short as it must cross more than phrasal segments). Alternatively, one could suggest different base-generated orders. However, note that the adjectives in (17) and (18a) select a specific preposition (*an*) on one of their arguments. Making the common assumption that selection is a local process, this militates against different base-generated orders. Furthermore, arguments are merged closer to their predicates than adjuncts. This raises questions about different base-generated orders for examples such as (18b). Similar issues of anti-locality of movement and local selection of arguments also arise in (19) with an intervening degree word. Most importantly, Yiddish and Russian adjectives with a following argument are still problematic.

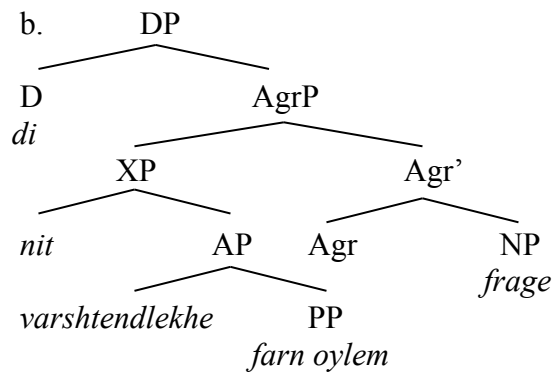
4.2. Adjectives as Specifiers

For (1c) above, slightly modified here as (22), I follow Corver (1997) in that the adjective builds an extended projection (XP) on top of AP. This projection sits in Spec, AgrP:

(22) [DP D [AgrP [XP AP] Agr [AgrP [XP AP] Agr [NP N]]]]

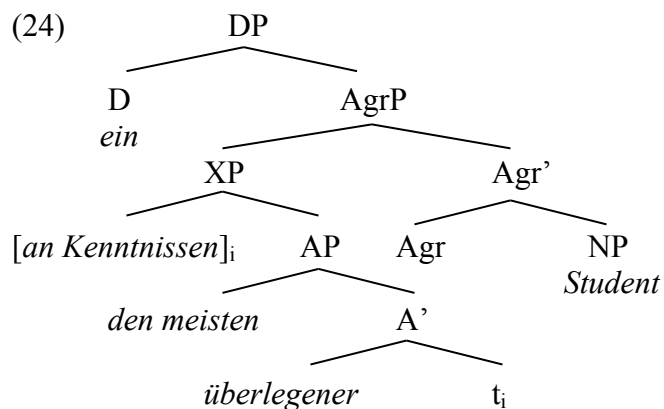
The base position of these elements can be illustrated with Yiddish (the AP in Yiddish is most likely head-initial):

- (23) a. di nit varshtendlekhe farn oylem frage (Yiddish)
the not comprehensive for.the people question



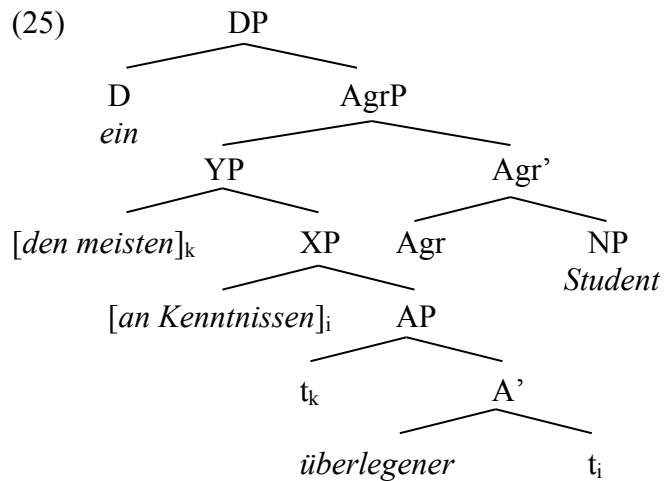
Continuing with German, displacement of the complement occurs inside of this complex specifier (for a proposal as to why the complement has to move, see Roehrs 2010b):¹⁰

- (24) (German)



¹⁰ The headedness of the AP in German is not clear. Note though that this argument goes through even if the AP is head-final as the two arguments reorder with regard to each other as seen in the next structure (whereas reordering of an argument and its related adjective could simply indicate flexibility in the headedness of the AP).

The structure with two displaced arguments is as follows:

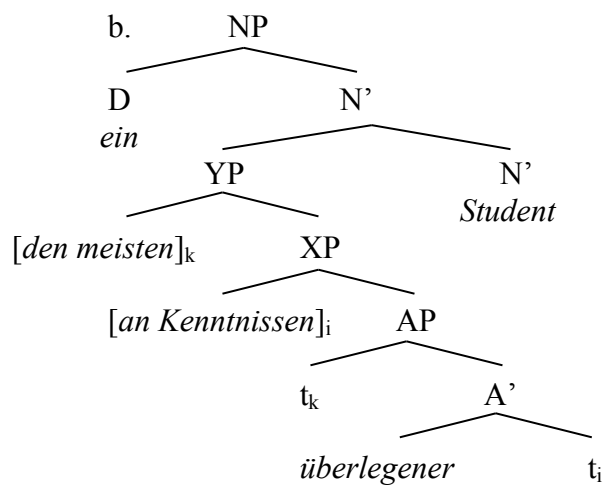


Adjectives as specifiers straightforwardly accommodate their arguments. This type of analysis can also house adjuncts and degree words without a problem.

4.3. *Adjectives as Adjuncts*

In a similar fashion, one could update (1a) above, repeated here as (26a) (I only give the tree where both arguments are displaced inside the adjunct):

(26) a. $[_{NP} D [_{N'} [_{XP} AP] [_{N'} [_{XP} AP] [_{N'} N]]]]$



Like adjectives as specifiers, adjectives as adjuncts have no problems with arguments, adjuncts, and degree words. Making certain assumptions, all three proposals can accommodate two preceding arguments. Recall, though, that the Adjectives-as-Heads/AP-over-NP analysis has a number of other issues.

4.4. *Extraction of Adjectival Arguments from the Noun Phrase*

Dependents of a head noun can move out of indefinite DPs even in the presence of adjectives. This can be seen with arguments of relational nouns (27a) and adjuncts of concrete nouns (27b):

- (27) a. [Von Peter]_i habe ich [einen jüngeren Bruder t_i] gesehen. (German)
 of Peter have I a younger brother seen
 ‘I have seen a younger brother of Peter’s.’
 b. [Aus welcher Stadt]_i hat er [ein nettes Mädchen t_i] kennengelernt?
 from which city has he a nice girl gotten to know
 ‘From which city has he gotten to know a nice girl.’

Crucially, though, none of the arguments of adjectives can extract (although oblique case-marked DPs seem to be worse than PPs):

- (28) a. * [Den meisten]_i treffe ich einen [t_i an Kenntnissen überlegenen] Studenten. (Ger.)
 to.the most meet I an in knowledge superior student
 b. ?? [An Kenntnissen]_i treffe ich einen [(t_i) den meisten t_i überlegenen] Studenten.
 in knowledge meet I an to.the most superior student

The data in (28) follow from the assumption that complex adjuncts (traditional account) or specifiers (Cinque’s proposal) are islands for movement and sub-extraction out of them leads to ungrammaticality (Chomsky 1986).

It is not clear where arguments of adjectives are located in Bošković (2005) but his formulation of the Left-branch Condition does not apply to them as arguments are (phrasal) constituents. If arguments are in specifiers as in Abney’s proposal A, they should be able to move just as the phrasal elements in the extraction data in (27) above can move. However, this is not what we find. A different proposal is made in Bošković (2016), where adjectives are adjoined to NP below DP. While the Germanic languages are not explicitly discussed in this respect, one could suggest that assuming adjectives to involve phases, their arguments must adjoin to the highest projection of the adjective on their way out of the DP. The next step, movement from this adjoined position to Spec,DP, would result in anti-local movement explaining the ungrammaticality in (28). However, to be clear, adjectives are not in head positions in that account.

Next, we check Bošković’ (2005) proposal for Russian, which allows two following complements (m = marked):

- (29) a. [prevosxodjashchij vse_x po znanijam] student (Russian)
 superior all.GEN on knowledge student
 ‘a student superior in knowledge to all (others)’
 b. ^m [prevosxodjashchij po znanijam dazhe vypusnikov stenforda] student
 superior on knowledge even graduates.GEN Stanford student
 ‘a student superior in knowledge even to the Stanford graduates’

Russian APs are (phrasal) adjuncts in Bošković’ analysis and adjectival arguments should be part of these adjoined structures for local theta-role assignment. In contrast to the discussion of

German above, *sub*-extraction out of adjuncts should be ungrammatical. However, Russian allows scrambling of arguments out of nominals:

- (30) a. [Vsex]_i ja vstretil [prevosxodjashchego t_i po znaniyam] studenta. (Russian)
all.GEN I met superior on knowledge student
‘I met a student superior in knowledge to all.’
b. [Po znaniyam]_i ja vstretil [prevosxodjashchego vsex t_i] studenta.
on knowledge I met superior all.GEN student
‘I met a student superior in knowledge to all.’

Without further assumptions, the grammaticality in Russian is thus unpredicted (again, see Bošković 2016 for an account).

Table 1 summarizes how Bošković’ (2005) analysis fares with regard to movement of adjectives and its extension to movement of their arguments:

Table 1: Summary of Bošković’ (2005) Account

	German	Russian
Bošković’ structure (p. 21)	[_{DP} D [_{AP} Adj [_{NP} N]]]	[_{NP} AP N]
movement of adjective	ungrammaticality explained	grammaticality explained
extraction of argument	ungrammaticality unexplained	grammaticality unexplained

To be fair, Bošković focuses on adjectives and does not discuss the movement properties of their arguments. What is interesting to point out is that while German does not allow movement of adjectives or their arguments, Russian does. An obvious difference between the two languages is that German has an article/DP that seems to induce the ungrammaticality in German or more generally Germanic. Specifically, the article/DP seems to turn the specifier or adjunct containing the adjective and its arguments into an island in the latter group of languages. If correct, islands are not structural per se but are induced in a certain environment (cf. Bobaljik & Wurmbrand 2005, Bošković 2014 on a contextual approach to phasehood, also Bošković 2016). Irregardless, we have arrived at another argument against Abney’s proposal in (1b) examining Germanic: with adjectives as heads, there is no *sub*-extraction and arguments should be able to move from their specifier or adjoined positions, contrary to fact.

4.5. *Argument Movement inside the Noun Phrase*

If a second adjective is added to the left, none of the arguments can move to precede that adjective:¹¹

¹¹ Similar facts hold for an adjective that is added to the right:

- (i) a. * ein [an Kenntnissen überlegener den meisten] netter Student (German)
a in knowledge superior to.the most nice student
b. * ein [den meisten überlegener an Kenntnissen] netter Student
a to.the most superior in knowledge nice student
(ii) a. * ein [an Kenntnissen überlegener] netter [den meisten] Student (German)
a in knowledge superior nice to.the most student
b. * ein [den meisten überlegener] netter [an Kenntnissen] Student
a to.the most superior nice in knowledge student

- (31) a. * ein [den meisten]_i netter [t_i an Kenntnissen überlegener] Student (German)
 a to.the most nice in knowledge superior student
 b. * ein [an Kenntnissen]_i netter [den meisten t_i überlegener] Student
 a in knowledge nice to.the most superior student

Recalling that we argue that adjectives are in phrasal positions, one might suggest that the impossibility of movement in (31) falls under Relativized Minimality (Rizzi 1990) such that one phrasal element (adjective) block the movement of another (argument of the other adjective). Note, however, that Relativized Minimality is quite selective (Rizzi 2001). In fact, considering the data in (17), one of the arguments of the adjective does not prevent the other from moving. If anything, one might expect the opposite state of affairs as arguments of adjectives are more similar to one another (and thus would be expected to block each other's movement¹²) than an argument and the adjective itself (and thus would not be expected to block each other's movement). Again, this is, however, not what we find. Rather, similar to (28), we can also state here that subextraction out of adjuncts or specifiers explains the ungrammaticality.

Perhaps unexpectedly, Russian is also ungrammatical in this context:¹³

- (32) a. * [vsex]_i zamechatel'nyj [prevosxodjashchij t_i po znanijam] student (Russian)
 all.GEN excellent superior on knowledge student
 b. * [po znanijam]_i zamechatel'nyj [prevosxodjashchij vsex t_i] student
 on knowledge excellent superior all.GEN student

The ungrammaticality also holds with movement out of the nominal:

- (33) a. * [Vsex]_i ja vstretil zamechatel'nego [prevosxodjashchego t_i po znanijam] studenta.
 all.GEN I met excellent superior on knowledge student
 b. * [Po znanijam]_i ja vstretil zamechatel'nego [prevosxodjashchego vsex t_i] studenta.
 on knowledge I met excellent superior all.GEN student

Given that the addition of a second adjective leads to ungrammaticality in Russian, we need to say more. If the two languages, German and Russian, are assumed to involve phrasal positions of adjectives, specifier or adjunct, then we could suggest that there is simply no FocusP above the base position of adjectives. In other words, there is no final landing site for the argument in (32) or no intermediate landing site in (33) making the movement to the beginning of the sentence too long. Alternatively, one could suggest that like an article/DP in Germanic, a second higher adjective in Russian induces islandhood (under Bošković' 2016 adjunction analysis, the second, lower adjective and its arguments are not in the outermost edge and thusly an argument cannot undergo extraction in Russian; for the German facts in (31), we need to invoke anti-locality again).

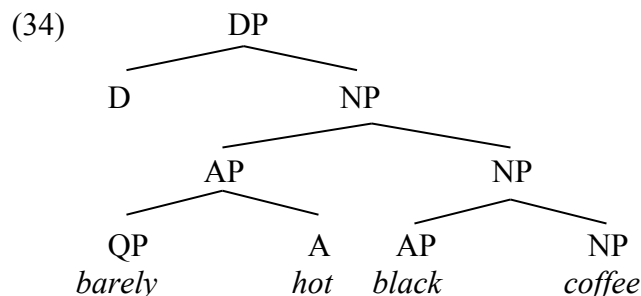
The ungrammaticality in (i) follows if arguments in German cannot stay in situ, i.e., in the complement position of the (head-initial) adjective (section 4.2); the ungrammaticality in (ii) follows if arguments cannot undergo rightward movement.

¹² Unless both elements are equidistant from the target of movement.

¹³ Asya Pereltsvaig (p.c.) points out, though, that the very addition of the second adjective (even without extraction) is degraded. Furthermore, she observes that (32b) is fine if 'excellent in knowledge' is a phrase; that is, complements can precede adjectives in a marked order (for instance, if one wants to focus the complement). In that case, an appropriate intonation is required.

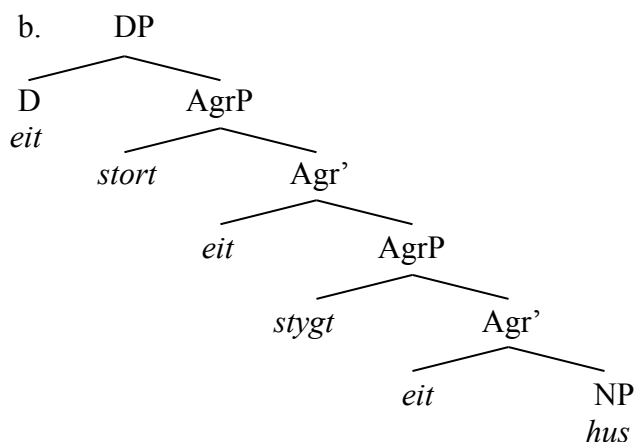
5. Adjectives as Adjuncts

We return to the traditional proposal according to which the adjective phrase is adjoined, updated here as adjunction to NP (also Valois 1991: 154ff.) and with *barely* in Spec,AP:¹⁴



There is also some evidence against this structure. Julien (2002: 269-70) observes that indefinite determiners can follow pre-nominal adjectives in some Scandinavian dialects (35a) (also Delsing 1993: 143). Importantly, these articles cannot be interpreted as adjectival agreement as each adjective has its own (strong) overt ending. Julien proposes that the article is in Agr (her α) and the adjectival inflection is part of a complex specifier of the adjective:¹⁵

- (35) a. ? eit stor-t eit styg-t eit hus (Norwegian)
 a big-ST an ugly-ST a house
 ‘a big ugly house’



There are at least three more arguments that have been used in the past to argue for adjectives to be in specifier positions. However, from today's perspective, they have to be taken with a pinch of salt. First, differences in N-raising between French and Walloon (Bernstein 1993) require that adjectives be in phrasal position, specifically specifier positions (Cinque 1994). In a similar vein, Gallmann (1996) proposes for German that there is Spec-head agreement between the adjective and noun brought about by covert N-raising. Note, however, that given certain shortcomings, N-raising has been replaced by roll-up movement in more recent work (e.g., Cinque 2010). Third,

¹⁴ Svenonius (1994: 446) suggests that *barely* is adjoined to AP.

¹⁵ Note also that similar issues arise if adjectives are proposed to be in Spec,NP.

another potential argument for intervening Agr heads comes from the fairly fixed sequence of stacked adjectives in the sense of Cinque 2010 (for an alternative explanation, see Abels & Neeleman 2012).

6. Summary

Table 2 summarizes the status of the three structural analyses of adjectives (A = Abney's proposal A, B = Abney's proposal B; ? = no account):

Table 2: Summary of Data and Structural Analyses of Adjectives in Germanic

Data:	A as Head	A as Adjunct	A as Specifier of Agr
Preceding adj. arg.	√ (A); ? (B)	√	√
Following adj. arg.	?	√	√
Split Top. of deg. wo.	? (A); √ (B)	√	√
Extraction of adj.	√ (but dem.)	√	√
Adj. in ext. proj. of N	?	√	√
Scope of degree word	?	√	√
Two preced. adj. arg.	√ (A) (but anti-local)	√	√
Extraction of adj. arg.	?	√	√
Multiple indef. art.	?	?	√
Order in adj. stacking	√	√	√
(N-raising)	?	?	√

Considering these results, it seems fair to say that adjectives as heads exhibit the most issues, while adjectives as adjuncts or specifiers fare much better. Also, the analysis of adjectives as specifiers has a slight advantage over adjectives as adjuncts. The latter was illustrated with multiple indefinite articles in some Scandinavian dialects.

7. Ban on Left-Branch Extraction of Determiners in Germanic

Bošković (2005) does not discuss the impossibility of (left-branch) extraction of determiners in Germanic in much detail. In footnote 19, he simply states that determiners, including demonstratives, are in D and that Saxon Genitives are non-constituents with the possessor in Spec,DP and the possessive morpheme *-s* in D (but see Roehrs 2013b and Bošković 2014: 35 fn. 12). As such, none of these elements can move out of the DP. In his more recent paper, Bošković (2016) does not discuss determiners and determiner-like elements in Germanic in detail either but he could appeal to the assumptions in his earlier 2005 paper.

Above, we argued that demonstratives are in phrasal positions (see also Roehrs 2010a, 2013a and references cited therein). Located in Spec,DP, they are expected to move in both Bošković' (2005) and (2016) systems, contrary to fact. A different account is called for. Following Schoorlemmer (2012) and Roehrs (2013a), I assume that D houses a [DEF] feature. Furthermore, I assume that [DEF] needs to be overtly licensed (Longobardi 1994; or, alternatively, D is an affix that requires an overt host). This will not only ban the movement of

the demonstrative out of the noun phrase but also that of all determiner-like elements. Notice that this is not a structural account.

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