

# THE BIG MESS CONSTRUCTION

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## Abstract

An LFG treatment is proposed for the ‘Big Mess’ construction in English, in which under certain circumstances adjectival expressions appear before the determiner (as in ‘that big a mess’), rather than in the normal position between the determiner and noun (‘a very big mess’, compare ‘\*a that big mess’). Empirically, the analysis is superior in coverage to existing treatments.

## 1 Introduction

The starting point of this paper is the belief that questions of explanation can only be properly addressed in the context of properly formalised and empirically adequate descriptions of phenomena. The goal of this paper is to provide such a description of the so-called ‘Complex Pre-determiner Construction’ or ‘Big Mess’ construction (BMC), exemplified in (1), formalised using the theoretical apparatus of LFG.<sup>1</sup>

(1) This is too big a mess (for anyone to clear up).

The construction involves an adjectival expression (*too big*) appearing before the determiner, rather than in the normal position for adjectives (between the determiner and noun, as in *an excessively big mess*), and seems to be a genuinely bizarre aberration in the syntax of English. Despite a considerable amount of work in a variety of frameworks other than LFG (see references in Section 3), it remains problematic.

The paper is structured as follows: Section 2 introduces the basic phenomenon; Section 3 reviews existing analyses; Section 4 presents the LFG analysis; Section 5 contains some supplementary discussion.

## 2 Outline of Phenomena

In the ‘Big Mess’ construction, an adjectival expression containing one of a limited number of Degree (‘Deg’) words, including *too*, *so*, *as*, *this*, *that*, *how*, and *however*, appears before the determiner (in what we will call the ‘pre-determiner’ or ‘BM’ position). See the examples in (2).<sup>2</sup>

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<sup>2</sup>The term ‘Big Mess’ is originally from Berman (1974); the term ‘Complex Pre-determiner Construction’ is from Kay and Sag (2012). The phenomenon is sometimes called ‘degree fronting’.

<sup>3</sup>The term Degree word, Deg, used for these items comes from Bresnan (1973), where these items are distinguished from the ‘Q’ (for ‘Quantity’) words *more*, *less*, and *enough*, which are compatible with what we will call ‘canonical’ position. The items *such* and *what* (as in *such a mess*, *what a mess*) are often included in the list of Degree words; we omit them here mainly for reasons of space, but also because they differ from the others in not being adjectival modifiers.

- (2) a. She made *too rude* a remark (for me to repeat).  
 b. She made *so rude* a remark (that we were shocked).  
 c. I've never heard *as rude* a remark (as that).  
 d. He doesn't look the type to make *this rude* a remark.  
 e. He doesn't look the type to make *that rude* a remark.  
 f. I wonder *how rude* a remark she could have made.  
 g. Don't be offended, *however rude* a remark she makes.

In general, adjectival expressions which do not contain one of these words are excluded from this position:

- (3) \*She made (very) rude a remark.

Instead, such 'normal' adjectivals appear in what we will call the 'canonical' position between the determiner and the noun:

- (4) She made a (very) rude remark.

In general, adjectivals containing one of these Degree words are excluded from canonical position:

- (5) \*She made a *too rude* remark.

Descriptively, there seem to be two challenges: (i) to characterise the circumstances under which the BMC is triggered, and (ii) to characterise the restrictions on the determiner that follows the BM adjectival. Neither is very difficult to describe informally and approximately, but both have proved remarkably resistant to formal treatment. In this section we will keep things simple and informal.

The words in (2) that trigger the BMC do not seem to form any very natural class. Though they are all in some sense degree modifiers, they are not a homogenous group: for example, while *how* and *however* are *wh*-words, the others are not. Moreover there are many degree modifiers that are not in the group. For example the equative comparative *as* is a trigger, but normal comparatives are not – they are perfectly compatible with canonical position, as in (6a), and normally excluded from the BMC, see (6b) (but see below for a qualification). Similarly, while *too* is a trigger, its near synonym *excessively* is not, see (7a) and (7b). Following Bolinger (1972), a number of analyses have sought to exploit the fact that BM triggers are mostly monosyllabic (so the problem with \**a too rude remark* is something to do with the prosody or stress pattern required), but this will not explain why *however* is a trigger, or why *too* and *as* are triggers, but *more* and *less* can occur in canonical position – or indeed why there is nothing wrong with a string of monosyllabic adjectives in canonical position (*a nice new hat*). At this point, it seems a list, as above, is the best that can be done.

- (6) a. a ruder remark, a more/less insulting remark, an insulting enough remark  
 b. \*ruder a remark, ?more/less insulting a remark, ?insulting enough a remark
- (7) a. an excessively rude remark

- b. \*excessively rude a remark

In the examples in (2) the Degree word is a direct modifier of the pre-determiner adjective. This is not necessary: a more deeply embedded Degree word has the same effect. For example, in the following, *as* is a modifier of *incredibly*, which in turn modifies the adjective *rude*; the BMC is allowed (in fact, required), just as in the examples above:

- (8) *as* incredibly rude a remark  
(9) \*an *as* incredibly rude remark

To summarise so far: an adjectival in pre-determiner/BM position must contain a Degree word, and an adjectival containing a Degree word must appear in BM position. In fact, things are slightly more complicated than this, as we will describe below. But this is still a good starting point.

Turning now to the restrictions on the determiner that follows the BM position: this can be stated very simply – the only determiner that is permitted is the indefinite article *a*, and its phonological variant *an* (we will write this as *a/an*).

The following show that the definite article *the* is not permitted, nor are possessive NPs, or quantificational determiners such as *every*.

- (10) \*She made too rude the remark (for me to repeat).  
(11) \*She made too rude Sam's remark (for me to repeat).  
(12) \*She made too rude every remark (for me to repeat).

Plurals are excluded, whether with a determiner, or bare:

- (13) \*She made too rude remarks (for me to repeat).  
(14) \*She made too rude many remarks (for me to repeat).  
(15) \*She made too rude several remarks (for me to repeat).

Notice that what is involved here is not an indefiniteness restriction. As the examples in (16) show, indefinites whose determiner is not *a/an* are excluded:

- (16) a. \*too good (some) solutions            (cf. There are *(some)* good solutions.)  
      b. \*too good several solutions        (cf. There are *several* good solutions.)  
      c. \*too big one problem            (cf. There's *one* big problem left to deal with.)  
      d. \*too big no problem            (cf. There's *no* big problem for them to fix.)  
      e. \*too hot coffee                    (cf. There's hot coffee in the pot.)  
      f. \*too tall this chap            (cf. There's *this* tall chap in the corner. . . )  
      g. \*too stupid some idiot            (cf. There's *some* stupid idiot at the door.)  
      h. \*too hard any problem        (cf. I can solve *any* hard problem you like.)

Notice also that this restriction is absent with post-nominal modifiers, where any Degree word is compatible with any determiner:

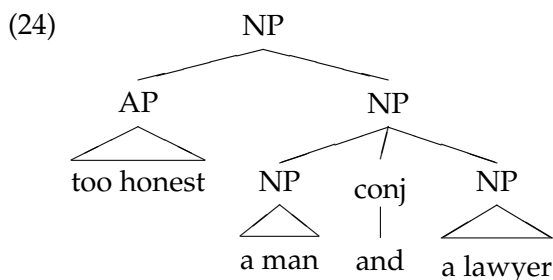
- (17) She made a remark too rude (for me to repeat).  
(18) She made no/the/every remark too rude (for me to repeat).  
(19) She made remarks too rude (for me to repeat).

- (20) She made several remarks too rude (for me to repeat).  
 (21) She serves coffee too expensive (for us to afford).

A initially appealing way of dealing with this restriction might seem to involve associating *a/an* with the BMC itself, so that the structure would be along the lines of [*too rude a*] remark, which would make what follows ‘too rude a’ a perfectly normal nominal phrase. Unfortunately, coordination facts make this untenable: *a/an* seems to form a constituent with the following nominal. Consider the following example from the British National Corpus (it is from Robert Louis Stevenson *The Strange Case of Dr. Jekyll and Mr. Hyde*, 1886). The interpretation makes it clear that *a lawyer* is coordinated with *a man*, both being modified by *too honest*:<sup>3</sup>

- (22) But Mr Utterson was too honest a man and a lawyer to do that.  
 (23) too honest [[a man] and [a lawyer]]

That is, the surface constituent structure should be something like (24), disregarding the precise position of the conjunction *and*:



It is worth emphasising that apart from the position of the adjectival, and the *a/an* requirement, BMC NPs are strikingly normal. In particular, an NP with a BM adjectival seems to have exactly the distribution one would expect of an NP with *a/an* as its determiner.<sup>4</sup> So, for example, an NP like *as large a group as possible* can be used predicatively as in (25); as an apposition as in (26); as subject, direct object, or indirect object, as in (27) to (29); or as object of a normal preposition as in (30).

- (25) This seems to be *as large a group as possible* under the circumstances.  
 (26) The group, *as large a group as possible*, will be selected next week.  
 (27) So that *as large a group as possible* will benefit. . .  
 (28) We must give *as large a group as possible* a chance.  
 (29) We must give a chance to *as large a group as possible*.  
 (30) Having searched among *as large a group as possible*. . .

<sup>3</sup>The only alternative structure would involve *too honest* modifying just *a man*, but this would require that *to do that* being associated with *a lawyer* – as in ‘Mr Utterson was a lawyer to do that’ (compare ‘He was a fool to do that’). This is clearly not the intended meaning.

<sup>4</sup>This has not always been appreciated, e.g. Bresnan (1973) and Berman (1974) thought the BMC was only possible in predicative NPs; Matushansky (2002) claims that what she calls degree fronting is only possible in non-specific (i.e. non-referential) indefinites.

Moreover, we seem to get the full range of interpretations that one would expect. For example, (31) includes a normal indefinite use after presentational *there*; (32) shows what is plausibly interpreted as a *de dicto* reading, while (33) involves a *de re* reading; (34) and (35) are generic; (36) and (37) show object NPs which are interpreted with respectively narrow and wide scope with respect to the subject:

- (31) There is *as rude a piece of graffiti* on this wall as on that wall.
- (32) I need *this wide a piece of wood* to finish this job – but we unfortunately haven't one – we haven't got any more wood at all.
- (33) I saw *that wide a piece of wood* behind the shed – I'll go and get it.
- (34) A potato is a good source of starch, but a green potato can make you ill, and *too green a potato* can poison you.
- (35) *As skilled a hunter* as the pike has no problems with these conditions.
- (36) Most well-run organisations have *too large an investment* in their stock.
- (37) No doubt everyone will welcome *so detailed a proposal*.

Similarly, what follows *a/an* is a normal nominal, e.g. it can contain normal pre-nominal and post-nominal modifiers: (38a) contains a post-nominal modifier *about his work*, in (38b) *remark* is pre-modified by a normal adjective *casual*:<sup>5</sup>

- (38) a. That was too rude a remark about his work for him to forgive.
- b. That was too rude a casual remark for him to forgive.

And there is the normal *a/an* alternation:

- (39) a. That was too rude a remark . . . (\**an*)
- b. That was too rude an assertion . . . (\**a*)

In short, apart from the oddness inherent in the BMC itself, the associated NP seems to be both internally and externally normal.

The same is true of the BM adjectival, i.e. apart from having to contain a Degree word, the BM adjectival is a normal adjectival expression. First, notice that the modification relations are perfectly normal. For example, in *as incredibly rude a remark*, *incredibly* is a modifier of *rude*, and *as* is a modifier of *incredibly*, just as in a predicative use (40a), or postnominal use (40b), and just as in a paraphrase with *equally* in (40c) (though of course *equally* is not a Degree word, so not a BMC licenser, see (40d)):

- (40) a. That was as incredibly rude as anything I have ever heard.
- b. A remark as incredibly rude as any I have ever heard.
- c. She made an equally incredibly rude remark.
- d. \*equally incredibly rude a remark

In each case, what is being equated is something like 'degree of extreme rudeness'.

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<sup>5</sup>Interestingly, the way a BM adjective composes with the head noun and other pre-head modifiers is also normal, in the sense that it reflects linear order. The BM adjective 'takes scope over' following pre-head adjectives (i.e. semantically, it composes last). For example, the scope relations in *as false an empirical claim as we have seen* are the same as those in *a false empirical claim*.

Second, and more significantly, the BM adjectival is a normal *pre-nominal* (i.e. attributive) adjectival. In particular:

- *all* gradable adjectives are allowed (presumably the gradability requirement follows from the presence of the Degree word, which will only be able to modify gradable adjectives);
- the adjectives have precisely the range of meanings one would get if they appeared directly after the determiner; and
- *only* pre-nominal adjectives are allowed.

Rather than attempt an exhaustive discussion of these points, we will focus on some cases that are of theoretical significance.

The first concerns ‘adverbial’ interpretations of adjectives. Pre-nominally, when modifying an action nominal, an adjective like *hard* can be interpreted adverbially (*hard worker* can be interpreted as ‘one who works hard’). This adverbial interpretation is not possible when *hard* is used predicatively, or post-nominally. Thus, in the examples in (41) *hard* can only be interpreted as ‘tough’, ‘not soft’: (41a) is predicative; (41b) and (41c) are post-nominal (they involve coordinate structures and an adjective with a complement because without these post-nominal position would be strange; the difference between them is just the order of the conjuncts).

- (41) a. As a worker she is hard.  
b. She is a worker dedicated to the company and hard.  
c. She is a worker hard and dedicated to the company.

Crucially, adverbial use of *hard* is perfectly compatible with the BMC, so (42) can be paraphrased as ‘she works too hard to be accused of shirking’:

- (42) She is too hard a worker to be accused of shirking.

Similarly, adverbial use of *occasional*, as exemplified in (43) (which is interpreted as ‘from time to time Sam is a philosopher’), is possible in the BMC, cf. (44):

- (43) Sam is an occasional philosopher.

- (44) Thus we see even so occasional a philosophical scholar as Raleigh quoting Aquinas . . .

(Richard Harp, *The consolation of Romance: providence in Shakespeare’s late plays in Shakespeare’s Last Plays: Essays in Literature and Politics*, edited by Dr. Stephen W. Smith, Travis Curtright, Lexington Books).

This use is impossible predicatively, witness (45). In short: the BMC involves *attributive* adjectives, interpreted normally.

- (45) \*As a philosopher Sam is occasional.

Moreover the *only* adjectives that are allowed are ones which can appear pre-nominally (e.g. adjectives with complements are excluded from the BMC, just as they are excluded from ‘canonical’ position):

- (46) a. \*too fond of children a person      (cf. a person too fond of children)

- b. \*a (very) fond of children person (cf. a person very fond of children)

In short, apart from the inherent oddness, in an example like *that rude a casual remark about her work* we seem to have an expression which is externally a normal NP, which contains a normal attributive adjectival expression (*that rude*), and a normal nominal (*casual remark about her work*). What is odd is that the adjectival must contain a Degree word, and the determiner must be *a/an*.

To be completely accurate, this simple picture must be supplemented by two complications.

The first is that as well as the 'obligatory' BMC triggers (*too, so, as*, etc.) that we noted at the outset, there are a number of 'optional' triggers – that is, items which are compatible with both the BM and canonical position. The most obvious of these are *more, less, enough*, and *quite* (in general, canonical position is preferred, but BM position is possible, as can be seen from the following):<sup>6</sup>

- (47) a. England look a *far more potent* force going forward now. . .  
b. . . apathy was *far more potent* a force among the British working class than action.  
c. . . the organization had become a *far less* potent force.  
d. . . white racism would have been *far less potent* a force  
e. You're *good enough* an actress to be invited to our Fenice theatre.  
f. Forlani is hot but not a *good enough* actress.  
g. For I feel that there is here a *quite basic* issue.  
h. The syntactic correctness of dereferenced RDF seems *quite basic* an issue to me.

The second complication is that even obligatory BM triggers are not absolutely excluded from canonical position. We think we can distinguish two phenomena. The first, and less interesting here, include examples of Degree words like *too* in canonical position as in (48a) and (48b) from Huddleston and Pullum (2002, p552). Huddleston and Pullum point out that these examples are 'somewhat marginal', and punctuated as compound adjectives:

- (48) a. the too-warm sheets  
b. the too-perfect living room

Though it is easy enough to find examples that are not punctuated in this way, as in (49), it seems to plausible that what is going on involves some kind of compounding process, perhaps analogous to what can be seen in (50), and we will say no more about this matter here.

- (49) a. Possibly the learned author has taken a *too extreme view* of the matter. . .

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<sup>6</sup>The examples in (47) are all attested, (47b) and (47e) are from the BNC, the rest are from Google. It is perhaps worth observing that these examples with adjectivals in the pre-determiner position are genuine instances of the BMC – in particular, there is the same restriction on the determiner: while *a/an* can be replaced by another determiner in the 'canonical' examples, *a/an* is the only possibility when the adjectival is in pre-determiner position, thus while *several far more potent ideas* is acceptable, one cannot have *\*far more potent several ideas*.



- b. Musicians normally are not madly keen on having an expensive car, but *a too expensive instrument* or *a too expensive bow* gives them much joy.

(50) one of those I'm-so-sick-of-this-bloody-job-that-I-could-scream days

The second phenomenon seems to us more systematic: adjectival expressions containing Degree words are freely allowed in canonical position, *providing they are pre-modified* (cf. Matushansky, 2002; Kim and Sells, 2011). Compare (51-53)a with (51-53)b; as (51-53)c indicate, such adjectivals are also able to appear in the BMC:<sup>7</sup>

- (51) a. \*a too rude remark
  - b. a far too rude remark
  - c. far too rude a remark
- (52) a. \*an as rude remark
  - b. a just as rude remark
  - c. just as rude a remark
- (53) a. \*a that rude remark, \*an all that rude remark
  - b. a not (all) that rude remark
  - c. not (all) that rude a remark

Intuitively, it seems one can have an adjectival expression containing a Degree in canonical position, so long as the Degree word is “hidden”, or “protected” by being pre-modified.

It is worth pointing out that when adjectival expressions containing a Degree expression are allowed in canonical position, restrictions on the determiner are relaxed, and one can find such expressions in (for example) definite plural NPs like (54) and (55), and indefinite plurals like (56).<sup>8</sup>

- (54) As I pulled the knot tight, Jan twitched, raised his *far too blue* eyes above his left sleeve and turned an incredibly blue and watery gaze upon me.
- (55) In addition to Urban Hund's leather collars and leashes, Barkley Paws Pet Boutique also carries their *just as stylish* nylon webbing collars!
- (56) I recently started a new character due to several *not that good* decisions in the character creation.

To summarise: there is group of Degree words, including *too, so, as, this, that, how*, and *however*, which cause adjectival expressions containing them to appear before the determiner, in the BM position. When this happens, the only determiner that is allowed is *a/an*. Such expressions are permitted in canonical position only under very restricted circumstances (if they are in a kind of compound, or if they are pre-modified). There is a second group of words, including *more, less, enough*,

<sup>7</sup>There is some variation here, which we have not investigated. Not all Degree words are open to this process. Notably, *how, however*, and *this* seem less susceptible to it. In the case of *however* it may simply be a general resistance to modification. We leave this issue open.

<sup>8</sup>Example (54) is from Günter Grass, *The Tin Drum*, trans. Breon Mitchell, Vintage Books, 2009; the others are from Google. These examples all involve pre-modified expressions, but it is of course possible that they are actually examples of the ‘compounding’ process noted above.

and *quite*, which normally appear in adjectival expressions in canonical position, but which can also appear in the BM position. Apart from the positioning of the adjectival expression, NPs in which this phenomena occurs appear perfectly normal, in terms of distribution, interpretation, and internal make-up.

### 3 Previous Analyses

The BMC has been a feature of English since at least early modern times,<sup>9</sup> and although it is mentioned in traditional grammars (e.g. Jespersen, 1987, p136) the first serious analyses are Bresnan (1973) and Berman (1974).<sup>10</sup> While descriptively useful, the analyses are not very appealing starting points for analyses with current formal apparatus. The broadly Generativist/Minimalist literature contains a number of analyses or suggestions for analyses (for example, Corver (1997); Kennedy and Merchant (2000); Matushansky (2002); Haumann (2004); Troseth (2009) Wood and Vikner (2011)), but all are to some degree problematic.<sup>11</sup>

Several have straightforward empirical flaws – e.g. assuming a post-nominal, predicative source for the construction (e.g. Haumann, 2004; Wood and Vikner, 2011), which is incompatible with the facts about adverbial interpretations of adjectives discussed above.

Several adopt the view that degree modified adjectivals are actually headed by Degree words (as in Corver (1997)), and so constitute DegPs, rather than APs, which makes it surprising that the distribution of adjective phrases seems to be unaffected by whether they are accompanied by a degree word (indeed unaffected by whether they are open to degree modification at all).<sup>12</sup> Some assume that preposing involves movement to a functional projection outside DP (Kennedy and Merchant, 2000, e.g.), but such a projection is necessarily distinct from DP, so one would expect DPs containing the BMC to have a different distribution from ones that do not, which does not appear to be the case (cf. above, a DP is what we have been calling an NP).

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<sup>9</sup>Shakespeare *Two Gentlemen of Verona* has someone described as ‘... too low a Mistress for so high a servant’, and Rissanen (1999, p209) notes that deviations from what we are calling the BMC are so rare that they cannot be regarded as a regular syntactic pattern. But there has clearly been some development, for example the OED cites an example of an adjectival containing *so* modifying a plural as late as 1797: *Men were no longer shut up in so narrow boundaries* (a modern speaker would use *such* here), and one in a definite NP from 1865: *The one weakness of his so mighty love* (a modern speaker would probably omit *so* here).

<sup>10</sup>Jespersen talks about *how* and *however* being like other interrogative words in ‘coming first’, and ‘attracting the adjective’. One should also mention de Moennink (1996) as a more recent, corpus based study.

<sup>11</sup>See Kim and Sells (2011) for further discussion of problems.

<sup>12</sup>For example, coercing a nationality adjective like *British* to be scalar, so that it accepts degree modification, does not seriously affect its distribution. Similarly, the kind of modification (e.g. modification by an ordinary adverb, by a comparative, or a degree word) makes little distributional difference (apart from the BMC of course). There are for example no items that subcategorise for adjectives modified in one way rather than another. Analysing modified and unmodified adjectival expressions such as *British*, *very British*, *more British*, *too British* etc. as APs captures distributional facts which cannot be captured if they are treated as being projections of different functional categories.

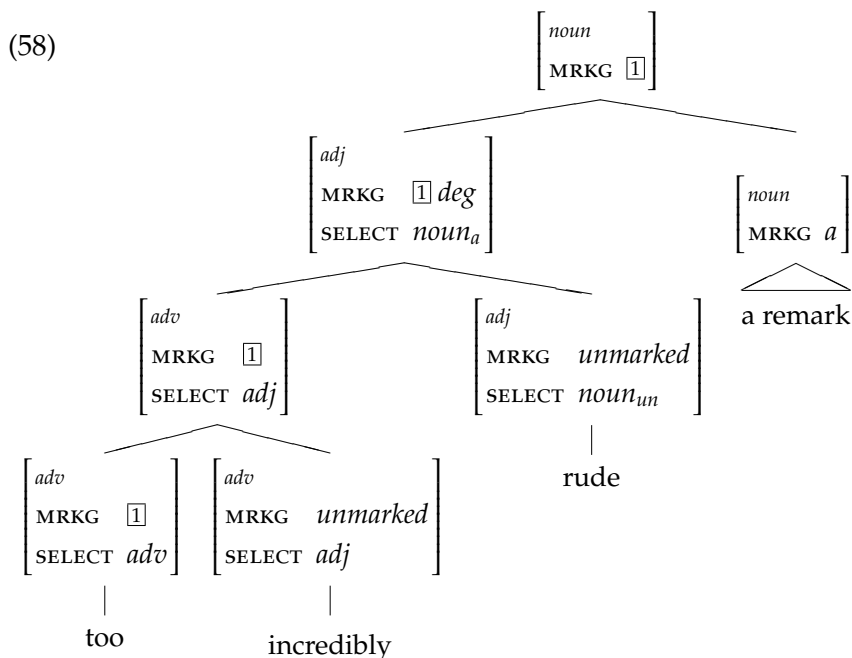
Most are formally incomplete, making crucial reliance on unspecified principles. All involve complex structures, a rich array of empty categories, a variety of covert and overt movement operations (which are in many cases without theoretical motivation).<sup>13</sup>

More impressive, both formally and descriptively, are a number of analyses formulated in the framework of HPSG (Ginzburg and Sag (2001); Van Eynde (2007); Kim and Kim (2009); Kim and Sells (2011); Kay and Sag (2012)). We will focus our discussion on Kay and Sag (2012).

In the version of HPSG assumed in Kay and Sag (2012) ('Sign-Based Construction Grammar', see e.g. Sag (2012)), phrases are licensed by *constructions*, which stand in inheritance relations, and determine the syntactic and semantic properties of the phrases they license. For example in a *head-functor-construction*, which is the construction which licenses the combination of adjectival and adverbial modifiers and the heads they modify, there are two daughters, a functor daughter and a head. The functor daughter determines the sort of head it can modify via a *SELECT* feature, which mothers inherit from their head daughter, by default. The other attribute that is important for this discussion is *MARKING* (abbreviated to *MRKG*), which a mother inherits from the functor daughter.

The key ideas of Kay and Sag's analysis of the BMC can be seen in (58), the analysis of (57).

(57) too incredibly rude a remark



Here, the functor daughter dominating *too incredibly rude* is of type *adj*, and is

<sup>13</sup>For example, while preposing of expressions including a *wh* item like *how* and *however* might be motivated by the need for some kind of feature checking, this account cannot plausibly be extended to other BMC triggers, which are not *wh* items.

an instance of what Kay and Sag call the ‘Complex Pre-determiner’ (CPD) construction. This is a type of head-functor construction which has three distinctive properties.

The first is that it is specified as *SELECTING* a nominal head with the *MRKG* value *a* (which we have abbreviated as *noun<sub>a</sub>*). Having this *SELECT* value means it can only combine with a nominal which has this *MRKG* value. The only way a phrase can acquire this value of *MRKG* is by containing an instance of the indefinite article (*a/an*) as determiner, as in (58). It is this *MRKG* value that puts an instance of the CPD construction like *too incredibly rude* in the pre-determiner position, and guarantees that the only determiner allowed is *a/an*.

The second important property of the CPD construction is that its *MRKG* value is specified as *deg*. The only way a constituent can be marked *DEG* is by (i) being a degree word (like *too*), or (ii) having a functor daughter which has this marking. Thus, *too rude* could have this marking, and in (58) *too incredibly* and *too incredibly rude* have this marking. It is this property that guarantees the presence of a Degree word in the pre-determiner position.

Recall that by default mothers inherit the *SELECT* feature from their head daughter. The third important property of the CPD construction is that this default must be over-ridden: in (58) *too incredibly rude* must be specified as selecting a noun with *MRKG* value *a*; but its head is *rude*, which will be specified as selecting a noun with *MRKG* value *unmarked* (so that it can modify bare nouns, as in (*a*) *rude remark*).

Thus, the key idea of Kay and Sag’s analysis is that it involves a special adjectival construction – the CPD construction – which is marked *deg* (and so contains a Degree word), and *selects* a noun which is marked *a* (and so has to modify an NP with the determiner *a/an*). And since the head of this construction is a normal adjective (which selects an unmarked noun), this requires the normal default inheritance of the *SELECT* value to be over-ridden. Everything else in (58) is normal (all the other sub-trees involve normal head-functor constructions, with mothers inheriting *SELECT* values from their head daughters).

Adjectives which are modified by Degree words are specified as *MRKG deg*, so they can occur in this construction, but unmodified adjectives are not: unmodified adjectives are specified as *MRKG unmarked*, as *rude* is in (58), and so are excluded from this construction. Likewise, assuming intensifying adverbs like *very* are *MRKG none*, phrases where they are the functor will be excluded from this construction. Thus, while (57) is licensed, the following are not:

(59) \*That was rude a remark.

(60) \*That was very rude a remark.

Unmodified adjectives select unmarked nouns, and so appear in canonical position; and so do adjectives modified by normal intensifying adverbs. So examples like (61) are licensed:

(61) a (very) rude remark

Kay and Sag do not discuss the possibility of Degree modified adjectives in canonical position, but one can imagine extending it to allow Degree words in canonical position only when ‘protected’. For example, the construction that combines normal adjectives and unmarked nouns might require the adjective to have some MRKG value other than *deg*, which would exclude (62) and allow (63).

(62) \*a too rude remark

(63) a far too rude remark

(62) would be excluded because *too rude* is specified as MRKG *deg*, but (63) would be allowed, because *far too rude* inherits the MRKG value of *far too*, which in turn has the MRKG value of *far*, which is not *deg*.<sup>14</sup>

This is an attractive analysis: it is carefully formalised, and covers most of the data we have presented. It embodies a very simple intuition about the construction (there has to be a degree word, and the determiner has to be *a/an*) in a very direct and descriptively appealing manner. The structure it assigns captures the modification relations (*too* modifies *incredibly*, *too incredibly* modifies *rude*, etc) directly, and seems to involve the right kind of constituent structure (e.g. *a remark* is a constituent).

In the following section, we will attempt to improve on the empirical coverage of this analysis, using the standard formal apparatus of LFG. On the formal side, this means we will not use features like *SELECT* or *MRKG*, default inheritance, or SBCG style constructions. On the empirical side, we will improve on Kay and Sag’s account by addressing two particular problems.

The first is that since MRKG values are inherited from functor daughters, the MRKG value on a BMC NP like *too rude a remark* (which will be *deg*, as in (58)) will be different from that of a normal NP like *a rude remark* or *a remark* (which will be *a*). This will be a problem if the MRKG value plays a role in determining the distribution of NPs elsewhere in the grammar, because as we saw above, there is no real distributional difference – from the outside, they all look the same.<sup>15</sup>

A more serious empirical problem is this. The analysis allows the Degree word that licenses the BMC to percolate from any depth inside the BM adjectival, but since the MRKG value is inherited from the functor daughter, and in these cases the functor daughter is the first daughter, it predicts that an adjectival where the Degree word is pre-modified should not license the BMC. This is incorrect, as the following demonstrate, and as we noted above (compare (51c)-(53c)):

(64) a. nearly *as* incredibly rude a remark

b. [[[nearly *as*] incredibly] rude] a remark

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<sup>14</sup>It might also be possible to provide an account of ‘optional’ BMC triggers (like *more*, *less*, etc.) by assigning these a MRKG value which is a super-type of *deg* and *unmarked*, hence compatible with both.

<sup>15</sup>It is not clear if this will be a problem for Kay and Sag in practice, because it is not clear what role MRKG values generally play in determining the distribution of phrases. The main purpose of MRKG values is to register the presence of grammatical elements in a phrase so to avoid it being duplicated – for example the restriction that a noun can have only one determiner can be enforced by having determiners select nouns that are unmarked.

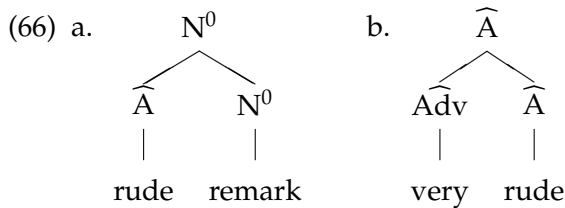
- (65) a. very nearly exactly *as* rude a remark  
 b. [[[[very nearly] exactly] *as*] rude] a remark

For example, in (64), the marking on *nearly as incredibly rude* will be inherited from *nearly*, which is not a Degree word, not from *as*, predicting (wrongly) that such a phrase cannot appear in the BMC. Contrary to what Kay and Sag predict, the BMC licenser can be *anywhere* in the pre-determiner expression.

## 4 LFG Analysis

The goal of this section is to develop an analysis of the BMC which improves on the empirical coverage of existing analyses, using only the standard apparatus of LFG.

We begin with some background on the analysis of attributive adjectives. Following Arnold and Sadler (2013), we assume that pre-nominal adjectives, and their modifiers, are instances of ‘non-projecting’ categories  $\widehat{A}$ , Adv, etc. (cf. Toivonen (2003)). The difference between a ‘hat’  $\widehat{X}$  category and a conventional  $X^0$  category is that the latter is typically dominated by  $X'$  and XP, and can thus be accompanied by complements and phrasal modifiers, whereas the former is only permitted in two circumstances: as a sister to  $Y^0$  under  $Y^0$ , or  $\widehat{Y}$  under  $\widehat{Y}$ , for example:



Most adjectives have both  $\widehat{A}$  and  $A^0$  lexical entries, and so can appear both pre- and post-nominally (e.g. *grateful*: as in *a grateful public* and *a public grateful for his leadership*), some have only  $\widehat{A}$  entries (e.g. *mere*), and can only appear pre-nominally, some have only  $A^0$  entries (e.g. *asleep*) and can only appear post-nominally. The adverbs we are concerned with here (intensifiers like *very*, Degree words, and *more*, *less* etc) are Adv.<sup>16</sup>

We thus assume the following basic rules for NP (leaving aside now the possibility of post-nominal modifiers):

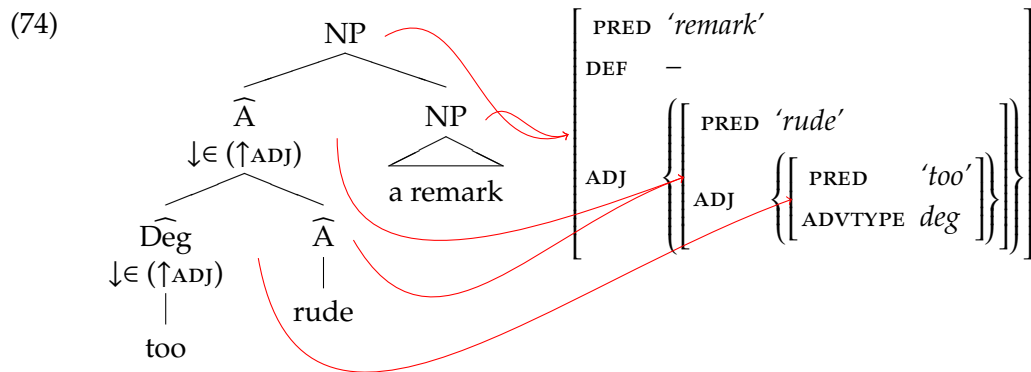
- (67) NP → DET N  
 $\uparrow=\downarrow$   $\uparrow=\downarrow$
- (68) N →  $\widehat{A}$  N  
 $\downarrow \in (\uparrow_{ADJ})$   $\uparrow=\downarrow$
- (69)  $\widehat{A}$  → Adv  $\widehat{A}$   
 $\downarrow \in (\uparrow_{ADJ})$   $\uparrow=\downarrow$

<sup>16</sup>As a consequence Degree words, as well as *more* and *less*, which take complements, cannot realise their complements ‘locally’ (local realisation would require them to be Adv<sup>0</sup>, heading AdvPs), so their complements are obligatorily extraposed as in ‘*as rude as that*’, ‘*as rude a remark as that*’. See Arnold and Sadler (2013).



and that the lower NP contains the indefinite article *a/an*. If we assume that in English the feature specification  $DEF -$  is uniquely associated with the indefinite article, we can achieve this very simply with the rule and annotations in (73), which will produce the c- and f-structure in (74).<sup>19</sup> Notice that the f-structure in (74) differs from that in (71) only in the presence of PRED ‘*too*’ and the ADVTYPE feature in the former.

$$(73) \quad NP \rightarrow \begin{array}{c} \widehat{A} \\ \downarrow \in (\uparrow_{ADJ}) \\ (\downarrow_{(ADJ \in)^+ ADVTYPE}) =_c deg \end{array} \quad \begin{array}{c} NP \\ (\uparrow_{DEF}) =_c - \end{array}$$



The ‘ $\downarrow \in (\uparrow_{ADJ})$ ’ constraint on  $\widehat{A}$  simply makes the adjective an adjunct of the noun (as in (68)). The functional uncertainty constraint ‘ $\downarrow_{(ADJ \in)^+ ADVTYPE} =_c deg$ ’ requires the presence of a Degree word in the  $\widehat{A}$ . The ‘Kleene plus’ operator ‘+’ ensures that this constraint can be satisfied in many ways, *inter alia*:

- (75) a.  $(\downarrow_{ADJ \in ADVTYPE}) =_c deg$   
 b.  $(\downarrow_{ADJ \in ADJ \in ADVTYPE}) =_c deg$   
 c.  $(\downarrow_{ADJ \in ADJ \in ADJ \in ADVTYPE}) =_c deg$

- (76) a. the adjunct set of the  $\widehat{A}$  contains a degree word: *too rude (a remark)*  
 b. the adjunct set of the  $\widehat{A}$  contains an item whose adjunct set contains a degree word: *too incredibly rude (a remark)*  
 c. the adjunct set of the  $\widehat{A}$  contains an item whose adjunct set contains an item whose adjunct set contains a degree word: *too incredibly surprisingly rude (a remark)*

Notice that nothing is said about the linear position of the degree word here. Thus, we improve on Kay and Sag (2012) by allowing examples like the following:

- (77) a. nearly *as* incredibly rude a remark [cf. (16a)]  
 b. very nearly exactly *as* rude a remark [cf. (88a)]

The fact that this constraint involves ‘ $=_c$ ’ means it cannot be satisfied by an

<sup>19</sup>This assumption about the feature  $DEF -$  is of course crucial, and means, for example, that this feature cannot be used as the morpho-syntactic reflex of semantic indefiniteness, because as the examples in (16) showed, semantic indefinites are not generally allowed in the BMC.



element that is unspecified for *ADVTYPE* (so we correctly exclude *\*very rude a remark*). We can allow examples involving *more*, *less*, and *quite* in BM position, as well as canonical position, as in (78), if we optionally associate them with an *ADVTYPE=deg* constraint in the lexicon.

- (78) a. *more/less/quite potent a force* [cf. (47)]  
 b. *a more/less/quite potent force*

The ' $_{\text{DEF} =_c}$  – on the daughter NP will have the effect of correctly excluding examples involving determiners other than *a/an*; it will also exclude mass nouns (which lack any determiner, and so presumably have no *DEF* specification at all). This is correct: compare *\*too expensive wine* (vs. *too expensive a wine*).

Notice that in other ways the lower NP is expected to have normal NP internal structure, as seems correct, and from the outside the upper NP will be indistinguishable from any other indefinite singular NP (unlike under Kay and Sag's analysis), and will be predicted to have the normal distribution noted above in Section 2.<sup>20</sup>

If we assume *DEF* to be a distributive feature, we derive an interesting, and apparently correct, prediction about co-ordinate structures involving nouns inside the BMC, namely that all conjuncts will have to satisfy the  $_{\text{DEF} =_c}$  – constraint. Coordination within the NP can arise in two ways. If two Ns are co-ordinated in the scope of *a/an* as in (79), the defining equation ' $\uparrow_{\text{DEF} = -}$ ' associated with the indefinite determiner will distribute to both conjuncts, and the constraining equation will be satisfied by both conjuncts.

- (79) (as nice) [ a [ cup and saucer ] ]

Alternatively, coordination may be at the level of the NP, in which case each conjunct obtains this feature independently, from its own determiner, as in (80). Again the constraining equation is satisfied in both conjuncts.

- (80) (too honest) [ [a man] and [a lawyer] ]

What is excluded is a case like (80), where the conjuncts contain different determiners. This prediction seems to be correct:<sup>21</sup>

- (81) *\*too honest* [[a man] and [no lawyer]]

Turning now to the phenomenon of degree-modified adjectivals in canonical position, as in (51)–(53). Recall that the generalisation was that degree words are allowed in this position providing they are pre-modified. This generalisation can be stated directly using a 'local name' (Dalrymple, 2001, p146), if the existing

<sup>20</sup>An anonymous reviewer correctly points out our rule (73) will license recursion, with the lower NP expanding into another BMC. We note, first, that it is in general not easy to combine multiple Degree modifiers, including *more*, *less*, etc. quite apart from the BMC. For example a phrase like *several more interesting more plausible analyses* requires a considerable amount of context to be acceptable. Given sufficient context, we think examples like the following would be acceptable:

(i) I expected her to wear too short a skirt, but had not expected quite so colourful too short a skirt.

<sup>21</sup>Of course, there is nothing wrong with a *string* like *too honest a man and no lawyer* – but here the conjuncts would be *too honest a man*, and *no lawyer*.

rule expanding N, (68) above, is replaced by the following:

$$(82) \quad N \rightarrow \begin{array}{c} \widehat{A} \\ \downarrow \in (\uparrow_{ADJ}) \\ \left( \begin{array}{l} (\downarrow (ADJ \in)^+) = \%X \\ (\%X \text{ ADVTYPE}) =_c \text{deg} \\ \neg(\%X \text{ ADJ} \in) \end{array} \right) \end{array} \quad \begin{array}{c} N \\ \uparrow = \downarrow \end{array}$$

The first constraint on  $\widehat{A}$  here says that it is an adjunct (this is just as in the existing rule), the second more complex constraint is negative, that is, it forbids something. What it forbids is the following. Suppose there is an adjunct, or an adjunct's adjunct, ... inside the  $\widehat{A}$ . Suppose we call this adjunct ' $\%X$ ', and suppose  $\%X$ 's *ADVTYPE* is *deg*, and suppose  $\%X$  does not itself have an adjunct. This is forbidden. See (83) for a line by line paraphrase:

- (83) a.  $(\downarrow (ADJ \in)^+) = \%X$     Let  $\%X$  be an adjunct (or adjunct's adjunct, etc). . .  
 b.  $(\%X \text{ ADVTYPE}) =_c \text{deg}$     which is specified as *ADVTYPE deg* . . .  
 c.  $\neg (\%X \text{ ADJ} \in)$     . . . and which does not have an adjunct

In other words: any Degree word in the  $\widehat{A}$  must have an adjunct. But recall that 'hat' categories are only permitted to dominate other 'hat' categories, and that 'hat' categories are always head final. It follows that any Degree word which has an adjunct will be *pre-modified*, and we correctly account for the contrast in, for example, (84):

- (84) a. \*a too rude remark    [cf. (51)]  
 b. a far too rude remark

The goal of this section was to develop an analysis which improves on the empirical coverage of previous analyses, using only the standard apparatus of LFG. We believe this goal has been achieved.

## 5 Discussion

The two crucial ingredients of the analysis in Section 4 are the use of a functional uncertainty equation to ensure the presence of a Degree word in the BMC, and the use of the constraining equation ' $_{DEF} =_c -$ ' to ensure the presence of the indefinite article. In this section we will consider some alternatives to the second.

In informal discussions in LFG, it is often assumed that determiners are just a kind of syntactic marker, and thus do not have *PRED* values. This cannot be true in general. Many determiners play a much fuller role: some can be the target of modification (*absolutely no ideas, almost every suggestion, . . .*), can contribute to the construction of complex determiners (*some but not all*), or clearly introduce some particular semantic content.<sup>22</sup> Even the definite determiner *the* introduces some kind of familiarity or uniqueness requirement. Significantly, perhaps, *a/an*

<sup>22</sup>So, for example, *some* often contributes a derogatory flavour (compare *Some student wants to see you.* with *A student wants to see you.*), or conveys that the precise identity of the individual picked out is somehow important, which accounts for the contrast in *Oh look! There's a##some fly in my soup!* (cf. Farkas, 2002).

has none of these properties: it cannot be modified or conjoined – arguably it is unique in contributing no constraints on the variable it introduces (e.g. Farkas, 2002), which is why it is so open to unselective binding by adverbs like *usually*, and can take on generic interpretations, as in *a lion is a carnivore*. If all other determiners have PRED values, then the following would be an alternative to (73) (the difference is just in the constraints on NP):

$$(85) \quad \text{NP} \rightarrow \begin{array}{ccc} \widehat{A} & & \text{NP} \\ \downarrow \in (\uparrow \text{ADJ}) & & \uparrow = \downarrow \\ \downarrow (\text{ADJ} \in)^+ \text{TYPE} =_c \text{deg} & & \downarrow \text{SPEC} \\ & & \neg (\downarrow \text{SPEC PRED}) \end{array}$$

Here the existential constraint ( $\downarrow \text{SPEC}$ ) is required to exclude bare noun phrases like *\*too hot coffee*, *\*too rude remarks* (which lack a SPEC); *a/an* would have to be lexically specified as contributing a SPEC value, but no PRED value.

Of course, a further possibility is that *a/an* does have a PRED value, then the constraint is simple and we can write (86):<sup>23</sup>

$$(86) \quad \text{NP} \rightarrow \begin{array}{ccc} \widehat{A} & & \text{NP} \\ \downarrow \in (\uparrow \text{ADJ}) & & \uparrow = \downarrow \\ \downarrow (\text{ADJ} \in)^+ \text{TYPE} =_c \text{deg} & & (\downarrow \text{SPEC PRED FN}) =_c 'a' \end{array}$$

It is not obvious that either of these approaches is superior to that described in Section 4.

One further possibility is that instead of trying to express the constraint in terms of features, we should simply require that the string contain the lexical item *a/an* after the BM adjective.<sup>24</sup> This would be equivalent to what we have for simple cases, but it would require some kind of matching constraint on the conjuncts in order to ensure we do not produce examples like *too honest [a man and a lawyer]*, and do not produce examples like *too honest [a man and no lawyer]* (cf (80) and (81) above). It also makes a different prediction about the grammatical role of *a/an*. According to the account in Section 4, the lower NP must be DEF –, that is, it must have the indefinite article as its determiner. This constraint is satisfied in the NP in (87a), but not that in (87b). Both contain *a/an* in the right string position, but in (87b) the indefinite article is not the determiner of the NP, but of the *specifier* of the NP, cf the structure in (87c).

- (87) a. a famous wine  
 b. a famous vineyard's wine  
 c. [a famous vineyard]'s wine

A string-based account would predict each would be equally able to participate in the BMC, the account in Section 4 predicts that while (87a) should, (87b) should not.

The kind of data one would need to decide this would be as in (88): on the

<sup>23</sup>One often sees this sort of constraint written more briefly as  $\text{SPEC} =_c 'a'$ . We assume this is an abbreviation, and that the values of SPEC are not semantic forms, as this would suggest.

<sup>24</sup>We are grateful to Ron Kaplan for suggesting that we consider this approach.

string-based account (88b) would allowed, on our account above it would not.

- (88) a. as delicately flavoured a famous wine  
b. ?as delicately flavoured [a famous vineyard]'s wine

While we are content that (88b) is less than wonderful, this might be for other reasons – it would be nice to have more decisive data.<sup>25</sup>

In Section 4 we have provided what we believe to be the most descriptively complete account of the BMC and related pre-nominal constructions involving Degree words that is currently available. We have done this using standard LFG apparatus. Of course, we have provided nothing whatsoever in the way of *explanation* – no account of *why* these particular words appear in this construction under these circumstances. However, we believe precise and complete description such as this is a necessary pre-requisite of explanation.

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<sup>25</sup>There is a potential source of confounds here: there are examples which are superficially like (88b) which are perfectly fine, e.g. *as expensive a children's coat*, however this does not have the structure that is relevant here: the specifier here is not *\*a children*, rather the structure involves the compound noun *children's coat* (a kind of coat), and the determiner is *a/an*. The fact that an example like this can appear in the BMC does not provide evidence either way.

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