

Non-restrictive Adjective Interpretation and Association with Focus

Robert Truswell

1. Introduction

The possibility in Romance in certain circumstances of a ‘non-restrictive’ interpretation of attributive adjectives, known in French as an *épithète de nature*, is frequently acknowledged in the literature (see e.g. Waugh 1977, Forsgren 1978, Goes 1999). Although authors have generally (and correctly) related this use of attributive adjectives to its ‘poetic’ or ‘emphatic’ function, the specific syntactic and semantic mechanisms through which this effect is available are not generally discussed.

The link between *les épithètes de nature* and presupposition has long been asserted by non-generative grammarians, as Waugh's, Forsgren's, and Goes' summaries of the history of study of this construction show. For example, Marouzeau (1922, reproduced by Forsgren 1978: 44) claims that the meaning of an adjective in its normal post-nominal position is ‘*non pas accepté, mais présenté comme appartenant à son substantif*’,¹ the difference between some element of meaning being accepted or presented apparently corresponding to the modern distinction between presupposition and assertion. Meanwhile, Roubaud (1786, reproduced by Forsgren 1978: 48) writes as follows:

Lorsque vous dites un *savant homme*, vous supposez que cet homme est savant; & lorsque vous dites un *homme savant*, vous assurez qu'il l'est. Dans le premier cas, vous lui donnez la qualification par laquelle il est distingué; dans le second, celle par laquelle vous voulez le faire distinguer. Là, la science est hors de doute; ici, vous voulez la faire connoître.²

Again, this would appear to parallel the modern distinction between presupposition and assertion. However, such descriptions of *épithètes de nature*, with the semantic contribution of the adjective apparently already recoverable from the meaning of the noun or from real-world knowledge, raise the question of exactly what the function of a non-restrictive adjective *is*. The claim of this paper is that the possibility of a non-restrictive interpretation of attributive adjectives can be explained by adapting established theories of association with focus (e.g. Rooth 1992, Rizzi 1997) to the noun phrase.

The remainder of this paper will be structured as follows: in §2 I will illustrate the non-restrictive use of attributive adjectives in French, and point out similarities and differences to other uses of adjectives; in §3, I will describe current syntactic and semantic

¹ ‘not accepted, but rather presented, as belonging to its substantive’

² ‘When you say ‘un *savant homme*’, you *suppose* that this man is erudite; and when you say ‘un *homme savant*’, you *assert* that he is. In the first case, you attribute to him the qualification which distinguishes him; in the second, the qualification by which you wish to distinguish him. There, his erudition is beyond doubt; here, you wish to make it known.’

theories of association with focus, mainly with reference to English, and explore the possibility of extending these theories to the noun phrase; and in §4 I will attempt to show that similarities between non-restrictive and focused uses of adjectives can be captured by a simple extension to standard theories of association with focus. Some extensions of this analysis to closely related constructions will be discussed in §5.

2. Non-restrictive Adjective Use

The phenomenon of non-restrictive interpretation of adjectives is illustrated by the contrast between the use of adjectives in the following examples:³

- (1a) i. *ce plat pays* ‘this country, which is flat’
 ii. *ce pays plat* ‘this flat country’
- (1b) i. *ma verte prairie* ‘my meadow, which is green’
 ii. *ma prairie verte* ‘my green meadow’
- (1c) i. *la catholique Irlande* ‘Ireland, which is catholic’
 ii. *l’Irlande catholique* ‘the catholic (part of) Ireland’

Two salient characteristics unite the non-restrictive constructions (in the i. examples). Firstly, the adjective is pre-nominal, whereas it is found post-nominally in the restrictive ii. examples. And secondly, in each case, the noun phrase is constructed with a definite determiner. I claim that both of these, while not essential, are standard characteristics of the non-restrictive adjective construction. Although it is possible to find non-restrictive interpretations of post-nominal adjectives, as in the following Spanish example, I believe that this is a different, reduced relative, construction, which I will not analyse here.

- (2) *La carrera, accidentada, fue suspendida.*

The race, which was calamitous, was suspended.

(Gutiérrez-Rexach & Mallen 2001: 118)

Also, we shall see that while replacing the definite determiner with an indefinite determiner does not always result in ungrammaticality, it frequently gives rise to a clear shift in the interpretation of the adjective:

- (3) *de [#](très) plat pays* ‘[#](very) flat countries’

We see here that a modification of (1a) i., replacing a definite with an indefinite determiner, no longer has a readily available non-restrictive interpretation (instead, the AdjP functions to restrict the reference of the noun to objects which possess the property of

³ In the English translations, I have resorted to using non-restrictive relative clauses when translating non-restrictive adjectives, for the sake of clarity. Although non-restrictive use of adjectives *is* possible in English, as discussed in §5.3, the more fixed word order can obscure the contrast on the page. This is not necessarily meant to imply a relative-clause-based analysis of attributive adjective constructions, however.

being flat to a high degree), and arguably requires modification of *plat* by *très* ‘very’, to be fully acceptable.

One immediate question is what the links are between this construction, and other occurrences in pre-nominal position of adjectives predominantly placed post-nominally,⁴ as in the following example:

(4a) *Nous vous souhaitons un agréable voyage.*

We hope you have a pleasant journey.

(4b) *Nous vous souhaitons un voyage agréable.*

We hope you have a pleasant journey.

In terms of meaning, there is little to choose between these two examples, the first of which is used on a Eurostar announcement. However, *agréable* is predominantly used post-nominally, in the order (4b). My claim, to be formalised later, is that the possibility of using *agréable* pre-nominally in (4a) is related to the circumstances in which (4a) is uttered: everyone who hears this statement is on a train, with the intention of going on a journey. This much is part of the common ground. The new content of (4a) is that the speaker hopes this journey will be pleasant. The announcer, in uttering (4a), focuses the adjective by positioning it pre-nominally, and presupposes the content of the noun.

Consider an alternative scenario. A contestant has won a prize on a game show. Exactly which prize he has won will be determined by his choosing one of several envelopes in the presenter's hand. The prizes could be anything: money, a new car, travel. The presenter asks the contestant what he hopes is in the envelope he picks, and the contestant replies that he could use a holiday. The presenter could then utter something like (4b) quite unremarkably, with a meaning along the lines of ‘we hope you win a nice holiday’.⁵ (4a) would be less normal, however: it cannot readily be interpreted in the same way as (4b), but only (if at all) along the lines of ‘we hope you win a *really good* holiday’, with strong emphasis on the adjective (which, in turn, is more natural if preceded by the

⁴ I will not address in this article the much-discussed issue of the correct analysis of the minority of adjectives, such as *grand* ‘big’, *bon* ‘good’, and “modal” adjectives such as *faux* ‘fake’, which occur pre-nominally by default. Equally, most of the proposals in this article do not hold true for relational adjectives (in other words, denominal adjectives, where the noun from which they are derived stands in some relation to the head noun), as in the following examples:

- i. *la limousine présidentielle* ‘the presidential limousine’
- ii. *la chaleur solaire* ‘warmth from the sun’

Such adjectives have very different possibilities. They resist both being placed pre-nominally and being modified by *très*, either operation leading to a clear shift in the interpretation of the adjective, so that it is no longer relational, in the above sense:

- iii. *la présidentielle limousine* ‘the limousine, which has the qualities normally associated with the president's car’
- iv. *la limousine très présidentielle* ‘the limousine, which has a great deal of the qualities normally associated with the president's car’

This class of adjectives falls outside the scope of this article, for reasons of space.

⁵ I accept that this would not be the most natural-sounding utterance. However, as a minimal pair, it hopefully illustrates the point despite being somewhat clunky.

degree modifier *très*, which is claimed by Goes 1999 to favour pre-nominal position independently of the function of the adjective).⁶

The principal difference between the original, Eurostar-based scenario, and this, game-show-based, scenario, for our purposes, is that the fact that the addressees are going on a journey can be taken as part of the common ground in the original scenario, whereas the contestant in the game show scenario may not win a trip as a prize – he could win money, or a new fridge, instead. In other words, the difference is that, in the second scenario, the proposition that the addressee is going on a journey cannot felicitously be presupposed. This difference in the context of utterance influences the relationship between the possible positions of the adjective, and the available interpretations of the adjective, relative to the noun, in those positions.

The central claim of this paper is that exceptional pre-nominal uses, such as (4a), of normally post-nominal adjectives may often be cases of a focus–presupposition structure, and that the different possibilities of interpretation of an adjective within that structure, as non-restrictive, emphatic, or contrastive, for example, depend largely on the semantic characteristics and discourse properties of the noun phrase as a whole within which the focused adjective is embedded. Fleshing out this claim will require several assumptions concerning the syntax and semantics of the focus–presupposition structure within the noun phrase, and concerning the semantics of different types of noun phrase. To these ends, I turn in the following section to the task of adapting theories of association with focus, generally designed with clausal semantics in mind, to the noun phrase.

3. Focus in the Noun Phrase

3.1. Alternative Semantics

The theory of focus which I will adopt in essence here is that of Rooth (1992), a version of Alternative Semantics. The fundamental assumption of this theory is that an element bearing focus has, in addition to its ordinary semantic value, a *focus semantic value*, consisting of the set of appropriately typed alternatives to the ordinary semantic value. At the level at which focus is interpreted, then, a focus-sensitive operator can be represented as a function of both the ordinary semantic value $[[\alpha]]^0$, and the focus semantic value $[[\alpha]]^f$ (equivalent to the set of alternatives to α). The exact interpretation of a phrase containing a focused element will therefore be a function of the larger construction in which the focus-bearing phrase is embedded, and a pragmatically determined alternative set $ALT(\alpha)$, a subset of the focus semantic value, among other factors.

⁶ Richard Ashdowne (p.c.) raises the issue of whether the pre-nominal position of *agréable* in (4a) could be related to *un agréable voyage* taking on some of the function of the formulaic and pragmatically weak *un bon voyage*. While this may well be the case, the issue still remains of why *agréable* is less acceptable pre-nominally in this second scenario.

I will illustrate with the standard example of the focus-sensitive adverb *only*, drawing heavily on Rooth (1992). Let us assume the following notation:

- (5) Ordinary semantic value of $[\alpha]_F$ is $\llbracket[\alpha]\rrbracket^0$.
 Focus semantic value of $[\alpha]_F$ is $\llbracket[\alpha]\rrbracket^f$.
 The pragmatically fixed alternative set, a subset of $\llbracket[\alpha]\rrbracket^f$, is $ALT(\alpha)$.

We can then represent the meaning of *only* as follows:

- (6) $\llbracket[\text{only VP}]\rrbracket = \lambda x. \llbracket[\text{VP}]\rrbracket^0(x) \wedge \forall P \in ALT(\text{VP}). P(x) \rightarrow P \equiv \text{VP}$

At the level where *only* is merged, the focus feature on some component of VP is interpreted, so the meaning of *only* VP is a function of the meaning of *only*, of the ordinary semantic value $\llbracket[\text{VP}]\rrbracket^0$, and of the pragmatically fixed alternative set $ALT(\text{VP})$. In the standard case, illustrated in (7) below, this alternative set is a set of properties obtained by replacing the focused subconstituent of VP with other relevant, appropriately typed, elements. In this way, the focus introduced at the NP level is interpreted at the larger, VP level, as *only* is the element which determines the relationship between the ordinary semantic value and the members of the alternative set. *Only* asserts the ordinary semantic value, and, furthermore, asserts that it is the sole member of the alternative set which can be truthfully asserted. This leads to representations such as the following:

- (7) $\llbracket[\text{only introduce Bill to [Sue]}_F]\rrbracket =$
 $\lambda x. \text{introduce}(x,b,s) \wedge \forall y \in ALT(s). \text{introduce}(x,b,y) \rightarrow y \equiv s$
 where $ALT(s) = \{\text{Jane, Tony, Elizabeth, ...}\}$

Other examples of focus are not interpreted by any one overt element at the level of interpretation but instead are licensed by the construction as a whole. This is the case with contrastive focus, illustrated by Rooth with the following example:

- (8) ‘An $[\text{American}]_F$ farmer was talking to a $[\text{Canadian}]_F$ farmer.’

A contrastive interpretation of the two focused constituents in this sentence is available only if a presupposition is satisfied that the ordinary semantic value of each of these constituents is a member of the alternative set of the other. Unlike the case of *only* above, where focus affects truth conditions, then, a contrastive interpretation of focus is only available if certain presuppositions are satisfied. It is still a live issue exactly why focus sometimes affects truth-conditions (as with *only*) and sometimes adds presuppositions instead (see Rooth 1992: 110-12 for some suggestions). However, it seems undeniable that a focus feature is not interpreted identically in all instances (although all interpretations of a focus feature have the unifying characteristic of reference to an alternative set, as well as, in English, prosodic similarities), and that many interpretations of a focus feature are only available if certain presuppositions are satisfied. I will claim below that this is the case with certain patterns of focus use within the noun phrase. This is, in fact, my reason for adopting this theory of focus (rather than, say, the Structured Meanings theory of Krifka 1991, 1992, which attempts to calculate the ordinary and focus semantic values of a phrase more deterministically by recourse to LF movement of a focused constituent to create an

operator–variable structure): as noted in the introduction, the presuppositional element of *les épithètes de nature* has long been remarked upon, and Rooth assumes that the ‘background’ (the alternative set relative to which focus is interpreted) is not determined in the compositional semantics, but rather presupposed, as it is clear that there are certain cases where the background of the construction is not structurally determined. Rooth (1992: 109) discusses the following example:

- (9) ‘People who [grow]_F rice generally only [eat]_F rice.’

This is a symmetrical contrastive focus construction, as in (8) above, with *grow* and *eat* contrasting with each other. However, *eat* is also in the VP over which *only* quantifies. If focus were related to LF raising, we would expect the alternatives to ‘[eat]_F rice’ to be a set of other things which could be done to rice, and the meaning of ‘only [eat]_F rice’ would be roughly as follows:⁷

- (10) $\lambda x. \text{eat}(x, \text{rice}) \wedge \forall P \in \text{ALT}(\text{eat}). P(x, \text{rice}) \rightarrow P \equiv \text{eat}$

This would be universally false, as we know from (9) that the people in question also grow rice. However, it is possible for (9) to be truthfully uttered. This is because we interpret *only* as quantifying over different types of things to eat, rather than over different things to do to rice. This is directly at odds with the location of the phonological realisation of focus, however: LF raising of focused *eat* would create a structure such as $\lambda P \lambda x. P(x, \text{rice})$. In this case, the background to a focused phrase cannot always be determined by LF raising of the focused constituent, and the non-compositional nature of the Alternative Semantics analysis must be maintained.

One puzzling feature of the Alternative Semantics approach of Rooth (1992: 90-3) is that Rooth requires that $\text{ALT}(\alpha)$ contains both α and *at least one element distinct from α* . Although this requirement is fulfilled by standard cases of association with focus, such as those discussed above, it is not clear that there is any theoretical reason why focus, in general, should require an element in the alternative set to be distinct from the ordinary semantic value. Although it is hard to see how anything else could be the case when we concentrate on clausal focus, my claim is that focus of attributive adjectives in the noun phrase represents a case where the alternative set need not contain any elements distinct from the ordinary semantic value, and that this is what lies behind the availability of non-restrictive adjective interpretations. To defend this position, I will first argue for the possibility of a noun phrase-internal focus position.

⁷ This account is not helped by the possibility that *rice* in (9) also bears a focus feature, and that prosodic constraints prevent the phonological realisation of focus on *rice* in addition to *eat*. Even if this is so, an account of focus based on LF raising would have to assume that *eat* in (9) raised, leaving a variable, and so the interpretation of *only eat rice* as quantifying over properties of the form $\lambda x \lambda y. \text{eat}(y, x)$ should not be available.

3.2. Evidence for Focus in Noun Phrases

Truswell (2004) provides evidence from searches on www.google.com that two classes of English attributive adjectives, with subsective and intersective semantics respectively,⁸ are freely ordered within themselves, but are generally rigidly ordered relative to each other, so subsective adjectives occur further from the noun than intersective adjectives. This is shown by the following data:

- Free relative ordering of intersective adjectives referring to material, origin, colour, shape and ‘similarity’:

(11a) wooden French wine crates – French wooden carriage clock

(11b) wooden red clock – red wooden shoes

(11c) wooden feline effigy – canine wooden cutouts

(11d) wooden circular pedestal – circular wooden platform

(11e) French red wine – dark green French marble

(11f) French feline press – feline French road movie

(11g) French circular occasional table – circular French desk

(11h) green feline eyes – feline green eyes

(11i) circular red patch – red circular collector's seal

(11j) grotesque circular feline mask – feline oval pupils

- Free relative ordering of subsective adjectives referring to size and novelty:

(12) new big idea – big new world

- Subsective adjectives dominate intersective adjectives:

(13a) big wooden bird – new wooden floors

(13b) big French bronze sculpture – new French strikes

(13c) big red dog – new red dress

(13d) big feline corpse – new feline tracks

(13e) big circular barbells – new circular platform

- Intersective adjectives do not generally dominate subsective adjectives:

(14a) ?wooden big office desks – wooden new doll's house accessory

(14b) ?the French big bazaar – ??French new ambassador

⁸ *Intersective* adjectives are those, such as colour, shape, and nationality terms, whose semantic contribution approximates to conjunction, or set intersection. So *red clock* means something like $\lambda x. \text{red}(x) \wedge \text{clock}(x)$. The same is not true of *subsective* adjectives, such as terms denoting size and age. A *big bird* is probably not big in comparison to a *big planet*. As the meaning of subsective adjectives such as *big* is determined relative to a comparison class, the interpretation cannot be straightforwardly modelled as conjunction. It appears instead that such adjectives determine a subset of the extension of the nominal property, hence the term *subsective*.

- (14c) *red big N? – red new potatoes⁹
 (14d) the canine big leagues – feline new breeds
 (14e) ??circular big window – ??circular new procedures

(data adapted from Truswell 2004: 13-14.)

It is equally clear, however, that the deviant intersective > subsective order is acceptable, providing certain conditions are met. Specifically, the intersective adjective must bear heavy stress, and the group consisting of the subsective adjective and the noun must be already salient in the discourse context, as the following examples show:

- (15a) I drive a big black car.
 (15b) ??I drive a black big car.
 (15c) #I drive a BLACK big car. [when big cars are not a salient part of the discourse context]
 (15d) ?All my friends drive big cars, but only I drive a black big car. [no stress on *black*]
 (15e) All my friends drive big cars, but only I drive a BLACK big car.

Here, we see the standard order (15a) and the unacceptability under normal circumstances of the opposite order (15b). (15c-d) show that the opposite order continues to be unacceptable if *big car* doesn't refer to a salient Kind in the discourse context, and *black* doesn't bear heavy stress. However, (15e) shows that this order is acceptable if both of these criteria are met.

Of course, both of these criteria are usually assumed to be part of the definition of focus, as well. The simplest assumption would then be that this is not coincidental, and that these exceptional orderings of multiple attributive adjectives represent instances of focus within the noun phrase. I will flesh out this proposal in the following section, sketching the mechanisms behind focus of attributive adjectives.

3.3. *The Workings of Noun-Phrase-Internal Focus*

Roberts (1998) proposes a view of focus such that an expression containing focus is felicitous only if the set of propositions corresponding to the ordinary semantic value of the expression with the focused element replaced by the different members of the focus alternative set, is congruent to the set of possible alternative answers to the question under discussion at that time. So a simple case of a focused element in a clause with a focus alternative set, as in (16), is felicitous only if the question under discussion at the time is as in (17):

⁹ Here, and in (14d) below, intersective > subsective order is, exceptionally, grammatical, because the subsective adjective is part of a fixed idiom. Elsewhere in (14), the grammaticality judgements are subjective and impressionistic. There appears, however, to be general agreement that all non-idiomatic examples are degraded to some extent.

- (16) ... but JOHN, I like.
 ALT(John) = {Bill, Mary, Nigel,...}

- (17) Who do you like?

Given the hypothesis that examples such as (15e) represent cases of noun phrase-internal focus, we would expect from Roberts (1998) that, for this phrase to be felicitous, the question under discussion must be as follows:

- (18) What kind of big car?

This suggests that noun phrase-internal focus represents a relation between two Kinds, in the sense of Carlson (1977): a Kind (in (15e), big cars) which must be already salient in the discourse, and another Kind (in (15e), big cars which are also black) which is a subkind of the first kind, where *subkind* could be defined as follows:

- (19) k_1 is a *subkind* of k_2 iff $\forall x.x$ is an object $\rightarrow (\mathbf{R}(x, k_1) \rightarrow \mathbf{R}(x, k_2))$
 where \mathbf{R} is a 'realisation relation' (as in Carlson 1977, Zamparelli 2000), and 'objects' are individuals or stages, as opposed to Kinds, in Carlson's ontology.

Evidence for this position can be adduced from the admissibility of utterances such as the following:

- (20) All my friends drive big cars, but only I drive a BLACK one.

Zamparelli (2000) argues that *one* is a pro-Kind (or pro-KIP in his terminology), and its antecedent here would be *big cars*. In that case, *big car* must represent a Kind in (15e).

Furthermore, it seems that *black big car* is a Kind in (15e). Circumstantial evidence for this is that a *singular* noun phrase can serve as antecedent for a pronoun *them*, functioning as a bare *plural* naming the Kind in question. This is shown by the following:

- (21) I've got *a labrador*_i. I love *them*_i, they're just so nondescript and doggy.

Parallel continuations of (15e) are possible, however:

- (22) All my friends drive big cars, but only I drive *a BLACK big car*_i. I love *them*_i, they strike fear into the hearts of all that see them.

In that case, it appears that both *big car* and *black big car* represent Kinds in (15e), and that *black big car* is a subkind of *big car*, as defined in (19).

Syntactically, a classic treatment of focus (following, e.g., Chomsky 1976, Krifka 1991, 1992, Rizzi 1997) has assumed that it represents a case of A'-movement, either covertly or overtly, with a phrase bearing a [+F] feature raising into a local Spec-head

agreement/checking configuration with a Focus head. If this is the correct analysis,¹⁰ then both options are available in the case of adjectival focus, as the following examples show:

- (23a) All my friends drive big cars, but only I drive a BLACK big car. [Focused element is fronted.]
- (23b) All my friends drive big cars, but only I drive a big BLACK car. [Focused element *in situ*]

I will assume that the overt part of the movement-based account of focalisation constructions is correct: it seems fairly uncontroversial that, clausally at least, such examples of focalisation have all the major characteristics of A'-movement, linking a position related to argument structure to a *riterial position*, in the sense of Rizzi (2004), that is, a position related to properties of information structure, etc. While it may be less obvious that this is the correct account in the case of the noun phrase, where notions such as 'argument structure' are more tenuous, and particularly in the case of attributive adjectives, when the correct analysis of adjunction in general is still very much a live issue, the basic semantic and prosodic similarities between clausal focus and examples such as (23) warrant proposing syntactic similarity too, as far as possible.

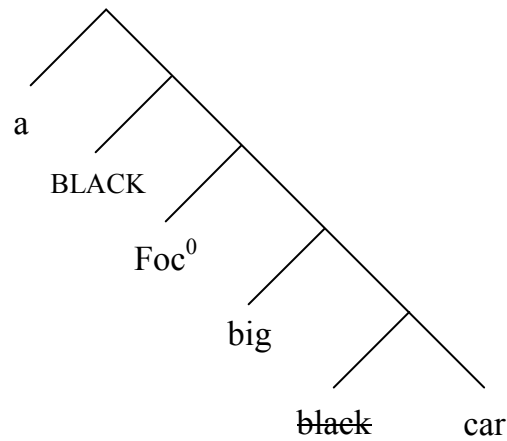
If focalisation is A'-movement to a specifier position, then one immediate consequence is that we expect focused elements to appear on the left of the noun phrase or the clause. This follows from the observation that, while head-complement order may or may not be parametrised (see, for example, Kayne 1994 and Ernst 2002, for opposing views on the matter), the vast majority of currently available linguistic data can reasonably be analysed using only leftward specifiers. Universally leftward specifiers are supported by Kayne (1994), because there are no languages which place the verb in penultimate position, mirroring V2 languages, for example. If rightward specifiers were available, this would be unexpected. If specifiers are universally on the left, then movement of a phrase to [Spec, Foc] should also place this phrase to the left of its sister, regardless of where it originated.

In terms of focus in the noun phrase, then, we expect cases of languages where normally post-nominal adjectives appear pre-nominally, because they have moved to a specifier position: whatever determines the normal position of an adjective should have no bearing on the pre-nominal position of an AdjP moved to [Spec, Foc].

This account of focus means that the discourse conditions on the focus construction can only be defined in non-constituent terms. Consider (23a). The syntactic structure of the noun phrase in this example is plausibly as follows:

¹⁰ Rooth (1992) and Pulman (1997) give reasons to believe that at least the covert part of the analysis is problematic, as the background to an *in-situ* focused element is not necessarily equivalent to the remnant which would be left by LF movement, and non-constituents can be targeted by focus *in-situ*. However, the more relevant construction for discussion of French non-restrictive adjectives is the one with overt fronting of the focused constituents, where the movement-based analysis is less controversial, so I ignore these issues here.

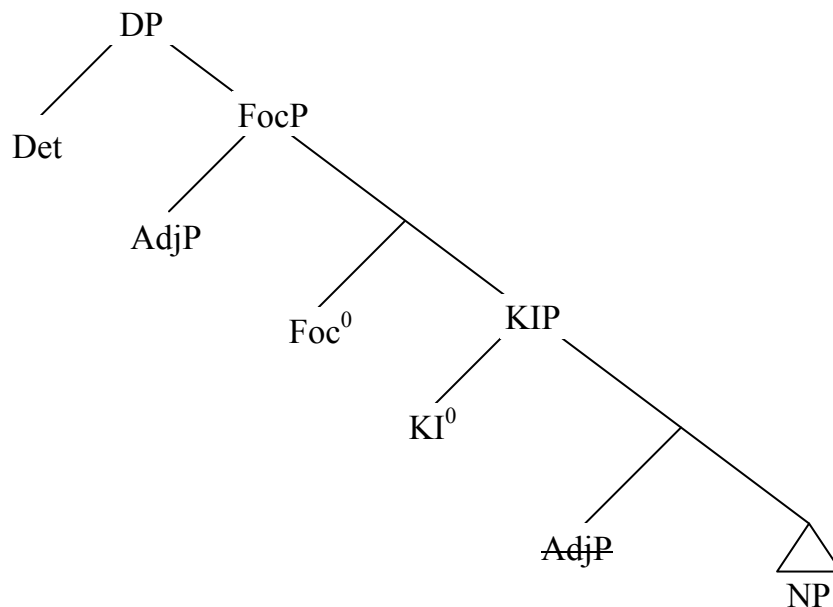
(24)



On the analysis presented above, the two Kinds in this construction are *big car* and *big black car*, and *big car* must already be salient in the discourse context for the focus construction to be felicitously used. However, this is not easily definable in compositional structural terms: in any standard compositional model, the Kind *big car* is never constructed. Instead, it is presupposed to be present in the discourse context. The requirements therefore exhibit what Rooth calls ‘a certain kind of non-locality ... typical of presupposition’ (Rooth 1992: 93).

Generalising across examples, what we are interested in is the following kind of noun phrase structure:¹¹

(25)



¹¹ (25) represents a minimal view of the determiner functional system. Increasingly, the consensus (as in Lyons 1999, Zamparelli 2000 and Borer 2005) is that D should be decomposed into at least two functional heads, either separating definiteness from cardinality, or strong from weak determiners, the latter in either case being the location of the indefinite article. Should such a position prove to be correct, it would be quite compatible with the results of this paper, which will show that the type of determiner influences the interpretation of a focus phrase embedded beneath it, while remaining largely agnostic about the syntactic structure of such configurations.

This structure includes the KIP, or Kind Phrase, layer, argued for in Zamparelli (2000). This can be thought of as the level where Carlsonian Kinds are formed, and the level for which English *one*, French *en* and Italian *ne* (with very different distributions) are pro-forms. Noun phrase-internal focus concerns the relationship between the Kind denoted at the KIP level, before merger of Foc^0 and movement of the AdjP into a local agreement configuration, and the Kind denoted by the remnant, once the AdjP has raised. The assimilation of the structure in (25) to other structurally similar cases such as clausal focus, with which cases such as (23) share so many characteristics, including this ‘non-locality’, would appear to be plausible.

It seems, then, that the syntactic and semantic circumstantial evidence all points to adjectival focus in English presupposing the presence in the discourse context of a Kind corresponding to the background of the focus construction, and introducing a new Kind, a subkind of the original Kind. The availability of focus constructions in French, and more generally in Romance, is widely acknowledged. We may reasonably expect, then, a similar construction to be available in French. The question for the following section is the role of focus in the various interpretations of pre-nominal adjectives in French.

4. Focus and French Pre-nominal Adjectives

We now have a ready-made explanation for the availability of pre-nominal *agréable* in (4a). Everything is in conformity with the felicity conditions of the focus–presupposition structure: *voyage* is correctly presupposed to be salient in the discourse context, because the phrase was uttered on a Eurostar train. The focus is on the subkind *agréable voyage*, which contrasts with other types of journey (mediocre, awful, etc.). As with the case of *a BLACK big car* above, the phrase is indefinite, and the focused adjective restricts the denotation of the noun to a proper subkind.

We can also allow for the admissibility of (3) only with *très*, as this contributes to the emphasis on the AdjP as a whole. The model of adjectival focus presented in §3 seems, then, to handle the major cases of normally post-nominal adjectives unexpectedly found pre-nominally in indefinite noun phrases, quite easily.

Turning to definite noun phrases, we find many more examples of non-restrictive interpretations of fronted adjectives than with indefinite noun phrases. I believe that this arises from a likely incompatibility between the pragmatic and semantic mechanisms behind definiteness and those behind contrastive focus, in particular. Specifically, definite noun phrases presuppose a certain identifiability (that is, discourse salience and/or discourse uniqueness) of their referent: the following is infelicitous if either there is no salient referent for the noun phrase in the discourse context (26a), or there are salient referents, but they are not unique (26b). The same examples with indefinite determiners are unproblematic, because there are no discourse salience or discourse uniqueness constraints on the occurrence of indefinite noun phrases (26c-d):

(26) *J'étais dans un bar assez bien connu hier soir...*

I was in a fairly well-known bar last night ...

(26a) *#Le girafe est entré.* 'The giraffe entered.'

(26b) *#L'homme est entré.* 'The man entered.'

(26c) *Un girafe est entré.* 'A giraffe entered.'

(26d) *Un homme est entré.* 'A man entered.'

On the other hand, contrastive focus involves selecting an alternative from among several different salient possibilities:

(27) *...mais JEAN, j'aime.* '...But JOHN, I like'

[→ I don't like any of the salient alternatives to John, i.e. any members of ALT(John).]

Two highly limiting, and almost mutually exclusive, conditions would then need to be met for a definite noun phrase to include a contrastively focused adjective. It would have to simultaneously satisfy the presupposition of identifiability that comes with definiteness, and the presupposition, from the contrastive focus, that the alternative set contains some element distinct from the ordinary semantic value of the phrase. This is not to claim that these types of presupposition are fundamentally incompatible: indeed, I will argue in §5.2 below that both may be satisfied in the case of constructions with definite noun phrases containing null nominals. However, it is clear that, in many cases, focus cannot be interpreted contrastively for this reason.

One possibility is that a non-restrictive interpretation of a focused adjective arises precisely when there is no element distinct from the ordinary semantic value of the noun phrase in the focus alternative set. A non-restrictive interpretation then arises when *every* object which realises the Kind denoted by the background, also necessarily realises the subkind denoted by the noun phrase as a whole. This is equivalent to presupposing that the intension of the focused adjective necessarily forms part of the intension of the noun phrase, or that an object realising the intension of the noun phrase could not do other than realise the intension of the adjective too.

Consider, for example, (1b) i. Here, *verte* is placed pre-nominally, in contrast to its standard post-nominal position. If this is indeed due to focusing of *verte*, then this cannot have a contrastive interpretation relative to *prairie*, as meadows are, more or less by definition, green. Instead, the relationship between focused *verte*, the alternative set, and *prairie*, is that any other subkind of *prairie* in the alternative set will still have the property of being green. In other words, greenness is presented as an inherent property of meadows.

The time has come to formalise this intuition. Firstly, I will elaborate on my understanding of the KIP layer in the phrase structure trees above. Carlson (1977) introduced the notion of 'names of KINDS of things' (Carlson 1977: 3). Even in that

dissertation, it was clear that this notion did not only correspond to bare nouns: Carlson includes examples of Adj–N compounds functioning as Kinds (e.g. ‘Jerry hates *small ugly creatures*’, Carlson 1977: 22). Today, we could see Zamparelli's proposed KI^0 head as the functional unit which introduces a Kind. If we can indeed consider Adj–N groups, as well as simple nouns, as Kinds, then it is surely not the case that there is something inherently Kind-like about a given noun, or lexical item. Rather, it seems that Kind-formation is more usefully seen as a matter of functional structure. I will assume for concreteness that a nominal lexical root denotes a $\langle s, \langle e, t \rangle \rangle$ property, and that attributive adjectives denote $\langle \langle s, \langle e, t \rangle \rangle, \langle s, \langle e, t \rangle \rangle \rangle$ functions, the identity type (i.e. a type of the form $\langle \alpha, \alpha \rangle$) guaranteeing that the output of these functions remains a property. Highly speculatively, KI^0 could perhaps be seen as the level at which a property first becomes related to a set of things (recall that Carlson's definition was as the proper name of kinds of *things*).

Let us assume, again maximising the similarity between clausal and adjectival focus, that a focused adjective is distinguished semantically by having, in addition to its ordinary semantic value, $[[Adj]]^0$, a contextually determined alternative set, $ALT(Adj)$, of alternative functions from properties to properties. At the level of the Foc^0 head, where a focus feature is interpreted, the Kind-forming KI^0 head will already have been merged, if the argumentation concerning the felicity conditions on focused adjectives in §3.3 is on the right track. If, in the course of the derivation of the noun phrase, members of $ALT(Adj)$ are operated on in parallel with $[[Adj]]^0$, then at the KIP level, the alternative set will give a set of Kinds as alternatives to the Kind formed by using the ordinary semantic value $[[Adj]]^0$. The focus feature will then be interpreted as a relation between Kinds. As a notational convention, let K_0 represent the Kind resulting from use of the ordinary semantic value $[[Adj]]$, of the focused AdjP, in determining the referent of the noun phrase, and let $K_1, K_2, K_3 \dots$ represent the Kinds resulting from using members of $ALT(Adj)$ in determining the referent of the noun phrase. I will assume that the ordinary semantic value of the KIP introduces a Kind into the universe of discourse. The question is, what does the focus semantic value contribute?

One answer would be that the interpretation of the focus feature introduces a presupposition that whatever predicate P holds of the ordinary Kind (K_0) does not hold of any Kind in $ALT(Adj)$ distinct from the ordinary Kind, or in other words, that any Kind in $ALT(Adj)$ of which P holds is a subkind of K_0 . This would mean that the assertions and presuppositions of contrastive and non-restrictive adjectival focus were identical, and that the only difference between the two interpretations of adjectival focus was a condition on the members of the alternative set, such that focus is interpreted contrastively iff the alternative set contains elements distinct from K_0 (i.e. elements that are not subkinds of K_0), and is interpreted non-restrictively iff the alternative set contains *no* elements distinct from K_0 . In other words, adjectival focus is interpreted non-restrictively if the noun, by definition, has the property denoted by the focused adjective – if the adjectival property is inherent to the nature of the nominal property, or has been inextricably associated with the referent of the nominal by the preceding discourse.

Side-stepping the very thorny issues of the subsequent embedding of these layers underneath determiner heads,¹² and instead simply assuming, for concreteness, a Generalised Quantifier-like representation of the relationship between the Kind and the rest of the clause, we could formalise the relationships between Kinds presupposed by focus as follows:

(28a) **Contrastive focus:**

- i. Asserted: $\lambda P.P(K_0)$
- ii. Presupposed: $\forall K_n \in \text{ALT}(KIP). P(K_n) \rightarrow K_n$ is a subkind of K_0 .
- iii. The contrastive part: $\exists K_m \in \text{ALT}(KIP). K_m$ is **not** a subkind of K_0 .

(28b) **Non-restrictive focus:**

- i. Asserted: $\lambda P.P(K_0)$
- ii. Presupposed: $\forall K_n \in \text{ALT}(KIP). P(K_n) \rightarrow K_n$ is a subkind of K_0 .
- iii. The non-restrictive part: $\forall K_m \in \text{ALT}(KIP). K_m$ is a subkind of K_0 .

In other words, the mechanism underlying the introduction of a Kind into the discourse, and the presuppositional content, of these two types of adjectival focus are identical. What differs is the conditions on the alternative set. And this set, as we know from Rooth (1992), is contextually, rather than structurally, determined.

My further claim is that a significant factor in deciding membership of the alternative set is the choice of determiner. This is hardly a new claim, at least outside of generative circles: it is clearly signalled in the quantitative, corpus-based approach of Forsgren (1978), for example. Forsgren finds that the *épithète de nature* makes up a far greater proportion of the exceptional pre-nominal instances of normally post-nominal adjectives in definite noun phrases than in indefinite noun phrases. Recent accounts of definiteness, such as van der Sandt (1992), relate this property to anaphoricity, characterising a definite noun phrase, roughly, as one presupposing that there is a salient antecedent in the discourse context with which the definite noun phrase can be resolved. This gives us a way to understand the correlation between non-restrictive adjective interpretation and definiteness. If a definite noun phrase is essentially anaphoric, then it comes as no surprise that a focused adjective within the definite noun phrase will generally not be interpreted contrastively: the referent of the noun phrase will have generally been established earlier in the discourse, and so there will often be no salient alternatives to contrast with. As Forsgren (1978: 126) remarks, ‘*il est plus naturel d'accoler une qualité posée comme inhérente à un substantif posée comme connu*’.¹³ Indefinites, lacking these presuppositions, have the contrastive interpretation of focus much more readily available.

This relationship between definiteness and the interpretation of focus only holds, however, as a one-way implication. It is quite possible, in the appropriate context, for a

¹² These issues are thorny, not least from the point of view of compositionality. The focus mechanisms sketched in this article would require the formalisation of a very delicate relationship between Kind semantics, determiner semantics, and semantics of the clause or whatever the noun phrase is embedded within, to be more complete.

¹³ ‘it is more natural to place a quality taken to be inherent next to a substantive taken to be already known’

focused adjective in an indefinite noun phrase to be interpreted non-restrictively, so examples such as the following do not have to be interpreted so that *dangerous* contrasts with *timid*, *helpful*, etc:

(29) *Edoardo est à Fresnes, soupçonné par ses compatriotes comme [un dangereux communiste].*

Edoardo is in Fresnes, suspected by his compatriots of being [a dangerous communist].

(Forsgren 1978: 91)

Instead, the natural interpretation of (29) is that Edoardo is suspected of being dangerous by virtue of his communism, in other words that communists are perceived as inherently dangerous, and so *dangereux* in the above example is a non-restrictive adjective. The presence of such examples is unproblematic for the sketch of non-restrictive interpretations given above. Indefinites are characterised by the *absence of a presupposition* of discourse familiarity and uniqueness, but not by a *presupposition of absence* of discourse familiarity.¹⁴ The case here is one where real-world knowledge is such that the writer (presumably in the West in the 1970s) can presuppose familiarity with the normal stereotypes of communists as dangerous, even if communists have never been mentioned in the discourse before. The comparative rarity of this construction (it would seem from Forsgren's figures that *épithètes de nature* represent roughly a quarter of all exceptionally preposed adjectives in indefinite noun phrases, where preposed adjectives represent 34% of all adjectives in indefinite noun phrases) would presumably be related to the fact that such a function is often redundant, unless the speaker is highlighting the particular property denoted by the non-restrictive adjective. However, it is generally available. In some types of definite noun phrase, preposed adjectives are rarer, as would be expected if certain options would appear to lead to a clash of presuppositions, as suggested above. However, non-restrictive interpretations make up a higher proportion of the exceptionally preposed adjectives in definite noun phrases.

5. Related Constructions

5.1. Anaphoric Use of the Pre-posed Adjective

The above proposals amount to a claim that a non-restrictive interpretation of exceptionally preposed adjectives is generally available in both indefinite and definite noun phrases. However, two factors make this interpretation of a focused adjective more likely in definite noun phrases. Firstly, a clash between the presuppositions of definiteness and of

¹⁴ A similar point can be made concerning the relationship between the presuppositions which a phrase satisfies, and association with focus. Just because a phrase satisfies the relevant presuppositions, and so *could* conceivably be focused, does not mean that it necessarily *has to* be focused. Cases such as these then become formally very close to Jakobsonian markedness: the distinction is not between positive and negative values for a given binary feature, but between presence and absence of a given feature, with absence of the feature corresponding to a lack of specification of a value for that feature, or vagueness between positive and negative values.

contrastive focus make a contrastive reading of adjectival focus unlikely in a definite noun phrase. Secondly, the absence of a presupposition of identifiability of the referent of an indefinite noun phrase means that only an attributive adjective denoting a property presupposed to be universally (or quasi-universally) part of the intension of the noun which it modifies can readily receive a non-restrictive focus interpretation in an indefinite noun phrase, while an adjective within a definite noun phrase can be interpreted non-restrictively if the property denoted by the adjective has been associated with the noun, as used in this instance, earlier in the discourse.

There is a striking construction, noted and discussed by Waugh (1977: 132-5), which represents a special case of this phenomenon of a non-restrictive interpretation of an adjective modifying a noun being available because the property denoted by that adjective has been associated with the referent of that noun, earlier in the discourse. Waugh calls this the ‘anaphoric use of the pre-posed adjective’ (Waugh 1977: 132), illustrated by the following examples:

(30a) *J'ai vu [un éléphant énorme] ... [Cet énorme éléphant] buvait de l'eau.*

I saw [an enormous elephant] ... [This enormous elephant] was drinking water.

(30b) *[Ses phrases] sont [un peu lourdes] et d'un style encore Louis XIII: [ses lourdes phrases], il les manie avec un entrain magnifique.*

[His sentences] are [a bit pompous] and in a style which still resembles Louis XIII: but he handles [his pompous sentences] with great flair.

(Waugh 1977)

The distinguishing characteristic of these examples is that each contains two tokens each of the noun and adjective in question, but the structural relationship between the noun and adjective in these two occurrences is different. In the first example, we see a switch from N–Adj order to Adj–N order, and in the second, we see a switch from a predicative relationship between the noun and adjective, in subject and complement position, respectively, of a copular phrase, to an attributive construction.

In either of these cases, the second occurrence of the adjective is clearly non-restrictive. We already know that in (30a) the elephant is enormous, and that in (30b) his sentences are pompous, because we have been explicitly told so. The elephant and the sentences are already salient objects in the discourse and the properties denoted by the adjective have already been explicitly attributed to them. The initially puzzling switch between N–Adj order or a copular construction on the first occurrence, and Adj–N order on the second occurrence, then becomes unremarkably assimilated to the larger body of non-restrictive interpretations of a focused adjective. This also supports the correlation between the availability of this interpretation and definiteness, as, in these examples, the second occurrence of the noun is necessarily within a definite noun phrase. Just as *ma verte prairie* focuses an adjective denoting a property, greenness, which is presupposed to be held by *ma prairie*, so *cet énorme éléphant* focuses a property, enormity, presupposed to be held by *cet éléphant*. The only difference is the way in which this presupposition is satisfied. In the former case, it is based on real-world knowledge of meadows: they are generally green,

and so the presupposition is satisfied. In the latter case, it comes from the structure of the preceding discourse: an elephant has been introduced into the discourse, and we know, from the restrictive modification of the first instance of *éléphant* by *énorme*, that this elephant is enormous. We know, then, that this particular instance of an elephant has the property of being enormous, and the presupposition is, once again, satisfied¹⁵. Seen in this light, the anaphoric pre-posed adjective is simply a special case of the more general phenomenon of non-restrictive adjectival focus.

5.2. The Null Nominal Construction

There is one definite nominal construction in French in which adjectives are used to distinguish between potential referents. This is the *null nominal* construction, with definite determiner and adjective, but no overt noun:

- (31a) — *Voulez-vous du vin?*
 — *Oui, [du rouge], s'il vous plaît.*
 Would you like some wine?
 Yes, some of [the red], please.

- (31b) *Dans un magasin, il y avait des chemises de plusieurs tailles. J'ai acheté [la plus grande].*
 In a shop, there were shirts of several sizes. I bought [the biggest].

Of course, the overt form of this construction is significantly different from the cases of pre-nominal focused adjectives discussed above. Considering such examples as (31) as instances of adjectival focus is, then, dubious. However, this example provides evidence of the compatibility between the identifiability presupposition of definiteness and the contrastive function of selecting one element from a range of distinct alternatives. What we see here is that the discourse preceding the null nominal construction acts to set up a range of alternative referents, with different values with respect to one property (size, colour, etc.). The null nominal picks out one element from this range, either a scalar endpoint, as

¹⁵ Of course, elephants are generally enormous, and so non-restrictive modification of the initial occurrence of *éléphant*, along the lines of *un dangereux communiste*, is also conceivable:

- i. *Il y avait une fois [un énorme éléphant] qui buvait de l'eau.*
 'Once upon a time, there was [an enormous elephant] who was drinking water.'

This touches on a slightly different point, that, because non-restrictive interpretation is dependent upon presupposition rather than entailment, it is always possible to combine the same adjective and noun restrictively instead, even though the restriction will be minimal (or, in practice, non-existent): not all meadows are green, and not all elephants are enormous (baby elephants are a manageable size). Equally, one could argue that Belgium is not a flat country because the Ardennes are a little bit wobbly, and so on. This shows that it is the *presentation* by the speaker of the adjectival property as inherent to the nominal semantics, and its *accommodation* by the audience as such, that is crucial to the construction, rather than every single object in the extension of the noun necessarily having the adjectival property. Interpretation of a focused adjective as non-restrictive indicates an unwillingness to consider even the possibility of the member of the extension of the noun which does not possess the property denoted by the adjective. This is also the reason why degraded cases of preposed adjectives are not generally fully ungrammatical, so much as pragmatically odd. These are not the core issues of this paper, which instead hopes to focus on the mechanisms which make this interpretation available in the first place.

identified by a superlative *le plus x* construction, or a specific colour, for example. This, then, is an exceptional case where the presuppositions of the definite article are compatible with a contrastive interpretation: there is an identifiable referent which is salient in the preceding discourse, but this referent contrasts with the other potential referents in the range set up by the preceding discourse. Here, then, exceptionally, a contrastive interpretation is available in a definite noun phrase.¹⁶

5.3. Non-restrictive Adjectives in English

Consider the following noun phrases:

(32a) the astonishing Egyptian pyramids

(32b) tasty organic carrots

Each of these examples contains an adjective (underlined) which may readily be interpreted non-restrictively: we do not generally assume, for example, that *the astonishing Egyptian pyramids* contrast with some unimpressive Egyptian pyramids, and, in the bare plural *tasty organic carrots*, as with the earlier examples of non-restrictive adjectives in indefinites, we interpret *tasty* as a property universally possessed by *organic carrots*. Furthermore, the opposite adjective orders are quite marginal, at best interpreted as contrastive focus–presupposition structures:

(33a) #the EGYPTIAN astonishing pyramids [not the Mayan ones]

(33b) #ORGANIC tasty carrots [as opposed to tasty carrots grown with pesticides etc.]

This shows that the site for non-restrictive interpretation of adjectives in English is higher than that where a restrictive interpretation is available. This is as would be expected if this interpretation is a reflex of movement to [Spec, Foc], a possibility which we would hope to be generally available cross-linguistically, regardless of the normal position of attributive adjectives in a language. The English data therefore appears to support the theory advanced earlier to account for the French case. As cases of post-nominal adjectives in English are fairly rare, and limited to a couple of exceptional constructions, we do not find a variation in word order similar to that in French to accompany the variation in interpretation in English cases with one adjective and a noun.¹⁷ This suggests that English adjectives

¹⁶ However, I have no proposal for why the nominal needs to be null for this to be the case. It strikes me that this is probably related to pronominalisation of the KIP in some way — compare the following related construction in French, and the standard equivalent in English, both of which involve pro-KIPs:

- i. *J'en ai pris le moins cher.* 'I took the cheapest.'
- ii. I want a red **one**.

However, the correct way to formalise this in a non-stipulative way currently escapes me.

¹⁷ This raises the issue of the divergent overt identification or realisation of a focus head in the two languages. Although English does not exhibit such clear word-order variation as French, it more readily admits heavy stress on a focused element. I have little to say about the overt reflexes of a focus head. However, it should be clear that the validity of more or less everything in this paper is dependent upon

should, all else being equal, be generally ambiguous between a restrictive and a non-restrictive reading. Indeed, this seems to be the case.

Consider the following: some spiders are fairly universally considered to be terrifying (for example, the black widow). Some people with arachnophobia consider *all* spiders to be terrifying. For these people, the capacity to induce terror is a property that all spiders, even the tiny money spiders, inherently possess. However, there are other people for whom black widows are terrifying, but money spiders aren't. Now consider the following utterance:

(34) I couldn't sleep last night. There was a terrifying spider roaming around my room.

For the arachnophobes, the adjective would be interpreted non-restrictively: the spider, by virtue of being a spider, would have been terrifying. For the non-arachnophobes, the adjective is interpreted restrictively: a money spider wouldn't have interrupted their slumber, but a black widow would. My above proposals lead me to claim that this should be a generally available structural ambiguity in English, with real-world knowledge and presupposition accommodation often favouring one or the other interpretation in a given noun phrase.

6. Conclusion

The proposals contained in this paper have aimed at a general reduction in size of the typology of attributive adjective interpretations and related constructions. This was pursued in several ways. Firstly, an expanded conception of focus was proposed, which was able, in a natural and non-stipulative way, to account for non-restrictive as well as contrastive adjective interpretations. Secondly, the article gave an account of the distribution of non-restrictive adjective interpretations which was based not on strictly grammatical conditions, but rather on discourse well-formedness conditions and clashes between the presuppositions introduced by contrastive focus and definiteness. Finally, it was shown that certain classes of apparent contradictions to this model could in fact be naturally accommodated within the model, by seeing many constraints as related to the state of the current universe of discourse rather than to strictly syntactic or formal semantic constraints, and that the model could naturally be extended to cover the possibility of non-restrictive interpretation of attributive adjectives in English. These proposals, taken in conjunction with those in Truswell (2004), aim towards a unification of the range of possible English

some characterisation of the overt reflexes of adjectival focus in English and French being achievable, as the notion would otherwise become quite vacuous.

A further problematic issue is that English seems to admit much more readily than French the possibility of Adj_{+Foc} Adj_{-Foc} N orders, which should, on the above proposals, be equally possible in both languages in those few French cases of normally pre-nominal adjectives. Contrast (22) with the following, degraded, translation:

- i. ^{??}*Tous mes amis conduisent de grandes voitures, mais je suis le seul qui conduise [une noire grande voiture].*
'All my friends drive big cars, but only I drive a black big car.'

Again, the desirability of these proposals is reduced to the extent that such differences are unaccounted for.

and French attributive adjective constructions, with the overall hope being to show that relatively few specific syntactic or semantic stipulations are required to account for attributive adjective use in these languages, and hopefully more generally, and that apparently anomalous cases can instead be explained by a careful consideration of the discourse function of different types of noun phrases, along with more universal syntactic and semantic mechanisms.

References

- Borer, Hagit. (2005). *Structuring Sense. Volume 1: in name only*. Oxford: Oxford University Press.
- Carlson, Greg. (1977). *Reference to Kinds in English*. PhD thesis, University of Massachusetts. Distributed by Indiana University Linguistics Club.
- Chomsky, Noam. (1976). 'Conditions on rules of grammar', *Linguistic Analysis* 2: 303-50.
- Ernst, Thomas. (2002). *The Syntax of Adjuncts*. Cambridge: Cambridge University Press.
- Forsgren, Mats. (1978). *La Place de l'adjectif épithète*. Uppsala: Almqvist and Wiksall.
- Goes, Jan. (1999). *L'Adjectif: entre nom et verbe*. Brussels: De Boeck & Larcier.
- Gutiérrez-Rexach, Javier & Enrique Mallen. (2001). 'NP movement and adjective position in the DP phases' in Julia Herschensohn, Enrique Mallen & Karen Zagana (edd.), *Features and Interfaces in Romance: essays in honour of Heles Contreras*. Amsterdam & Philadelphia: John Benjamins, 107-32.
- Kayne, Richard. (1994). *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Krifka, Manfred. (1991). 'A compositional semantics for multiple focus constructions', *Linguistische Berichte Sonderheft 4*: 17-54.
- . (1992). 'A framework for focus-sensitive quantification' in Chris Barker & David Dowty (edd.), *Proceedings of the Second Conference on Semantics and Linguistic Theory*. Columbus: Ohio State University, 213-36.
- Lyons, Christopher. (1999). *Definiteness*. Cambridge: Cambridge University Press.
- Pulman, Steven. (1997). 'Higher order unification and the interpretation of focus', *Linguistics and Philosophy* 20: 73-115.
- Rizzi, Luigi. (1997). 'The fine structure of the left periphery' in Liliane Haegeman (ed.), *Elements of Grammar*. Dordrecht: Kluwer, 281-337.
- . (2004). 'On the form of chains: criterial positions and ECP effects'. Ms. University of Siena.
- Roberts, Craige. (1998). 'Information structure in discourse: towards an integrated formal theory of pragmatics'. Ms., Ohio State University.
- Rooth, Mats. (1992). 'A theory of focus interpretation', *Natural Language Semantics* 1: 75-116.

Truswell, Robert. (2004). 'Attributive Adjectives and the Nominals they Modify'. MPhil thesis, University of Oxford.

van der Sandt, Rob. (1992). 'Presupposition projection as anaphora resolution', *Journal of Semantics* 9: 333-77.

Waugh, Linda. (1977). *A Semantic Analysis of Word Order*. Leiden: EJ Brill.

Zamparelli, Roberto. (2000). *Layers in the Determiner Phrase*. New York: Garland Publishing.