

# GENERALIZING OVER QUANTITATIVE AND QUALITATIVE CONSTRUCTIONS

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## 1. *Introduction*

Quantitative (1a) and qualitative (1b) constructions share a syntactic structure of the type (Det) N1 de NP2:

- |     |                                  |           |                   |                     |
|-----|----------------------------------|-----------|-------------------|---------------------|
| (1) | <i>(Det) N1</i>                  | <i>de</i> | <i>NP2</i>        |                     |
| a.  | Beaucoup<br>a-lot                | de<br>of  | livres<br>books   | <i>Quantitative</i> |
| b.  | Ton phénomène<br>your phenomenon | de<br>of  | fille<br>daughter | <i>Qualitative</i>  |

The syntax of these constructions has received a lot of attention in recent years (den Dikken 1995, 1998, Español-Echevarría 1996, Hulk & Tellier 1999ab, Doetjes 1997). However, very little work has concentrated on the relation between both constructions. Milner (1978) had already observed that quantitative and qualitative constructions share the same syntactic structure (see also Ruwet 1982). However, the X' framework of the late seventies did not allow a fully explicit implementation of this claim: the identical syntactic structure proposed could not account for various properties of quantitative and qualitative constructions. Interestingly, most research since the late seventies has focused either on quantitative or on qualitative constructions, without taking their common properties into consideration. We will argue that the parallelism between qualitative and quantitative constructions is even stronger than previously suspected.

## 2. *The generalization*

### 2.1 *Two agreement patterns: 'pure degree' vs comparison*

In both quantitative and qualitative constructions, agreement can be triggered by the element preceding *de* or by the element following *de*.

- (2) *Quantitative:*
- |    |  |
|----|--|
| a. | Beaucoup de livres sont/ *est tombé(s)<br>a lot of books are/ is fallen        |
| b. | Une montagne de livres *sont/ est tombée<br>a mountain of books are/ is fallen |

- (3) *Qualitative*: (cf. Hulk & Tellier 1999)
- a. Ton phénomène de fille est distrait\*(e)  
your phenomenon<sub>masc</sub> of daughter<sub>fem</sub> is absent-minded<sub>fem/\*masc</sub>
  - b. Ce bijou d'église romane a été reconstruit\*(e)  
that jewel<sub>masc</sub> of roman church<sub>fem</sub> was rebuilt<sub>masc/\*fem</sub>

For quantitative constructions, this difference in agreement correlates with the interpretive nature of the quantitative element. In (2a), *beaucoup* 'a lot' has completely lost its original lexical meaning and indicates quantity of high degree. In (2b), by contrast, *montagne* 'a mountain' still retains part of its lexical meaning in that its relation with the quantified element can be paraphrased in terms of comparison. The interpretive difference between (2a) and (2b) can be brought out by a contrast in terms of paraphrasability:

- (4) *Comparative paraphrases of quantity*:
- a. The quantity of books is such that it resembles a mountain.
  - b. \* The quantity of books is such that it resembles a lot

This difference between *beaucoup* 'a lot' and *une montagne* 'a mountain' correlates to some extent with the contexts in which they can be used: The use of *montagne* 'mountain' as a quantitative expression is much more selective with respect to its context than *beaucoup* 'a lot' is.

- (5)
- a. \* Il y a une montagne d'eau dans la rue  
There is a mountain of water in the street
  - b. Une véritable montagne d'eau a déferlé sur les pêcheurs  
A true mountain of water bore down on the fishermen

These examples show that the comparative interpretation of *montagne* as a great quantity has to be supported by the entire context, precisely because it still retains aspects of its original meaning. By contrast, the quantifier *beaucoup* has completely lost its original meaning which is 'a good strike'. The contextual support required for *montagne* 'mountain' is not necessary for *beaucoup* 'much', as the latter is just an expression of pure degree.

Let us now turn our attention to qualitative constructions. Hulk & Tellier (1997) observe that there is a difference in agreement between (3a) and (3b). Closer scrutiny of the data reveals that we are in fact dealing with a contrast that is strikingly similar to the one displayed in (2ab). In (3a), *ton phénomène* has completely lost its original lexical meaning: it only contributes a strongly positive or negative evaluation of *fille* 'daughter', and as such expresses high/low degree of quality. In (3b), *bijou* still retains part of its lexical meaning. Once again, the difference between what we term the 'pure degree' reading of *phénomène* 'phenomenon' in (3a) and the 'comparative' reading of *bijou* 'jewel' in (3b) can be captured by a difference in paraphrasability:

- (6) *Comparative paraphrases of quality*:
- a. The quality of the church is such that it resembles a jewel.
  - b. \* The quality of your daughter is such that  
she resembles a phenomenon

Interestingly, both in ‘comparatively paraphrasable’ (2b) and (3b), the quantifying or qualifying noun which retains some of its lexical meaning determines agreement. In (2a) and (3a), on the other hand, the non-paraphrasable ‘pure degree’ expressions of quantity or quality correlate with agreement of the NP following *de*.

The descriptive generalization covering agreement in both quantitative and qualitative constructions can be formulated as follows:

- (7) *The Qua(nt/l)itative Agreement Principle (QAP)*
- a. In qua(nt/l)itative constructions, the qua(nt/l)ified noun determines agreement iff the qua(nt/l)ifier has a ‘pure degree’ interpretation of qua(nt/l)ity.
  - b. The qua(nt/l)ifier determines agreement iff the relation between the qua(nt/l)ified noun and the qua(nt/l)ifier is paraphrasable in terms of a comparison in which the qua(nt/l)ifier keeps its lexical interpretation.

In the remainder of this paper, it will be argued that the QAP can be derived from the syntactic structure of the DP.

## 2.2 Some ambiguous cases

It has been observed by Hulk & Tellier (1999) that agreement judgements are not always very clear. Some sentences clearly have one possible agreement pattern, while others allow for both patterns, or only show a preference for one or the other pattern. This is illustrated by the data in (9-10), which are partly taken from Hulk & Tellier (1999):

### *Ambiguities of qualification:*

- (8) a. Ce bijou d’*église romane* a été reconstruit(\*e)  
 that jewel<sub>masc</sub> of roman church<sub>fem</sub> was rebuilt<sub>masc/\*fem</sub>
- b. Ce bijou de *Marie* est absolument exquis\*(e)  
 that jewel<sub>masc</sub> of Marie<sub>fem</sub> is absolutely marvelous<sub>fem/\*masc</sub>

Interestingly, agreement varies with the degree of comparison that is possible between qualifier and the qualified NP. While the church in (8a) can be said to be like a jewel, it is hard to maintain in the same way that *Marie* is like a jewel without losing the lexical interpretation of *jewel*. In (8b), the use of *bijou* ‘jewel’ thus only involves a highly positive evaluation of *Marie*. In our analysis, then, agreement with *Marie* in (8b) is not due to animacy, as for Hulk & Tellier (1999), but simply to the fact that a qualitative comparison between animate and inanimate entities is much harder to interpret as a true comparison, favoring a ‘pure degree’ reading. These examples show that in a context favoring the comparison reading, the ‘pure degree’ reading is excluded, while a ‘pure degree’ reading can be obtained in a context where the comparison reading is excluded.

Ambiguous cases also exist in the quantificational domain. Consider for instance (9):

### *Ambiguities of quantification:*

- (9) a. Une foule d’étudiants est/(\*)sont dans le couloir<sup>1</sup>  
 A crowd of students is/\*are in the hallway

<sup>1</sup> It appears that in Canadian French (Yves Roberge, p.c.) plural agreement is possible in the example (11a). This suggests that in Canadian French, the ‘pure degree’ reading of *foule* ‘crowd’ is more readily available. This might be due to a lexical process of grammaticalization of the same kind that affected the grammaticalization of *beaucoup* as a ‘pure degree’ expression.

- b. Une foule d'étudiants se sont/\*s'est succédé  
 A crowd of students have<sub>pl/\*sg</sub> come in one after the other
- c. Une foule de problèmes se sont/\*s'est produit\*(s)  
 A crowd of problems have<sub>pl/\*sg</sub> occurred  
 'A host of problems have occurred'

In (9a), the context forces a reading in which the students form a crowd. In this context agreement with the quantifier is obligatory. In the other two examples, the lexical interpretation of *foule* 'crowd' is excluded by the context. In (9b), the distributive nature of the predicate forces a distributive reading on the subject which is incompatible with the 'mass' interpretation of crowd, thus forcing a reading of crowd as a 'pure degree' quantifier. In (9c), the noun *problème* 'problem' is incompatible with the notion of crowd, as the lexical meaning of crowd involves animacy. As a result, crowd can only receive the 'pure degree' reading in this context.

### 3. Deriving 'comparative' and 'pure degree' qua(nt/l)ification

#### 3.1. The structure of det N1 de NP2

We will assume that the (derived) syntactic structure of *Det N1 de NP2* is as follows, with the nature of XP/YP to be determined later:

- (10) [<sub>XP</sub> [<sub>DP</sub> Det N1 ] de [<sub>YP</sub> NP2 ]]
- |     |           |    |        |
|-----|-----------|----|--------|
| une | montagne  | de | livres |
| ton | phénomène | de | fille  |

This means that both the DPs preceding and following *de* are constituents (See also the appendix). For qualitative constructions, this structure goes against that argued for by den Dikken (1995, 1998). Following Kayne (1994), den Dikken (1995, 1998) proposes a structure for qualitative constructions in which Det is generated in a DP outside of a CP headed by *de* as in (11). In this structure, qualitative constructions are uniformly derived by predicate inversion, with movement of NP1 to SpecFP, and incorporation of the head of XP into *de/of*.

- den Dikken (1995, 1998)*
- (11) [<sub>DP</sub> D [<sub>FP</sub> NP1 *de/of+X* [<sub>XP</sub> NP2 *t<sub>X</sub> t<sub>NP1</sub>* ]]]
- |      |           |        |               |
|------|-----------|--------|---------------|
| ce   | bijou     | d'     | église romane |
| ton  | phénomène | de     | fille         |
| that | idiot     | of + a | doctor        |

However, Milner (1978) offers a good argument in favor of the idea that the string preceding *de* forms a constituent. Milner (1978) presents contrasts of the following type:

- 'Pure degree' qualification*
- (12) a. Elle avait acheté quelques merveilles de robes  
 et de souliers rouges qui lui allaient à ravir  
 'She had bought some marvels of dresses  
 and (of) red shoes which fit her like a glove'
- b. \* Elle avait acheté quelques merveilles de robes  
 et splendeurs de souliers rouges qui lui allaient à ravir

‘She had bought some marvels of dresses  
and splendors of red shoes which fit her like a glove’

*Comparative qualification*

- (13) a. Nous avons visité plusieurs bijoux d’abbayes  
médiévales et d’églises romanes  
We have visited several jewels of medieval abbeys  
and of roman churches  
b. \*Nous avons visité plusieurs bijoux d’abbayes médiévales  
et chefs-d’oeuvre d’églises romanes  
We have visited several jewels of medieval abbeys and  
masterpieces of roman churches

Milner (1978) observes that *Det NI* can be followed by a coordinated structure of *de NP2s*, but that *Det* alone cannot be followed by a coordinated structure of qualified *NI de NP2s*, as attested by (12b-13b). We observe that the same is true for quantitative constructions:

*‘Pure degree’ quantification*

- (14) a. Une foule de fautes et d’erreurs stylistiques  
A large amount of mistakes and stylistic errors  
b. \*Une foule de fautes et masse d’erreurs stylistiques  
A large amount of mistakes and load of stylistic errors

*Comparative quantification*

- (15) a. Des montagnes de livres et de papiers  
‘(indef) mountains of books and of papers’  
b. \*Des montagnes de livres et tas de papiers  
(indef) mountains of books and heaps of paper

If one were to assume with den Dikken (1995/1998) that the determiner of the qua(nt)ifier is in a projection of its own outside of FP, the question arises as to why this determiner cannot have coordinated FPs in its complement. The contrast observed by Milner (1978) strongly suggests that the material preceding *de* forms a constituent in the classical sense.

3.2. *‘Comparatives’ vs. ‘pure degree’: a different configuration*

We argue that quantitative and qualitative constructions share the same syntactic configurations. The ‘comparative’ constructions (viz. (2b) and (3b)) are analyzed along the lines of the ‘predicate inversion’ analyses proposed by Kayne (1994) among others for possessive and qualitative constructions:

- (16) la [<sub>CP</sub> [<sub>NP</sub> voiture]<sub>j</sub>] **de** [<sub>IP</sub> [<sub>NP</sub> Jean] I° [e]<sub>j</sub>] ... (Kayne 1994)  
the car of Jean

- (17) ce [<sub>CP</sub> [<sub>NP</sub> bijou]<sub>j</sub>] **de** [<sub>IP</sub> [<sub>NP</sub> église romane] I° [e]<sub>j</sub>] ...  
that jewel of roman church

Kayne (1994) analyses these DPs in the same way as relative clauses:

(18) the [<sub>CP</sub> [<sub>NP</sub> picture] **that** [<sub>IP</sub> Bill saw [e]]] (Kayne 1994)

Relative clauses in (18) and the DP constructions in (16-17) share the presence of a sentential structure including a C° (Kayne's D°/P°) element. C° *de* can be viewed as the head of a tenseless CP.

We assume a structure similar to that of (17) for both quantitative and qualitative constructions, with the difference that the determiner is generated as part of the qua(nt/l)ifier. Predicative inversion can be taken as a syntactic reflex of the paraphrasability of these constructions in terms of comparison. The idea here is that the semantic interpretation of these constructions can be read off directly from their syntactic structure: C° *de* contains an operator that is underspecified for quality or quantity, and the predicative properties of the small clause are responsible for the relation of comparison between the qua(nt/l)ifying and the qua(nt/l)ified noun. Predicate inversion thus creates tenseless relatives.

(19) '*comparative*' qua(nt/l)ification (cf. 4b)

- |    |                                 |                         |                                 |                                     |  |
|----|---------------------------------|-------------------------|---------------------------------|-------------------------------------|--|
| a. | [ <sub>CP</sub> [ <sub>DP</sub> | ce bijou ]              | <b>de</b>                       | [ <sub>SC</sub> [ <sub>NP</sub>     | église romane] t <sub>ce bijou</sub> ] |
|    |                                 | that jewel              | of                              |                                     | roman church                           |
| b. | [ <sub>CP</sub> [ <sub>DP</sub> | une montagne] <b>de</b> | [ <sub>SC</sub> [ <sub>NP</sub> | livres] t <sub>une montagne</sub> ] |  |
|    |                                 | a mountain              | of                              |                                     | books                                  |

In all of these cases, the NP which has been moved into the Specifier of C° *de/ that* determines the agreement properties of the DP as a whole. It can be assumed that C° *de* carries agreement features. Its Spec-head relation with the qualifier ensures that the entire CP carries the features of the qualifier. As a result, the qua(nt/l)ifying noun in comparative qua(nt/l)ification structures determines agreement. We thus derive the generalization in (4b) from shared properties of the 'comparative' construction (3b-5b) and possessive/ relative constructions.

By contrast, we claim that the 'pure degree' constructions (viz. (2a) and (3a)) do not involve 'predicate inversion'. This lack of inversion will be shown to directly correlate with lack of agreement with the qua(nt/l)ifying noun: all and only 'inverted' qua(nt/l)ifiers trigger agreement. We assume that 'pure degree' constructions have a syntactic structure containing an (adverbial) functional projection expressing Evaluation in the sense of Cinque (1999). The qua(nt/l)ifying noun is base-generated in SpecEvalP. It assumes the interpretation of 'pure degree' associated with Eval°, losing the rest of its lexical meaning. Importantly, the EvalP modifies a DP in this case, not a CP as in comparative constructions.

(20) '*pure degree*' qua(nt/l)ification (cf. 4a)

- |    |                    |                 |                                      |                 |           |
|----|--------------------|-----------------|--------------------------------------|-----------------|-----------|
| a. | [ <sub>EvalP</sub> | ce phénomène    | Eval° [ <sub>DP</sub> ____ <b>de</b> | [ <sub>NP</sub> | filles ]] |
|    |                    | that phenomenon | of                                   |                 | girl      |
| b. | [ <sub>EvalP</sub> | beaucoup        | Eval° [ <sub>DP</sub> ____ <b>de</b> | [ <sub>NP</sub> | livres ]] |
|    |                    | a lot           | of                                   |                 | books     |

This structure for 'pure degree' qua(nt/l)ification allows us to derive their syntactic and semantic properties. Syntactically, the agreement properties of the DP as a whole are determined by the qua(nt/l)ified noun, since the qua(nt/l)ifier occupies an adverbial position. This means that the head of the adverbial projection will agree with the qua(nt/l)ified noun in its complement. As a result, the entire structure will bear the features of the qua(nt/l)ified noun, which thus determines agreement. This derives the generalization in (4a). From a

semantic point of view, the structure in (20) must be read as an evaluation in terms of high degree over the qualified noun. In the quantitative domain, ‘pure degree’ is translated as high quantity, while in the qualitative domain ‘pure degree’ is interpreted as a strongly positive or negative evaluation. The absence of a syntactic predicative relation between the qua(nt/l)ifier and the qua(nt/l)ified noun accounts for the absence of a comparative relation between them. This neatly accounts for the fact that the ‘pure degree’ constructions do not allow for a comparative paraphrase. One particularly clear case in point involves a structure such as (21), for which Hulk & Tellier (1999) observed that the qualifier cannot function as the predicate of the qualified noun. The same is true in the quantificational domain, as shown in (22).

- (21) a. Cette sapristi de bonne femme  
That<sub>FEM</sub> good grief of woman<sub>FEM</sub>  
b. \* Cette bonne femme est (une) sapristi  
That woman is (a) good grief
- (22) a. Beaucoup de livres/ sable  
a lot of books/ sand  
b. \*Les livres sont beaucoup/ \*le sable est beaucoup  
The books are many/ the sand is many

In our account, the contrasts in (21) and (22) can be taken as proof that (21a-22a) is not derived via predicate inversion from an underlying structure involving a form of predication as in (21b-22b). This analysis entails that two entirely different underlying structures are assigned to the ambiguous cases in (23a) and (24a).

- (23) a. Une foule d'étudiants est/\*sont dans le couloir (cf. (11a))  
'A crowd of students is/\*are in the hallway'  
b. Les étudiants constituent une foule  
'The students constitute a crowd'
- (24) a. Une foule de problèmes se sont/\*s'est produit\*(s) (cf. 11c)  
A crowd of problems have<sub>pl/\*sg</sub> occurred  
'A host of problems have occurred'  
b. \*Les problèmes constituent une foule  
'The problems constitute a crowd'

In (23a), *foule* ‘crowd’ is in a comparative construction and retains its lexical meaning, as attested by (23b). The underlying structure of (23a) therefore is that of a relative clause, and involves predicate inversion. In (24a), *foule* ‘crowd’ is in a construction in which its original meaning is lost, as indicated by (24b). Only expressing ‘pure degree’, *foule* ‘crowd’ is hosted by the Specifier of an adverbial EvalP which modifies a DP.

Although both structures share a Det N1 de NP2 structure on the surface, their underlying structure is nevertheless radically different: *de* is a relative clause marker in the comparative construction, but it is a D° in the ‘pure degree’ construction. The element *de* also functions in other contexts as a complementizer and a determiner, always with an in(de)finite interpretation. In this, *de* can be considered the indefinite counterpart of English *that*, which functions both as a complementizer of finite clauses and a definite determiner.

- (25) a. Jean essaie de venir C infinite  
 b. ce bijou d'église romane C/ relative clause infinite  
 c. Jean n'a pas lu de livres D indefinite  
 d. beaucoup de livres D indefinite
- (26) a. John thinks that Mary comes C finite  
 b. the book that he has read C/ relative clause finite  
 c. that book demonstrative D definite

In the comparative construction then, *de* can be viewed as the complementizer of a nonfinite relative clause. In the 'pure degree' construction, *de* is an indefinite  $D^{\circ}$  selected by EvalP. We propose that the indefinite  $D^{\circ}$  indicates that the identity and quantity of the qualified noun are not specified. The modification of the indefinite NP by EvalP, which provides qua(nt/l)ification, 'fills in' the identity or quantity of the qualified noun. The idea that *de* introduces an unidentified or unquantified NP which is licensed by adverbial modifier is hardly controversial: the same mechanism applies in the verbal domain, where quantificational adverbs license indefinite DPs (cf. Doetjes 1997). We therefore analyze the licensing of the indefinite DPs in (27) and (28) in exactly the same way.

- (27) *Adverb outside of DP*  
 Pierre n'a pas lu \*(de) livres  
 Marie a beaucoup lu \*(de) livres
- (28) *Adverb in EvalP*  
 énormément \*(de) livres / une foule \*(de) problèmes  
 ce phénomène \*(de) Jeanne

Summarizing, in the analysis advocated here, the syntactic structures for comparative constructions and 'pure degree' constructions are substantially different: comparative constructions involve a relative clause structure involving CP, while 'pure degree' constructions involve a DP structure. The properties of both comparative and 'pure degree' constructions as they have been analyzed here can be summarized as follows:

	Properties	Examples
<b>Comparative</b>	- predicate inversion - agreement with the qua(nt/l)ifier	Quantitative <i>Une montagne de livres</i>
	- share structural and agreement properties with relative clauses	Qualitative: <i>Ce bijou d'église romane</i>
<b>Evaluative/ 'pure degree'</b>	- no predicate inversion - agreement with the qua(nt/l)ified noun	Quantitative: <i>Beaucoup de livres</i>
	- qua(nt/l)ifier base generated in SpecEvalP - shares properties with adverbial projections	Qualitative: <i>Ton phénomène de fille</i>

#### 4. *Internal vs external agreement*

In the recent literature much attention has been devoted to so called mismatches between internal and external agreement in qualifier constructions (cf. Hulk & Tellier 1999ab). By internal agreement we mean agreement within the nominal domain, and by external agreement agreement outside of the complex DP with a verb or adjective. So far we have

only been concerned with external agreement. One can speak of a mismatch in cases where the internal agreement showing up on the determiner differs from external agreement.

In this section, we will show that the approach adopted here can predict where mismatches occur. As it turns out there are some interesting differences between quantifier and qualifier constructions, which we will account for by making use of independent properties of the qua(nt/l)ifiers in both constructions.

Let us then evaluate the predictions of the analysis presented here for comparative and ‘pure degree’ constructions. The external agreement of comparative constructions is triggered by the qua(nt/l)ifying noun, as predicted by the relative clause structure. As far as internal agreement is concerned, the determiner of the qua(nt/l)ifying noun agrees with this noun, since both are moved as a single constituent from the predicative position.

(29) *Qualification:*

- a. Ce bijou d’église romane a été reconstruit(\*e)  
that<sub>masc</sub> jewel<sub>masc</sub> of roman church<sub>fem</sub> was rebuilt<sub>masc/\*fem</sub>
- b. Ce chef-d’oeuvre de fresque, Michelange l’a peint(\*e)  
dans des conditions difficiles  
That masterpiece<sub>masc</sub> of fresco<sub>fem</sub>, M. it  
painted<sub>masc/\*fem</sub> under difficult circumstances

(30) *Quantification:*

- a. Une foule d’étudiants est/\*sont dans le couloir  
A crowd of students is/\*are in the hallway
- b. Une montagne de livres \*sont/ est tombée  
a mountain of books are/ is fallen

As the examples show, there is never a mismatch between internal and external agreement in the comparison construction, as predicted.

In the pure degree cases, external agreement is determined by the qua(nt/l)ified noun. With respect to internal agreement, one would expect that agreement on the determiner is triggered by the qua(nt/l)ifying noun with which it forms a constituent. As a result, there is a ‘mismatch’ between internal and external agreement. The determiner agrees with the qua(nt/l)ifier, while external agreement is triggered by NP2, the qua(nt/l)ified noun:

(31) *Qualification:*

- a. Cette saloperie de vent est ennuyeux  
That<sub>fem</sub> dirt<sub>fem</sub> of wind<sub>masc</sub> is annoying<sub>masc</sub>
- b. Ton phénomène de fille est distraite  
your<sub>masc</sub> phenomenon<sub>masc</sub> of daughter<sub>fem</sub> is absent-minded<sub>fem</sub>

(32) *Quantification:*

- a. Une foule de problèmes se sont/\*s’est produit\*(s)  
A crowd of problems have<sub>pl/\*sg</sub> occurred  
‘A host of problems have occurred’
- b. Un tas de fautes ont été corrigées  
A heap of mistakes were/\*was corrected  
‘A lot of mistakes were corrected’

It has been shown, however, that in some cases the agreement on the determiner is triggered by NP2, the qualified noun (Høeybye 1944:278, Imbs 1951, Milner 1978, and Hulk & Tellier 1999ab):

(33) *Internal agreement of the determiner with the qualified noun:*

- a. Cette grande diable de fille  
 This<sub>fem</sub> tall<sub>fem</sub> devil<sub>masc</sub> of girl<sub>fem</sub>  
 ‘This tall devil of a girl’
- b. Ces sacré nom de Prussiens ont attaqué Paris  
 Those<sub>pl</sub> holy<sub>sg</sub> name<sub>sg</sub> of Prussians<sub>pl</sub> have<sub>pl</sub> attacked Paris  
 ‘Those damned Prussians have attacked Paris’

(34) *Choice of internal agreement*

- a. Ce/cette putain de policier est intelligent(\*e)  
 that<sub>masc/fem</sub> whore<sub>fem</sub> of policeman<sub>masc</sub> is intelligent<sub>masc/\*fem</sub>  
 ‘That damned policeman’
- b. Ce/cette canaille de gamin est très malin/ \*maligne  
 that<sub>masc/fem</sub> scoundrel<sub>fem</sub> of boy<sub>masc</sub> is very smart<sub>masc/\*fem</sub>

As Hulk & Tellier (1999) observe, the determiner can be either masculine or feminine in these cases because the noun can either be used as an invective/swearword or as a normal noun. Following in essence Milner (1978), they make the assumption that invectives and swearwords are nouns without phi-features, and as such cannot determine agreement. As a result, invectives/swearwords cannot determine the gender and number features of the determiners and adjectives preceding them.

In the analysis advocated here, we will also make use of the idea that invectives/swearwords are nouns without phi-features.<sup>2</sup> Implementing this insight into our analysis, we have to recall that the gender and number features of Eval<sup>o</sup> are set by the features of the qualified noun. The qualifying noun and Eval<sup>o</sup> are in a Spec-Head relation. This Spec – Head relation does not result in agreement in cases where the qualifying noun is fully specified for gender and number: the features of Eval<sup>o</sup> are already determined by the qualified noun, and the qualifying noun determines the features in its extended projection. As Spec – Head agreement only applies when it needs to, i.e. when underspecified features are present, no Spec – Head agreement occurs in this case. This situation can be represented as follows:

- (35) [<sub>EvalP</sub> [ Cette canaille ] Eval<sup>o</sup> [<sub>DP</sub> \_\_\_ **de** [<sub>NP</sub> gamin ]]]]  
 [<sub>D</sub> FEM, SG] [<sub>N</sub> FEM, SG] [<sub>Ev</sub> MASC, SG] [<sub>N</sub> MASC, SG]  
 that scoundrel of boy

<sup>2</sup> This idea allows us to understand Milner’s (1978) observation that constructions as in (i), with non-nominal exclamatives, are ungrammatical.

i. \*ce zut de livre ii. \*cette parbleu de voiture  
 that chucks of book that by Jove of car

Qualificational constructions require nominal qualifiers. Although *sapristi* ‘damn’ looks like an exception in this regard, it is worthwhile to point out that it derives diachronically from the noun *sacristie* ‘sacristy’. Arguably then, *sapristi* still retains a specification for N, but no phi-features.

However, if a featureless invective NP is inserted in the qualifying DP, the D heading this DP remains underspecified, since its gender cannot be determined by the featureless invective. However, the underspecified determiner is contained in a DP that is in a Spec - Head relation with  $Eval^\circ$ , which carries the gender and number features of the qualified noun. In this case, then, due to Spec – Head agreement of the featureless DP with  $Eval^\circ$ , the gender and number features of the determiner of the featureless qualifier will be determined by  $Eval^\circ$ , and thus indirectly by the qualified noun. This situation can be represented as follows:

(36)  $[_{EvalP} [ \text{Ce} \quad \text{canaille} ] \text{Eval}^\circ \quad [_{DP} \text{---} \text{de} [_{NP} \text{gamin}]]]$   
 $[_D \text{ MASC, SG}] \quad [_N \quad ] \quad [_{Ev} \text{ MASC, SG}] \quad \quad \quad [_N \text{ MASC, SG}]$

(37)  $[_{EvalP} [\text{Cette} \quad \text{grande} \quad \text{diable}] \text{Eval}^\circ \quad [_{DP} \text{---} \text{de} [_{NP} \text{fille} ]]]]$   
 $[_D \text{ FEM, SG}] [_A \text{ FEM, SG}] \quad [_N \quad ] \quad [_{Ev} \text{ FEM, SG}] \quad \quad \quad [_N \text{ FEM, SG}]$   
 That tall devil of girl

Notice that under this account, there are no real feature conflicts at all, as there are in the approach of Hulk & Tellier (1999). These authors make use of functional heads to transmit phi-features within the constructions. They introduce special mechanisms to cope with feature conflicts: features cannot be copied onto a functional head if they conflict. In the analysis presented here, no such mechanisms apply. The only principle needed is the idea that Spec – Head agreement only applies when needed, i.e. when underspecified features are present.

Cases such as in (35-36), with a qualifier which can be interpreted either as an invective or as normal noun with ‘pure degree’ interpretation, can have both agreement patterns: if the noun is interpreted as an invective, the determiner agrees indirectly with the qualified noun, otherwise it agrees with the qualifier, as in all other cases.

Another instance of agreement between the qualified noun and the qualifier in SpecEvalP involves number agreement as in (38-39):

(38)  $[_{EvalP} [\text{Ces} \quad \text{sacré} \quad \text{nom}] \text{Eval}^\circ \quad [_{DP} \text{---} \text{de} [_{NP} \text{Prussiens}]]]$   
 $[_D \text{ PL}] \quad [_A \quad ] \quad [_N \quad ] \quad [_{Ev} \text{ MASC, PL}] \quad \quad \quad [_N \text{ MASC, PL}]$   
 Those holy name of Prussians

(39) a. Ces animaux/\*cet animal de Bacchantes sont belles  
 Those animals<sub>masc</sub>/that animal of Bacchantes<sub>fem</sub> are beautiful<sub>fem</sub>  
 b.  $[_{EvalP} \circ [ \text{Ces} \quad \text{animaux} ] \text{Eval}^\circ \quad [_{DP} \text{---} \text{de} [_{NP} \text{Bacchantes}]]]$   
 $[_D \text{ MASC, PL}] \quad [_N \text{ MASC, PL}] \quad [_{Ev} \text{ FEM, PL}] \quad \quad \quad [_N \text{ FEM, PL}]$

We propose that the qualifying noun is inserted with underspecified number features. The underspecified number features of the qualifier are fixed by Spec - Head agreement with the features of  $Eval$ . Only underspecified features are filled in. If a noun does not have any feature specification at all, as is the case of invectives/swearwords, there will be only number agreement on the (underspecified) determiner, but not on the (featureless) invective, as shown by (38), where *sacré nom* ‘holy name’ is singular, but the determiner *ces* ‘these’ is plural.

Interestingly, in the ‘pure degree’ quantificational cases we do not find gender or number agreement of the determiner and/or N1 with the quantified noun:

- (40) a. un\*(e) foule/des foules de problèmes<sub>masc.pl</sub>  
 a<sub>fem/\*masc</sub> lot/(indef<sub>pl</sub>) lots of problems  
 b. un\*(e) tas/des tas d'inspiration  
 a<sub>masc/\*fem</sub> lot/(indef<sub>pl</sub>) lots of inspiration<sub>fem.sg</sub>

The contrast between (39a) on the one hand and (40a) on the other shows that a plural qualified noun forces the use of a plural qualifier, while a plural quantified noun does not. At first sight, this difference is not predicted by the configurations assigned to these constructions in our analysis. However, the difference between qualificational and quantificational constructions in this regard can be independently motivated. Part of the explanation is easy. Quantificational nouns always have features, and therefore always determine the gender of the determiner accompanying them. There are no counterparts of invectives/swearwords in the quantificational domain. The absence of obligatory number agreement is more difficult to explain. Indeed, since Eval° inherits the features of the quantified noun, we expect that Spec - Head agreement in EvalP will provide the quantifier with number features, contrary to fact.

Within the logic of our analysis, this suggests that the quantifier bears fixed number features when it is inserted in SpecEvalP. We suggest that there is a relation between the fixation of Number in the quantificational domain and the relation between number and quantification in general. While number features on a quantifier inserted in SpecEvalP are fixed, number features on a qualifier inserted in Spec EvalP are not. This difference correlates with a further difference between quantity and quality. Quantity is a property of a set of individuals, while quality can be a property of each individual in a set. In example (39a), each Bacchant is negatively qualified. In (40a), on the other hand, the set of problems has the property of being large; nothing is said about the individual problems. We propose that the number features of the quantifier need to be fixed in order to avoid a distributive reading, which would be triggered by agreement.

Nevertheless, quantificational 'pure degree' constructions do exhibit particular patterns of 'external' agreement. Consider the following:

- (41) a. Des masses de sable sont évacuées/ \*est évacué  
 Vast quantities of sand are/ \*is evacuated  
 b. Des trésors d'ingéniosité ont été déployés/ \*a été déployé  
 Treasures of ingenuity have/ \*has been engaged

These cases must be viewed as 'Evaluative/ pure degree' constructions, since they are not paraphrasable in terms of comparison:

- (42) a. \* Cette quantité de sable ressemble à des masses  
 'That quantity of sand resemble masses'  
 b. \* Cette quantité d'ingéniosité ressemble à des trésors  
 'That quantity of ingenuity resembles a treasure'

Nevertheless, agreement in these cases clearly is with the quantifier, a hallmark of the comparative construction. The exceptional behavior of these 'pure degree' constructions can be explained as follows. Following Doetjes (1997, to appear), we assume that mass nouns such as *sable* 'sand' and *ingéniosité* 'ingenuity' do not have a lexical specification for number. As a result, we end up with a configuration for these cases where Eval° cannot inherit a number feature from the quantified nouns *sable* 'sand' and *ingéniosité* 'ingenuity':



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