Number and adjectives: the case of French Activity and Quality Nominals.

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THE CASE OF FRENCH ACTIVITY AND QUALITY NOMINALS

1. INTRODUCTION

This article is dedicated to the examination of the role of Number with regards to adjective distribution in French. We focus on two kinds of abstract nouns: activity nominals and quality nominals. Both display particular behaviours with regards to adjective distribution: activity nominals need to appear as count nouns to be modified by qualifying adjectives; concerning quality nominals, they are frequently introduced by the indefinite *un(e)* instead of the partitive article *(du / de la)* when modified. Our analysis of adjectives is based on the idea that they can have two uses, which correlate with syntactic and semantic restrictions and are distinguishable on semantic grounds. Adjectives are understood either as taxonomic, i.e. as denoting a subkind of the modified noun, or as qualifying, in which case they express a property of the noun. Whereas taxonomic adjectives qualify as direct modifiers in the sense of Cinque (2010), qualifying adjectives behave either as direct or as indirect modifiers.

To account for the restrictions on the modification on activity and quality nominals, along the lines of Borer (2005), we suggest that the Num head *un(e)* is responsible for the partitioning of the noun's referent, which in turn enables the presence of a qualifying adjective.

The article is organized as follows. In Section 2, we define and illustrate the class of activity nominals (2.1.) and describe their behaviour with regards to both taxonomic and qualifying adjectival modification, paying particular attention to the fact that they must occur in count use to accept qualifying (vs. taxonomic) modification (2.2.). Consequently, we provide a syntactic analysis of both kinds of adjectival modification based on the presence vs. absence of Num(ber)P (2.3.), and relying on Cinques's (2010) approach to adjective attachment. In Section 3 we define quality nominals, and then compare them to activity nominals with regards to modification. We show that quality nominals accept various types of articles when modified, but that the choice of the article relates to the interpretation of the adjective (3.2.), these observations also match the description of activity nominals. In Section 4, we provide an articulated syntactic analysis of the distribution of the articles with various classes of adjectival modifiers in the presence of quality and activity nominals. In Section 5, we draw the conclusion of our article.

2. ACTIVITY NOMINALS
2.1. Definition

Activity nominals (Van de Velde 1995; Flaux & Van de Velde 2000; Haas & Huyghe 2007; Haas, Huyghe & Marin 2008) are nouns which are morphologically related to verbs denoting Activities, i.e. durative and atelic processes (Vendler 1967; Verkuyl 1972; Smith 1991), as illustrated in (1):

(1)a. danse$_N$ / danser$_V$ b. marche$_N$ / marcher$_V$
    'dance'   'to dance'   'walk'   'to walk'
  c. natation$_N$ / nager$_V$ d. cuisine$_N$ / cuisiner$_V$
    'swimming'   'to swim'   'cooking'   'to cook'

In what follows, we will limit our attention to nouns related to intransitive verbs. Such nouns usually occur in structures such as (2) and (3) that exhibit a habitual reading:

(2)a. DP *faire* partitive article Activ.N.
  b. Max fait {du   jardinage / de la   natation / de la   marche}.
     Max does {PART.ART.MASC gardening /   PART.ART.FEM   swimming/ PART.ART.FEM   walking}

'Max does some {gardening / swimming / walking}'.

(3)a. DP *pratiquer* definite article Activ.N.
  b. Max pratique {le   jardinage   / la natation /   la marche}   tous les week-end.
    Max   practises {the   gardening /   the swimming / the   walking} all the week ends
    Lit.: 'Max practices {gardening /swimming / walking} on weekends'.

According to Pivault (1994), in structures like (2) and (3), the DP subject is understood as an Agent, and the verb *faire* as a light verb, i.e. it lacks semantic content. Consequently, the semantic predicate of the sentence is the activity nominal itself. Note also that the non-countable character of activity nominals is revealed by the use of the so-called 'partitive article', which is the form of the indefinite article used to introduce mass nouns (cf. *du vin* '(some) wine' / *de la bière* '(some) beer'). As shown by the following examples, the atelic character of the verbal predicate is maintained by the corresponding noun, which is compatible only with PPs introduced by *pendant* 'for' but not by *en* 'in'[1]:

(4)   a. Max a fait   {du   jardinage / de la   marche} {pendant   deux heures
      Max   has done   {PART.ART.MASC gardening /   PART.ART.FEM   walking} {for   two   hours
      /*en deux heures}.
      / *in two hours}.
      'Max did (some) {gardening / walking} {for two hours / *in two hours}.'

  b. Zoé a pratiqué {la   danse / la   natation}   {pendant dix ans /   *en dix ans}.
     Zoe   has practiced {the dancing / the   swimming} {for ten years /   *in ten years}.
     'Zoe has practiced {dancing / swimming} {for 10 years / *in ten years}.'

Another context in which activity nominals are particularly frequent is the subject position of generic sentences (5) (see Heyd & Knittel 2009) and the object position of psychological verbs (6):

(5)   a. {Le jardinage / la natation}   est   un   loisir   répandu.
      {the gardening   / the swimming} is   a   hobby   common
      '{Gardening / swimming} is a common hobby.'
  b. {L'escalade   / la danse}   développe la souplesse.
     {the climbing   / the dancing}   improves   the flexibility
     '{Rock climbing / dancing} improves suppleness.'

(6)   a. Je déteste   le jardinage.
     I hate   the   gardening
     'I hate gardening.'
  b. Les Français   adorent la marche.
     the   French   love   the walk
     'French people love walking.'

In fact, even nouns that are not related to verbs— and which usually refer to entities, abstract (7), concrete (8), and even animate (9) — can receive an activity interpretation when they occur as objects of the light verbs *faire* and *pratiquer* (Heyd & Knittel 2009). In such cases, they usually refer to sports, sciences or arts (Pivault 1994). An important fact is that, in (8a) and (9a), the nouns *piano* 'piano' and *cheval* 'horse' appear as mass nouns, and not under their usual count forms (8b, 9b):

(7)   La   syntaxe donne   des   maux de tête.
    the   syntax gives   INDEF.PL. headaches
    'Syntax gives (people) headaches.'

(8)   a. Paul fait du   piano depuis dix   ans.
                 Paul   does   PART.ART.MASC piano for   ten   years
                 'Paul has been playing the piano for ten years.'
vs.:   b. Ces pianos sont   lourds.
                 these pianos are   heavy.
                 'These pianos are heavy.'

(9)   a. Marie   a fait   du   cheval   cet été.
                 Marie   has done PART.ART.MASC horse   this summer
                 'Mary went riding this summer.'
vs.:   b. Ces chevaux   sont   noirs.
                 these horses   are   black
                 'These horses are black.'

We will now examine adjectival modification of activity nominals.

2.2. Adjectival modification of activity nominals

This subsection is dedicated to the examination of the properties of modified activity nominals. We first distinguish two types of adjective uses from both semantic and syntactic points of view. We then show that adjectival modification of activity nominals by qualifying adjectives depends on their use as count nouns.

2.2.1. Two kinds of adjectival modification

In what follows, we will consider two kinds of adjectival modification: 'qualifying' and 'taxonomic' modification[2] (see Knittel 2005). In the first type, adjectives used as qualifying modifiers express an extra property of the noun and accept predicative use and adverbial modification, as in example (10). In the other kind of modification, 'taxonomic' adjectives refer to subkinds of the head noun, can only be used attributively and cannot be modified by adverbs (11). The following examples illustrate the difference between these uses with contrasting interpretations:

(10) a. un   gâteau (très) léger
            a   cake   (very) light
            'a (very) light cake'
      b. Ce   gâteau   est   (très) léger.
            this   cake   is   (very) light
            'This cake is (very) light.'

(11) a. un   gâteau (*très) sec
            a   cake   (very)   dry
            Lit.: 'a dry cake' (i.e. a biscuit)
≠   b. Ce   gâteau   est   (*très) sec.
            this   cake   is   (very)   dry
            Lit.: 'This cake is (*very) dry.'

In examples (10), the adjective *léger* 'light' can be modified by an adverb and exhibits predicative use. Semantically, it expresses an 'accidental' property of a cake individual. In (11), conversely, the adjective *sec* 'dry' cannot be modified by an adverb, and has no predicative use. It is also semantically different from *léger* in (10), in that it enables reference to a subkind of the noun it modifies or to members of this subkind, that is *un gâteau sec* 'a biscuit'. Taxonomic adjectives thus qualify as subsective modifiers.

However, the examples in (11) are not syntactically ill-formed. Rather, the adjective is possible in predicative use provided it is understood as denoting a (accidental) property of a given cake (e.g. a

stale cake), and not as a type of cake. This example shows that 'taxonomic' and 'qualifying' should not be understood as referring to adjective classes. Rather, they describe adjective uses, since adjectives generally exhibit both behaviours (see McNally & Boleda 2004; Knittel 2005 for similar observations about relational adjectives).

The taxonomic vs. qualifying use of a given adjective can also be distinguished by the fact that, when the adjective has a corresponding quality noun, the noun / adjective alternation is possible only when the adjective is used qualifyingly (12), as shown by Fradin & Kerleroux (2003, 2009). In contrast, taxonomic uses of the same adjectives do not alternate with deadjectival nouns as illustrated by (13).

(12) a. une agression sauvage
     a   aggression   brutal
     'a brutal aggression'
   b. la sauvagerie de cette agression
     the brutality   of this   aggression
     'the brutality of this aggression'
   c. Cette agression a été   (très) sauvage
     this   aggression has been (very) brutal
     Lit: 'This aggression has been very brutal.'

(13) a. une fleur   sauvage
     a   flower   wild
     'a wild flower'
   b. *la   sauvagerie de cette fleur
      the   wildness   of this   flower
     Lit: 'the wildness of this flower'
   c. *Cette fleur est   (très) sauvage
     this   flower is   (very) wild
     Lit: 'This flower is very wild.'

In the following section, we examine the distribution of adjectives with activity nominals.

2.2.2. Qualifying modification
Let us now examine how the adjectives in the uses described above behave when combined with activity nominals.

The examples in (14) reveal that activity nominals can be modified by qualifying adjectives when the nouns denote specific entities or events, or when they refer to concrete objects (15):

(14) a. Lors   du spectacle, elle a   exécuté   {une /des} danse(s)   gracieuse(s).
     during   the show,   she has performed {a /some} dance(s)   graceful(PL)
     'During the show, she performed {a/some} graceful dance(s).'
   b. Les marches fatigantes qu' ils   ont   faites   les   ont   épuisés.
     the   walks   tiring(PL)   that they have done   them have exhausted
     Lit: 'The tiring walks they took exhausted them.'

(15) Elle a acheté {une moto   rapide / un piano blanc / un cheval noir}.
     she has bought {a motorbike   fast   / a piano white / a horse   black}
     'She bought {a fast motorbike / a white piano / a black horse}.'

However, the following examples show that qualifying modification is impossible for activity nominals when they occur in their typical syntactic configurations (see 2.1.).

(16) a. Elle fait de la danse (*gracieuse).
       she does PART.ART.FEM dancing (*graceful)
      'She does (*graceful) dancing.'
   b. Ils pratiquent la marche (*fatigante).
      they practice the walking (*tiring)
      'They practice (*tiring) walking.'
   c. Il fait de la moto (*rapide).
      he does PART.ART.FEM motorcycling (*fast)
      'He does (*fast) motorcycling.'

The examples in (14-15) and (16) also display another major morphosyntactic difference: in (16), the activity nominals necessarily take a narrow scope with operators such as negation (17), a fact that signals their non-specific character. Second, they cannot be separated from the light verb on which they depend and, consequently, cannot occur as subjects of the passive construction (18):

(17) a. Elle n'a pas fait {de (la) danse / de (la) marche / de (la) moto}[3/4]
      she Neg has not done {PART.ART.FEM dance / PART.ART.FEM walk / PART.ART.FEM motorbike}
      Lit.: 'She has not done {dance / walk / motorbike}.'
≠ b. Il y a {de la danse / de la marche / de la moto} qu' elle n'a
      there is {PART.ART.FEM dance/ PART.ART.FEM walk / PART.ART.FEM motorbike} that she Neg-has
      pas faite.
      not done
      Lit.: 'There is some {dance / walk / motorbike} that she has not done.'

(18) *{De la danse / de la marche / de la moto} a été faite
      {PART.ART.FEM dance / PART.ART.FEM walk / PART.ART.FEM motorbike} has been done
      par Marie
      by Mary
      Lit.: '(Some) {dance / walk / motorbike} has been done by Mary.'

Narrow scope and adjacency with a verbal head are properties reminiscent of those displayed by incorporated elements (see Bittner 1988, de Hoop 1992, van Geenhoven 1998, Farkas & de Swart 2003, and Mathieu 2004, 2006 for French), which are also characterized by the lack of number inflection or variation[5].
A first hypothesis to account for the impossibility of qualifying modification is to consider that it is directly linked to the incorporated status of the nominals (see Knittel 2009, 2010 for such observations). However, the examples in (19) show that qualifying modification is also impossible in generic use:

(19) a. La danse (*gracieuse) développe la souplesse.
      the dance (*graceful) develops the suppleness
      '(*Graceful) dancing improves suppleness.'
   b. La marche (*fatigante) provoque des crampes.
      the walk (*tiring) causes INDEF.PL cramps.
      '(*Tiring) walking causes cramps.'
   c. La moto (*rapide) est un sport dangereux.
      the motorcycling (*fast) is a sport dangerous
      '(*Fast) motorcycling is a dangerous sport.'

We thus conclude that, for activity nominals, qualifying modification is restricted to specific, i.e. non-incorporated and non-generic, contexts. Now, generic and incorporated uses share another

peculiarity: that of excluding count activity nominals, even when those are available in other contexts (see (14-15)).

(20) a. *{Les marches / les motos /   les danses}   sont un loisir   répandu.
           {the walk-PL   /   the motorcycling-PL /   the dance-PL}   are   a hobby   common
      b. *Elle pratique {les marches / les motos /   les danses}
           she   practises {the walk-PL /   the motorbike-PL /   the dance-PL}

We can consequently hypothesize that, in the case of activities, number inflection is a syntactic reflex of specificity. Since only specific use allows qualifying modification, one only finds modified number-inflected (vs. mass) activity nominals.

2.2.3. Taxonomic modification

As suggested above, taxonomic adjectives are used to refer to subtypes. This is shown by the following examples, which also reveal that only taxonomic modification is possible in generic DPs whose lexical head is an activity nominal:

(21) a. La   danse   orientale   est   une   sorte de   danse.
           the   dancing oriental   is   a   kind of   dancing
           'Oriental dance is a kind of dance.'
vs.: b. # La   danse   gracieuse   est   une   sorte de   danse.
             the   dancing graceful   is   a   kind of dancing
           # 'Graceful {dancing / dance} is a kind of {dancing / dance}.'

(22) a. La syntaxe formelle   est   une   branche de   la   syntaxe.
           the syntax   formal   is   a   branch   of   the   syntax.
           'Formal syntax is a branch of syntax.'
vs.:   b. # La   syntaxe difficile est   une   branche de   la syntaxe.
                 the   syntax   difficult is   a   branch   of   the syntax.
              # 'Difficult syntax is a branch of syntax.'

From a semantic point of view, this fact is easily explained if we consider that generic NPs refer to types, not to individuals. In such a case, possible modifications are limited to taxonomic adjectives which enable reference to subtypes. It seems that no adjective expressing an extra, i.e. accidental, property can modify generic NPs.
The following examples indicate that taxonomic adjectives are indeed possible in sentences such as (24), where they occur as subjects of generic sentences as well as in (23), exhibiting activity nominals in their incorporated use[6]:

(23) a. La   danse   orientale   développe la souplesse.
           the   dancing oriental   develops   the flexibility
           'Oriental dancing improves suppleness.'
      b. La   marche rapide   provoque   des   crampes.
           the   walking fast   causes   INDEF.PL cramps.
           '(Fast) walking causes cramps.'
      c. La   syntaxe formelle   donne   des   maux de tête.
           the   syntax   formal   gives   INDEF.PL headaches
           'Formal syntax causes headaches.'

(24) a. Elle fait de la   danse   orientale.
           she   does PART.ART.FEM   dancing oriental
           'She does oriental dancing.'

b. Ils   pratiquent la marche rapide.
   they practice   the   walking (fast)
   'They practice fast walking.'
c. Elle fait de la   syntaxe formelle.
   she   does PART.ART.FEM syntax   formal
   Lit.: 'She does formal syntax.'

We can conclude that taxonomic modification is possible in any context where activity nominals are found, and does not rely on the distinctions (±specific, ± incorporated, ± number-inflected) to which qualifying adjectives are sensitive.

The following subsection is dedicated to a syntactic analysis of this phenomenon.

2.3. Syntactic analysis

In this section, we provide a syntactic analysis to account for the contrast between qualifying and taxonomic modification of activity nominals. Our analysis relies on the structural relationship between the FPs hosting adjectival projections (Cinque 2010) and NumP (Ritter 1991, Carstens 1991, Valois 1991), and / or vP (Harley 2009).

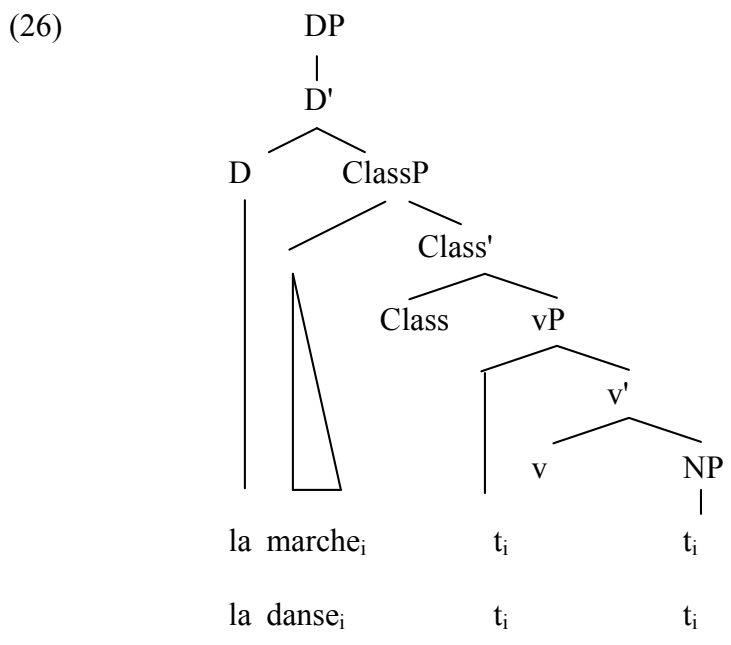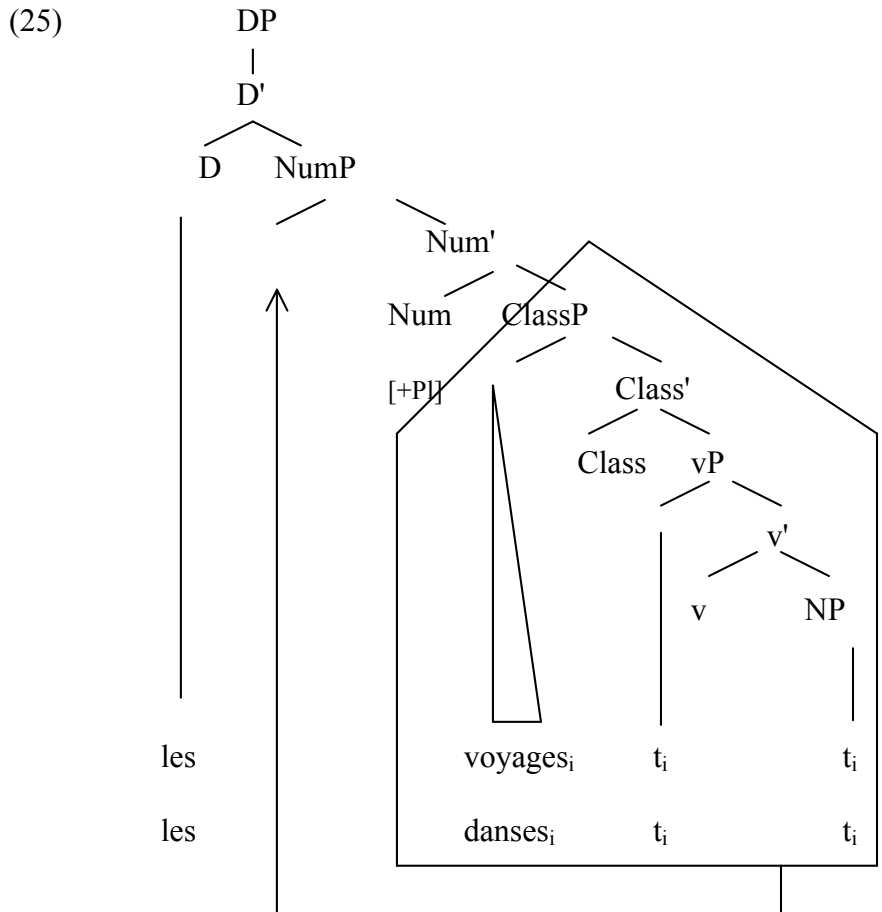### 2.3.1. The syntactic structure of activity NPs

Recall from the preceding examples that activity nominals need to occur in count use to enable qualifying modification. Along the lines of Ritter (1991), Carstens (1991), and Valois (1991), let us assume that NumP is the projection encoding number variability (i.e. singular vs. plural). Thus, a DP (Abney 1987) whose head is a count (activity) nominal, such as *marche(s)* 'walk(s)' or *danse(s)* 'dance(s)' (14), contains a NumP in its functional structure.

Along the lines of Shlonsky (2004), we also assume that there is no N movement in the DP (see also the arguments against N movement raised by Lamarche 1991, Laenzlinger 2005, Haegeman 2003, Knittel 2005)[7]. Rather, in order to account for the noun's number variability, we assume that NP moves to Spec,NumP.

However, as we saw previously, activity nominals can either occur as mass or as count nouns. This variability can be simply explained by the analyzes of Borer (2005), Kwon & Zribi-Hertz (2004), and Zribi-Hertz & Glaude (2007), who argue that Number is an optional projection which is realized only for count nouns.

Since activity nominals describe events, we also assume that their functional structure contains an event projection vP, along the lines of Harley (2009) and Alexiadou (2009) (see also Davidson 1967). Finally, in agreement with Picallo (2008) and Iordachioaia & Soare (2009) in the case of event nominals, we consider that projections of nouns are characterized by a ClassP, which encodes their nominal character, and checks the noun's Gender features.

 Consequently, *danse* 'dance' or *marche* 'walk' will be represented as in (25) when in count use, and as in (26) when used as?mass nouns; instead of a movement of NP to NumP, we assume that the whole ClassP moves to Spec,NumP.

(25)

```
                    DP
                    │
                    D'
                   ╱  ╲
                  D    NumP
                      ╱  ╲
                         Num'
                        ╱  ╲
                      Num    ClassP
                            ╱  ╲
                     [+Pl]      Class'
                               ╱  ╲
                            Class   vP
                                   ╱  ╲
                                        v'
                                       ╱  ╲
                                      v    NP
```

les

les   voyages_i   t_i   t_i

           danses_i   t_i   t_i

(26)

```
                    DP
                    │
                    D'
                   ╱  ╲
                  D    ClassP
                      ╱  ╲
                         Class'
                        ╱  ╲
                     Class   vP
                            ╱  ╲
                                 v'
                                ╱  ╲
                               v    NP
                                    │
```

la marche_i   t_i   t_i
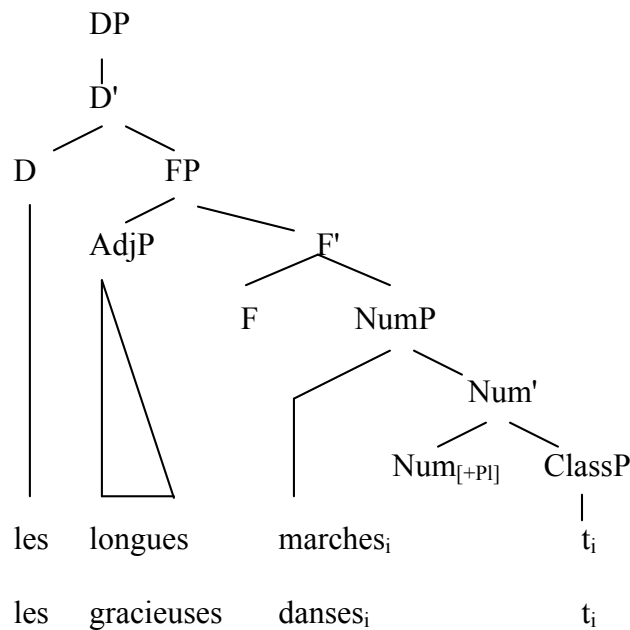
la danse_i   t_i   t_i
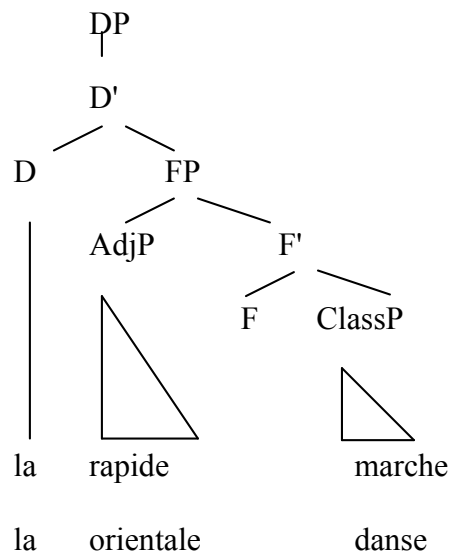
2.3.2. Adjective attachment

Recall from section 2.2. that qualifying modification is possible only for activity nominals that display number inflection, that is, if NumP is present in the DP structure; in contrast, taxonomic modification is independent of NumP.

To account for this variation, we hypothesize that the projections hosting qualifying adjectives merge above NumP, whereas those hosting taxonomic adjectives merge above ClassP. More precisely, we claim that the projections of adjectives in qualifying use syntactically select NumP as their complement, whereas those of adjectives in taxonomic use select ClassP as their complement. If we adopt Cinque's (2010) hypothesis that AdjPs are merged in the specifiers of F(unctional)Ps, the resulting representations are:

(27) a. Qualifying modification:

```
                        DP
                        |
                        D'
                      /    \
                    D        FP
                            /   \
                         AdjP     F'
                          /\     /   \
                         /  \   F     NumP
                        /    \        /    \
                       /      \      /     Num'
                      /        \    /     /    \
                     les   longues marches_i  Num_[+Pl]   ClassP
                                                            |
                                                            t_i
                     les  gracieuses danses_i               t_i
```

b. Taxonomic modification:

```
                    DP
                    |
                    D'
                  /    \
                D        FP
                        /  \
                    AdjP     F'
                     /\     /   \
                    /  \   F    ClassP
                   /    \         /\
                  la  rapide     /  \
                                marche
                  la  orientale  danse
```
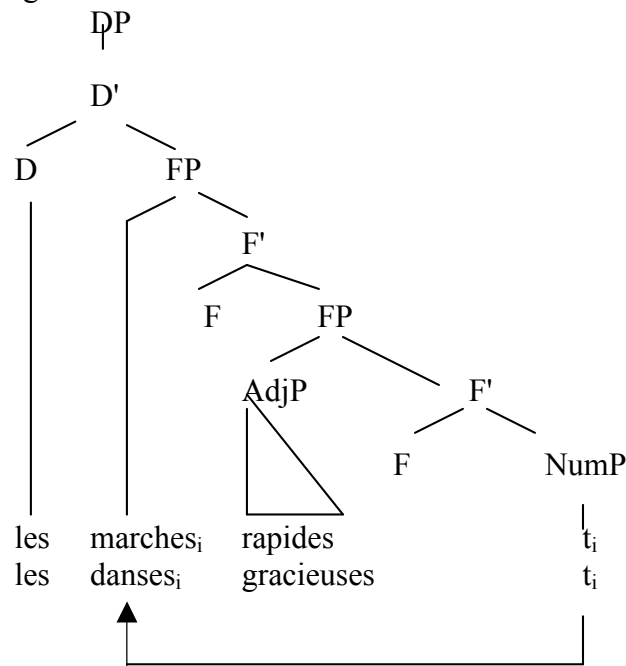
Since adjectives such as *rapide* 'fast' and *orientale* 'oriental' necessarily appear postnominally (28a-b), and that *fatiguante* 'tiring' and *gracieuse* 'graceful' can also occur in this position (28c-d), we need to account for their placement.

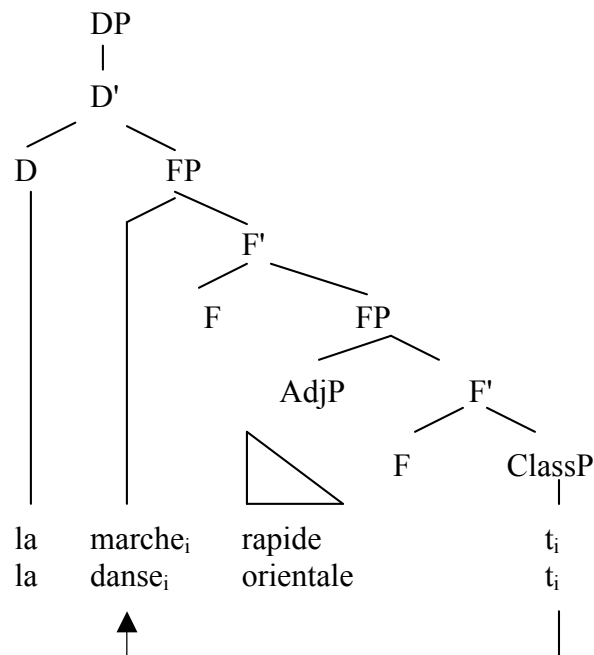(28) a.   {de la / une} (*orientale)   danse   (orientale)
           {some / a}   (*oriental)   dance   (oriental)

   b.   {de la / une} (*rapide)   marche   (rapide)
           {some / a}   (*fast)   walk   (fast)

   c.   une   (gracieuse) danse   (gracieuse)
           a   (graceful)   dance   (graceful)

   d.   une   (épuisante)   marche   (épuisante)
           a   (exhausting)   walk   (exhausting)

Consequently, like in Cinque's (2010) analysis, we consider that the FPs hosting adjectives are dominated by other FPs to which the ClassP / NumP is moved:

(29) a. Qualifying modification:

les   marches$_i$ rapides   t$_i$
les   danses$_i$ gracieuses   t$_i$

   b. Taxonomic modification:

la   marche$_i$ rapide   t$_i$
la   danse$_i$ orientale t$_i$

Consider now examples (30-31):

(30) a. Elle a exécuté une danse orientale_{Tax} gracieuse_{Qual}.
      she has performed a dance oriental graceful
      'She performed a graceful oriental dance.'
    b. *Elle a exécuté une danse gracieuse_{Qual} orientale_{Tax}.
      she has performed a dance graceful oriental

(31) a. Ils ont participé à une marche rapide_{Tax} épuisante_{Qual}.
      they have taken part to a walk fast exhausting
      Lit.: 'They took part in an exhausting fast walk.'
    b. *Ils ont participé à une marche épuisante_{Qual} rapide_{Tax}.
      they have taken part to a walk exhausting fast

These examples reveal that taxonomic adjectives necessarily occur closer to nouns than qualifying adjectives. This adjacency requirement is in fact described by Sproat and Shih (1990) and Cinque (2010), who rely on similar examples to distinguish direct from indirect adjectival modification. According to these authors, adjectives pertaining to direct modification occur closer to the noun than those expressing indirect modification. They also exhibit various properties that are reminiscent of those displayed by the taxonomic adjectives described above. In particular, they may lack predicative use, which is also a property of taxonomic adjectives (11). The following examples illustrate this fact with activity nominals:

(32) a. Du ski alpin
      PART.ART.MASC ski alpine
      'alpine skiing'
    b. *Ce ski est alpin
      this skiing is alpine
    c. De la pêche sous-marine
      PART.ART.FEM fishing underwater
      'underwater fishing'
    d. *Cette pêche est sous-marine
      this fishing is underwater

As noted by Cinque (2010), after Bolinger (1967), direct adjectives modify the noun's reference, which is exactly the case of taxonomic adjectives.

Finally, Cinque notes that direct modification can give rise to idiomatic [N-A] readings. Even if this is not exactly the case here, one can observe that, in *ski alpin* 'alpine skiing', the adjective does not mean 'pertaining to the Alps', as is usually the case (cf. *la flore alpine* 'alpine flora', i.e. the flora of the Alps), but refers to downhill skiing. In the same way, in a string such as *pêche automnale* 'autumnal fishing', the adjective takes an individual level interpretation, since it refers to a kind of fishing that usually occurs in Autumn and displays specific characteristics, but cannot be used to describe a fishing party that accidentally occurred in Autumn.

Finally, the need to distinguish between these two kinds of modifiers is confirmed by the fact that they cannot be coordinated:

(33) a. *une danse orientale et gracieuse
      a dance oriental and graceful
    b. *une marche rapide et épuisante
      a walk fast and exhausting

Considering now adjectives such as *gracieuse* and *épuisante*, the first hypothesis is that they are indirect modifiers. However, several facts prevent such an analysis. First, these adjectives can also occur prenominally (see (28)), a property characteristic of direct modification:

(34) a. une   gracieuse   danse   orientale
        a   gracious   dance   oriental
        'a gracious oriental dance'
    b. une   épuisante   marche   rapide
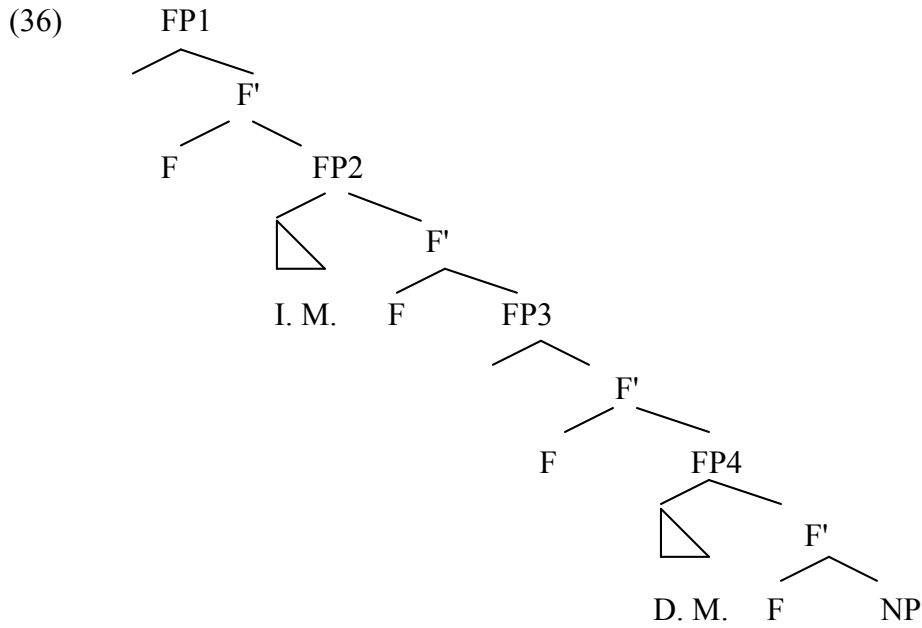   a   exhausting   walk   fast
        'an exhausting fast walk'

Second, some of these adjectives also display an evaluative value that is superimposed on their original meaning. For instance, in *une danse remarquable* 'a remarkable dance', the adjective is primarily understood as 'great' rather than as 'noteworthy'. Thus, *remarquable* corresponds to a positive evaluation. In the same way, *une course incroyable* 'an incredible race' means 'a great race' rather than 'an unbelievable race'. Such adjectives are considered as direct modifiers in Cinque's (2010) analysis. On the other hand, an adjective such as *inattendu* 'unexpected', which can only be understood as 'that was not expected' and occurs necessarily postnominally, is analyzed as an indirect modifier. As will be discussed in Section 4, adjectives of the *inattendu* type as well as those of the *gracieux* and *remarquable* type necessarily occur with *un*:

(35) {une / *de la}   danse   {gracieuse /   remarquable / inattendue}
       {a / *PART.ART.FEM}   dance   {graceful /   remarkable /   unexpected}
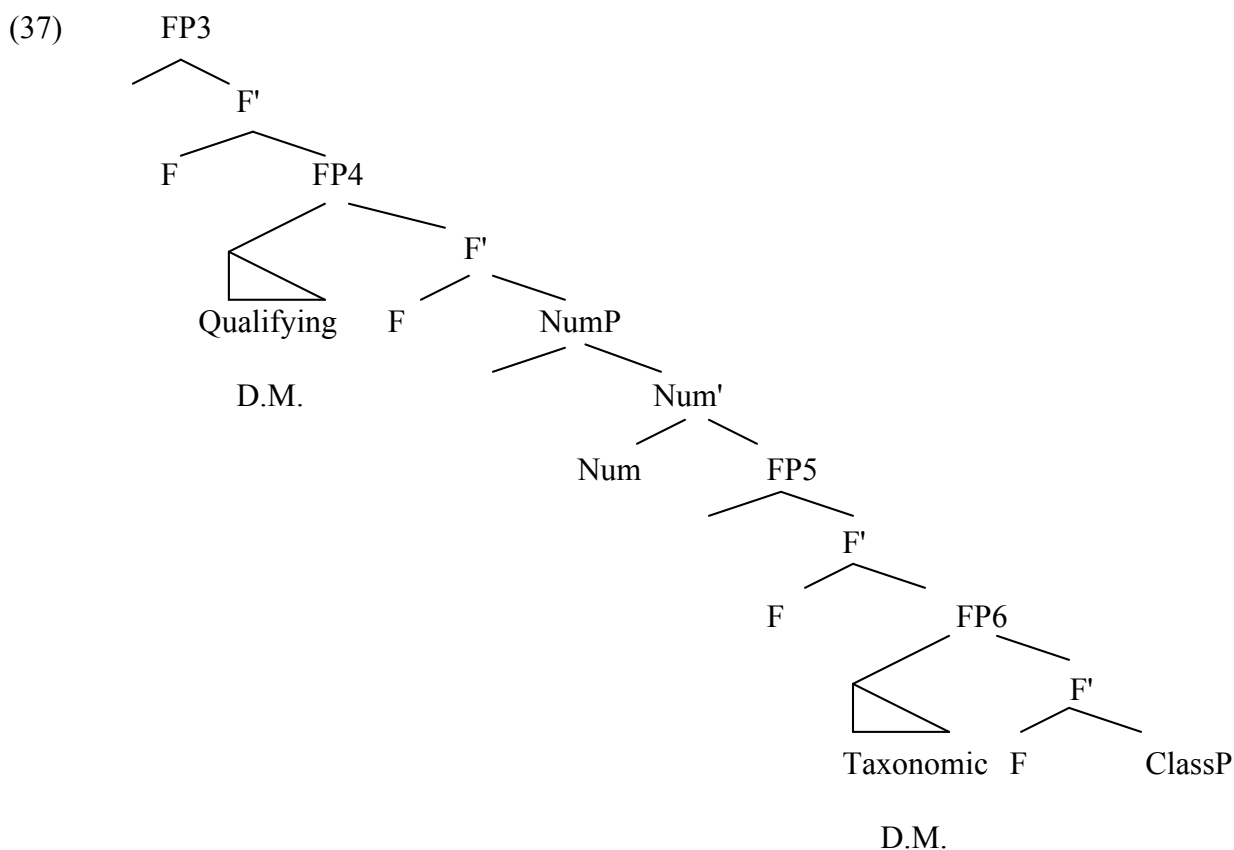   'a dance {graceful / remarkable / unexpected}'

The above observations enable us to draw the conclusion that the taxonomic vs. qualifying contrast does not parallel the direct vs. indirect opposition put forward by Sproat & Shih (1990) and Cinque (2010); rather, if taxonomic adjectives qualify as direct modifiers, qualifying adjectives may be either direct or indirect modifiers. Consequently, the presence vs. absence of NumP is not the appropriate criterion for opposing direct vs. indirect modification. Rather, as shown by (35), the distinction is between activity nominals introduced by the partitive article, which only accept taxonomic modification, and those introduced by the indefinite article, which combine with direct and indirect qualifying adjectives.
Our analysis led us to the same conclusion as Larson (1998), namely that the non-intersective reading of adjectives arises when the adjective applies to the event component of the nominal.
Consider the representation in (36), from Cinque (2010), which illustrates the basic ordering of adjectival projections (the FP have been numbered to facilitate reference, I.M. and D.M. standing for 'indirect modification' and 'direct modification' respectively):

(36)

```
          FP1
         /  \
            F'
           /  \
          F    FP2
              /\   \
             /  \   F'
            /____\  / \
           I. M.  F   FP3
                     /  \
                        F'
                       /  \
                      F    FP4
                          /\   \
                         /  \   F'
                        /____\  / \
                       D. M.  F   NP
```

We can now suggest that NumP is in fact inserted in the above structure under FP4, and that FPs hosting taxonomic modification merge between NumP and ClassP in the case of activity nominals (the projections of indirect modification have been omitted in (37)):

(37)

```
          FP3
           |
           F'
          /  \
        F      FP4
              /  \
      Qualifying   F'
                  /  \
        D.M.     F    NumP
                      |
                     Num'
                    /   \
                  Num    FP5
                        /  \
                       F'
                      /  \
                    F     FP6
                         /  \
                        /    F'
                       /    /  \
               Taxonomic F      ClassP
                       |
                      D.M.
```

If we assume that the type of movement at work here is remnant movement, as Shlonsky (2004) and Cinque (2010) suggest, the above representations accurately account for the placement of adjectives with activity nominals. Since taxonomic adjectives are postnominal, we assume a movement of ClassP to Spec, F5P. If ClassP remains in this position, qualifying adjectives, if any, will appear left of the noun (cf. (34a): *une gacieuse*$_{Qual}$ *danse orientale*$_{Tax}$); they will appear postnominally if NumP moves to Spec,F3P ((30a): *une danse orientale*$_{Tax}$ *gracieuse*$_{Qual}$). Note that predicative use is restricted to adjectives that merge in Spec,F4P or above, that is, as indirect modifiers.
We can now examine quality nominals.

3. QUALITY NOMINALS
3.1. Definition
According to Rainer (1989), who introduced the term, quality nominals are nouns morphologically built on adjectives (36a-b), and denoting properties. Along the lines of Van de Velde (1995), and Flaux & Van de Velde (2000), we also include nouns from which adjectives can be morphologically built (38d) in this class, since both types refer to properties:

(38) a. agressivité$_N$ /   agressif$_{Adj}$ b. clarté$_N$ /   clair$_{Adj}$
        'aggressiveness' / 'brutal'; 'aggressive'   'brightness' / 'bright'
     c. imprudence$_N$ / imprudent$_{Adj}$ d. courage$_N$ /   courageux$_{Adj}$
        'imprudence'/ 'imprudent'   courage /   'courageous', 'brave'

Like activity nominals, quality nominals frequently occur as objects of light verbs:

(39) a. Paul {a / possède}   une   grande   sensibilité.
        Paul   {has / possesses}   a   great   sensitivity
        Lit.: 'Paul {has / possesses} a great sensitivity.'

    b. Elle {montre /   fait preuve de /   témoigne de} beaucoup   de prudence.
        she   {exhibits /   shows (evidence of) /   demonstrates of} a lot   of prudence.
        'She {exhibits / shows (evidence of) / demonstrates} a lot of prudence.'

    c. Cela lui   a (re)donné   de la   combativité.
        this   him   has (again)given PART.ART.FEM   pugnacity
        'This has {given him / restored his} fighting spirit.'

    d. Zoé a   {repris / perdu}   patience.
        Zoe   has   {recovered / lost}   patience
        'Zoe has {recovered / lost} (her) patience.'

The nominals under investigation here are those that display aspectual properties; i.e., they share the aspectual properties of the predicate to which they are related. Since they are paired with adjectival predicates, which are stative, they also refer to states (Beauseroy 2009). Consequently, they lack temporal span, and can only vary in intensity (Van de Velde 1995; Flaux & Van de Velde 2000). This is shown by the fact that, when modifying a quality nominal, *beaucoup* 'much' can only have an intensive meaning (Obenauer 1983), like *très* 'very' with the corresponding adjective (see (40)). Conversely, when *beaucoup* modifies dynamic verbal or nominal predicates, such as those denoting activities, it can only receive a temporal (*longtemps* 'for a long time') or habitual (*souvent* 'often') interpretation (41)[8]:

(40) a. beaucoup de {courage / patience / éloquence /   imprudence}
          a lot   of {courage /   patience /   eloquence /   imprudence}
          'a lot of {courage / patience / eloquence / imprudence}'

  = b. être très   {courageux / patient / éloquent /   imprudent}
          to be very   {brave /   patient /   eloquent /   imprudent}
          'to be very {brave / patient / eloquent / imprudent}'

  ≠ c. être {souvent / longtemps} {courageux / patient / éloquent /   imprudent}
          to be {often /   for a long time} {brave /   patient /   eloquent /   imprudent}
          'to be {brave / patient / eloquent /imprudent} {often / for a long time}'

(41) a. beaucoup de   {danse /   patinage / ski /   marche}
          a lot   of   {dancing /   skating /   skiing / walking}
          'a lot of {dancing / skating / skiing / walking}'

  = b. {danser / patiner /   skier /   marcher}   {souvent / longtemps}
          {to dance /   to skate /   to ski /   to walk}   {often /   for a long time}
          '{to dance / to skate / to ski / to walk}{often / for a long time}'

  ≠ c. {danser / patiner /   skier /   marcher} intensément
          {to dance /   to skate /   to ski /   to walk}   intensely
          '{to dance / to skate / to ski / to walk} intensely'

Finally, like activity nominals, quality nominals are mass nouns; however, some also have a count use in which they refer to concrete or abstract manifestations of quality (Van de Velde 1995, Flaux & Van de Velde 2000, Beauseroy 2009), as shown by the (b) examples (42-44):

(42) a. Max a   montré de l'   imprudence.
          Max has   shown   PART.ART.FEM   imprudence
          'Max has shown (some) imprudence.'

    b. Max a commis   deux imprudences.
          Max has committed   two   imprudences.
          Lit.: 'Max committed two imprudences.' (i.e. two imprudent acts)

(43) a. Zoé a manifesté de la   méchanceté.
      Zoé has exhibited PART.ART.FEM wickedness
      'Zoé has exhibited (some) wickedness.'
   b. Zoé a proféré   plusieurs   méchancetés.
      Zoe has uttered   several   wickednesses
      Lit.: 'Zoe uttered several wickednesses.' (i.e. several wicked, nasty things)

(44) a. Paul a montré   de la   négligence.
      Paul has shown   PART.ART.FEM carelessness
      'Paul has shown (some) carelessness.'
   b. Les négligences de Paul   ont été critiquées.
      the carelessnesses of Paul   have been criticized
      Lit.: 'Paul's carelessnesses have been criticized.' (i.e. his careless acts)

Consequently, like in the case of activity nominals, we assume that quality nominals display NumP only in count use.

When in mass use, quality nominal can be considered as incorporated elements, in the same way as an activity nominal. The following examples show that they also take a narrow scope with negation, and cannot be separated from the light verb on which they depend by passivation:

(45) a. Il n' a   pas montré de   courage.
      he Neg-has not shown   PART.ART.MASC courage
      'He did not show courage.'
 ≠ b. Il y a du   courage qu' il n' a   pas   montré.
      there is PART.ART.MASC courage that he Neg-has not   shown
      Lit.: 'There is some courage that he did not show.'

(46) ??Du   courage a   été montré par Marie.
     PART.ART.MASC courage has been shown   by Mary
     Lit.: '(Some) courage has been shown by Mary.'

3.2. Modification of quality nominals

In the literature, it is reported (Van de Velde 1995; Flaux & Van de Velde 2000; Beauseroy & Knittel 2007) that quality nominals do not accept modification when introduced by partitive articles, that is, in their mass use. Instead, when such nominals appear with adjectival modification, the indefinite article *un(e)* 'a', must be used (47). The same holds true when a relative clause or a bare complement appears with the quality nominal (48-49).

(47) a. Ce professeur a   {*de la /   une} patience   extraordinaire.
      this teacher   has {PART.ART.FEM / a} patience   extraordinary
      Lit.: 'This teacher has an extraordinary patience.'
   b. Zoé a   manifesté {*de la /   une} très grande gentillesse.
      Zoe has shown {PART.ART.FEM / a}   very great   kindness.
      Lit.: 'Zoe has shown a very great kindness.'
   c. Max a montré   {*de la /   une} méchanceté diabolique envers Marie.
      Max has shown   {PART.ART.FEM / a} wickedness   devil-like   towards Mary
      Lit.: 'Max has shown a devil-like wickedness towards Mary.'

(48) Zoé a   montré {*de la /   une} subtilité [qui nous a   impressionnés]Rel.
    Zoe has shown {PART.ART.FEM / a} shrewdness [that us   has   impressed]
    Zoe has shown a shrewdness [that impressed us].

(49) Il a {*de la / une} patience d' ange.
     he has {PART.ART.FEM / a} patience of angel
     Lit.: 'He's got a patience of angel.'

It should be noted that modified quality nominals introduced by *un(e)* still keep their abstract, property denotation, and do not refer to acts or words (see Section 4.1.). As a consequence, they appear in the same contexts as their mass equivalents. Moreover, they do not pluralize (50). The presence of *un(e)* is actually a syntactic reflex of the presence of a modifier, as shown by the fact that this article cannot be used to introduce an unmodified quality nominal (51):

(50) *Zoé a montré {des / deux / plusieurs} très grandes gentillesses.
     Zoé has shown {INDEF.PL / two / several} very great kindnesses.'
     Lit.: 'Zoé has shown {some / two / several} very great kindnesses.'

(51) *Elle a montré un courage.
     she has shown a courage
     Lit.: 'She has shown a courage.'

However, even if grammars do not mention this possibility, Kupferman (2004, 87) observes that modified quality nominals may be introduced by partitive articles in the context of copulative sentences (52). (53) shows that such strings, where *un(e)* is also possible[9], are also found in other contexts, including negative sentences like (53c):

(52) a. Ce discours, c' était {de la / *une} grande éloquence.
       this talk, it was {PART.ART.FEM / *a} great eloquence
       Lit.: 'This talk, it was great eloquence.' (i.e. Doing this talk, it was showing great eloquence.)
       (Kupferman 2004, 87)
    b. Ces agressions, c' est {de la / *une} violence gratuite.
       these aggressions it is {PART.ART.FEM / *a} violence pointless
       Lit.: 'These aggressions, they are pointless violence.'

(53) a. Ils ont fait preuve {de / d'une} vraie gratitude
       they have made proof {of / of a} true gratitude
       'They showed (a) true gratitude.'
    b. Ce jour-là, il a manifesté {de la / une} méchanceté gratuite.
       that day-DEM, he has demonstrated {PART.ART.FEM / a} wickedness gratuitous
       'That day, he demonstrated (a) gratuitous wickedness.'
    c. Ils n'ont pas montré {de / une} fausse modestie.
       they Neg- have not shown {PART.ART. / a} false modesty
       'They did not show (a) false modesty.'

We can thus conclude that, in contrast to what is traditionally assumed, quality nominals do not necessarily need to be introduced by *un(e)* when modified. Still, the above examples raise several questions: is there any difference between structures introduced by *un(e)* and those introduced by the partitive article? And why should quality nominals behave differently from activity nominals with regards to adjectival modification?
These questions are addressed in the following sections.

4. ADJECTIVAL MODIFICATION PATTERNS
In this section, we show that the modification patterns observed for activity nominals also apply to quality nominals, and that the same interactions between modification type and the mass / count

distinction are observed. We then examine the properties of modified nominals introduced by *un(e),* and consider the hypotheses put forward by Kupferman (2004) and Kleiber (2003). Finally, we propose an appropriate syntactic treatment for modified nominals with the indefinite article, based on Cinque (2008, 2010).

4.1. Qualifying modification

Recall from section 2.2.1. that activity nominals can be modified by qualifying adjectives when they occur as count nouns, i.e. when they are dominated by NumP. Like activity nominals, some quality nominals may also occur as count nouns (42b-44b). In such a case, they refer either to external manifestations of the quality in question, through words (42b) or actions (43-44b) or are used to designate concrete objects characterized by the property in question, as in (54):

(54) J' ai admiré les beautés du paysage.

      I have admired the beauties of.the landscape

      'I have admired the beauties of the landscape.' (i.e. the beautiful things in the landscape)

As expected from the behaviour of activity nominals, quality nominals also allow qualifying modification when they occur as count nouns.

(55) a. Il a commis une méchanceté impardonnable.

        he has committed a wickedness unforgivable

        Lit.: 'He has committed an unforgivable wickedness.'

    b. Elle a proféré d' incroyables absurdités.

        she has uttered INDEF.PL incredible absurdities

        Lit.: 'She uttered incredible absurdities.'

    c. J' ai admiré les sublimes beautés du paysage.

        I have admired the sublime beauties of.the landscape

        Lit.: 'I have admired the sublime beauties of the landscape.'

The qualifying nature of the modifiers in the above examples is confirmed by the fact that they can occur predicatively and can accept adverbial modification.

(56) a. Ces méchancetés sont (vraiment) impardonnables.

        these wickednesses are (truly) unforgivable

        Lit.: 'These wickednesses are truly unforgivable.' (i.e. these wicked acts)

    b. Les absurdités qu' elle a proférées sont (franchement) incroyables.

        the absurdities that she has uttered are (frankly) incredible

        Lit.: 'The absurdities that she uttered are (frankly) incredible.'

    c. Les beautés du paysage sont (simplement) sublimes.

        the beauties of.the landscape are (simply) sublime
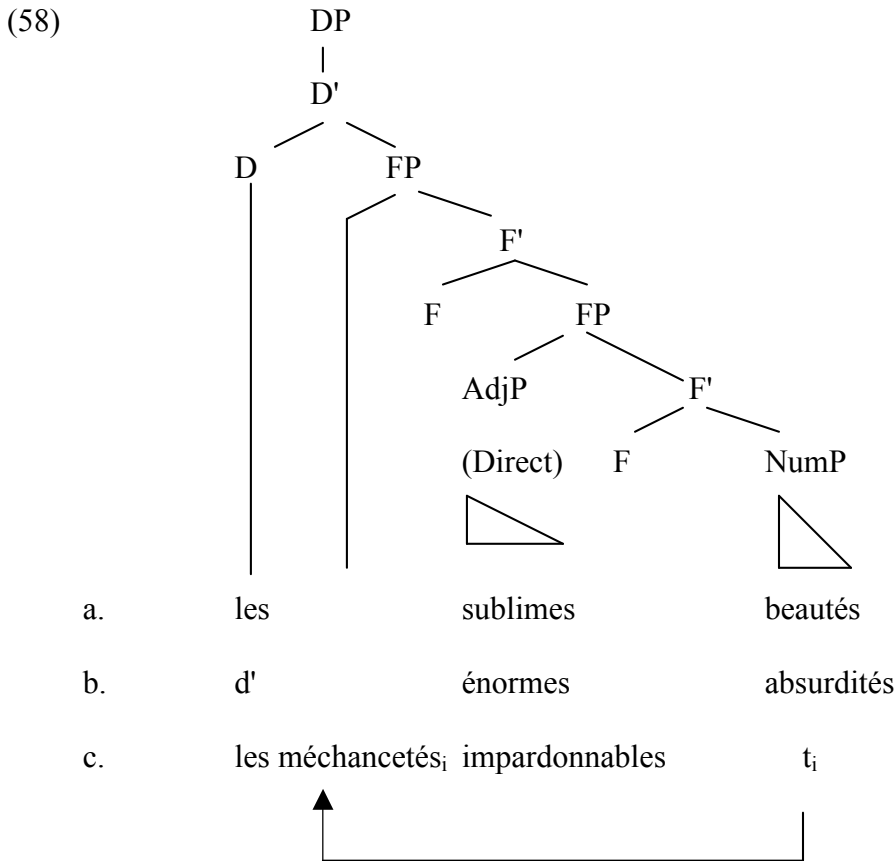
        Lit.: 'The beauties of the landscape are (simply) sublime.'

The adjectives in (55) may occur in prenominal as well as in postnominal position, as shown by (57).

(57) a. {une / des} (incroyable(s)) stupidité(s) (incroyable(s))

        {a / INDEF.PL} (incredible(PL)) stupidity(PL) (incredible(PL))

        Lit.: '{one /ø} incredible {stupidity / stupidities}', i.e. {one /ø} incredibly stupid word(s)

    b. {une / des} (impardonnable(s)) méchanceté(s) (impardonnable(s))

        {a / INDEF.PL} (unforgivable(PL)) wickedness(PL) (unforgivable (PL))

        Lit.: '{one /ø} unforgivable wickedness(es)', i.e. {one /ø} unforgivable wicked word(s)

c. {une / des}   (sublime(s))   beauté(s)   (sublime (s))
    {a / INDEF.PL}   (sublime(PL))   beauty(PL)   (sublime(PL))

They also allow an evaluative reading, *impardonnable* 'unforgivable' being construed as 'very serious', and *incroyable* 'incredible' as 'enormous'. Since they pattern like *gracieuse* 'graceful' and *épuisante* 'exhausting' with activity nominals (34), they deserve the same analysis, i.e. that of direct modifiers.

Consequently, the structure proposed in (29a) for qualifying modification of activity nominals in count use can also be used for the examples in (55), as shown in (58). When the adjectives occur postnominally, we will consider that NumP has moved to Spec FP (58c), as with activity nominals.

(58)

DP
|
D'
／＼
D   FP
      ＼
       F'
      ／＼
     F   FP
         ／＼
       AdjP   F'
             ／＼
    (Direct) F   NumP

a.   les   sublimes   beautés

b.   d'   énormes   absurdités

c.   les méchancetés$_i$ impardonnables   t$_i$

### 4.2. Modified quality nominals introduced by the partitive article

Let us now examine structures in which modified quality nominals are introduced by the partitive article. Recall from Section 3.1. that quality nominals lack NumP in their mass use. As a consequence, the adjectives modifying them can only merge above ClassP.

Now, concerning quality nominals referring to states, the question of a potential event structure has to be raised. According to Kratzer (1996), states display an event structure, syntactically encoded by a vP. Alexiadou (2011) and Borer (2005) consider that the possible insertion of *for* temporal adverbials proves the presence of an event structure. In the same vein, Grimshaw (1990) considers that modifiers such as *constant*, *frequent*, or subordinate clauses introduced by *in order to* reveal the presence of an event structure, which distinguishes event nominals, whether simple or complex, from results. The following examples show that quality nominals pass all these tests successfully:

(59) a. sa   méchanceté   {constante /   délibérée}
         his/her   wickedness   {constant /   deliberate}
         'his/her constant / deliberate wickedness'

b. son   agressivité   fréquente
    his/her   aggressivity   frequent
  'his/her frequent aggressivity'

c. la gentillesse de Paul dans le but d' amadouer   Marie
    the kindness   of Paul   in order to   coax   Mary
  Lit.: 'Paul's kindness in order to coax Mary'

d. sa   patience   pendant tout le   voyage
    his/her   patience   for   all   the   trip
  'his/her patience for the whole trip'

Consequently, we suggest that quality nominals, like activity nominals, merge under a ClassP dominating a vP projection:

(60)
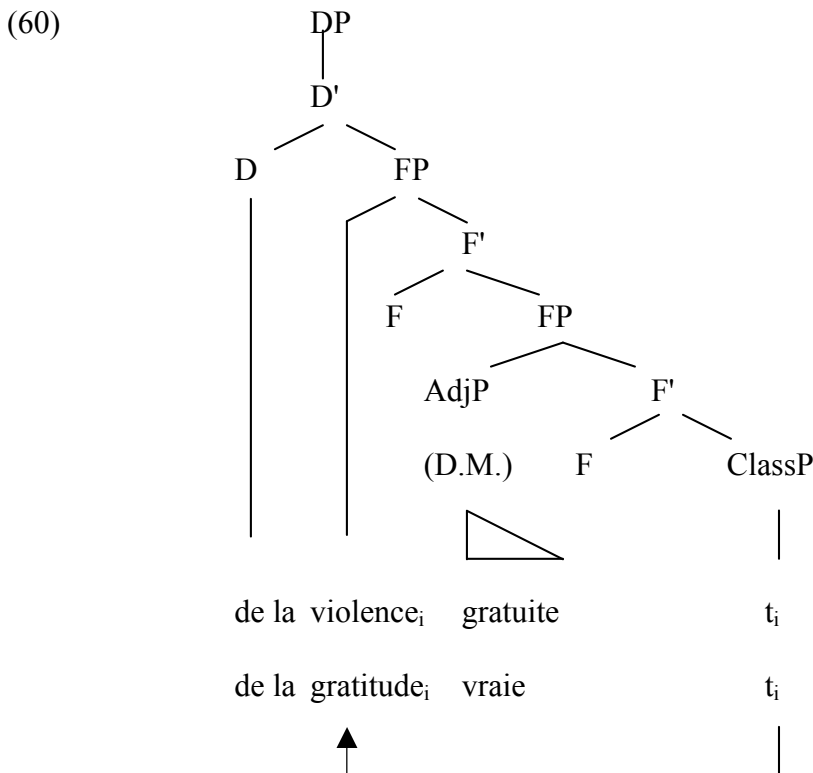
However, another possible question is why such structures are frequently considered unacceptable. In our opinion, this may be due to the fact that, in contrast to activity nominals or simple nouns, quality nominals do not present natural (i.e. objective) subclasses. According to Flaux & Van de Velde (2000, 77), qualities correspond to the final (i.e. lowest) elements of their taxonomy, and, as such, cannot be questioned by *quel* 'which':

(61)   ?? Quel courage as-tu?
          what   courage   have-you
       Lit.: 'What (kind of) courage do you have?'

In our view, this property is inherited from the corresponding adjectives, which do not allow subclassification, in contrast to colour adjectives, for example (62a):

(62) a. -De quel bleu est   ta   nouvelle   voiture ?
        - of   which blue is   your   new   car

 - Elle est {bleu marine / bleu outremer / bleu azur / ...}
 - it is {blue navy / blue ultramarine / blue sky / ...}
 '- Which blue is your new car?
 - It is {navy blue / ultramarine blue / sky blue / ...}'

vs.:b.?? - De quelle {méchanceté / douceur / bonté / violence / ...} a-t-elle fait preuve?
 - of which {wickedness / gentleness / goodness /violence / ...} has she shown
 '- Which {wickedness / gentleness / goodness / violence / ...} did she show?'

Since quality nominals do not display natural / objective subclassification, in this case, only adjectives expressing an already recognized form of the property can allow a taxonomic, i.e. subsective reading, and, consequently, accept the partitive article[10]. The reduced frequency of such strings is thus explained, and accounts for the common judgement that these structures are ill-formed.

4.3. Modified nominals introduced by the indefinite article
As we saw in the above sections, the partitive article is possible only with a reduced class of adjectives. Compare the following examples, in which the partitive article is unacceptable, to those in (53):

(63) a. Il a montré {un / *du} grand courage
 he has shown {a / *PART.ART.MASC} great courage
 'He has shown a great courage.'
 b. Elle a manifesté {une / *de la} patience exceptionnelle
 she has exhibited {a / *PART.ART.FEM} patience exceptional
 'She has shown an exceptional patience.'
 c. Tu as fait preuve {d'une / *d'} incroyable stupidité
 you have exhibited {of a / *of} incredible stupidity
 'You have shown incredible stupidity.'

The adjectives *grand* 'great', *exceptionnelle* 'exceptional' and *incroyable* 'incredible' have the same properties as those of examples (34-35), where they modify count activity nominals. Apart from *grand* which is strictly prenominal, they may occur either pre- or postnominally, and have an intensive value. Thus, the primary reading of e.g. *une incroyable stupidité* 'an incredible stupidity' is not 'a stupidity that cannot be believed' but 'a great stupidity'. Consequently, they qualify as evaluative adjectives in Cinque's (2010) terms, and deserve to be analyzed as direct modifiers.
In contrast, *inespéré* 'unexpected' and *injustifié* 'unjustified', which occur only postnominally and have no evaluative reading, qualify as indirect modifiers:

(64) a. Ils ont montré {un courage inespéré / une méchanceté gratuite}
 they have shown {a courage unexpected / a wickedness gratuitous}
 'They have shown {an unexpected courage / a gratuitous wickedness}'
 b. *Ils ont montré {un inespéré courage / une gratuite méchanceté}
 they have shown {an unexpected courage / a gratuitous wickedness}

Recall from (53c) that *méchanceté gratuite* 'gratuitous wickedness' can also be introduced by the partitive article, in this case referring to a previously established form of wickedness. When the indefinite is used instead of the partitive, the semantic difference lies in the fact that the adjective is used to qualify the wickedness exhibited in a particular situation, in other words, a particular instance of wickedness.
Consequently, we can conclude that modification of quality nominals parallels modification of activity nominals; in both cases, we find direct modifiers with a taxonomic / subsective value that

accept the partitive article, and others that allow an evaluative reading and are only compatible with the indefinite *un*. However, only examples of evaluative adjectives modifying activity nominals have been provided until now. Since evaluative (63), as well as indirect modifiers (64), are able to modify quality nominals in mass use, the same should be true for nouns denoting activities. The following examples (from a daily local newspaper and the Internet 'France' pages) show that this is indeed the case. Note that *savoureuse* 'tasty' (65), as a direct modifier, occurs either pre- or postnominally, and generally means 'very good' rather than 'that has a lot of (good or bad) taste'. Examples (66) are cases of indirect modification.

(65) a. Yannick   pratique une   cuisine savoureuse.
       Yannick   practices a   cooking   tasty
       'Yannick practices a tasty cuisine'
    b. ...où   l'on   pratique une   savoureuse   cuisine de   terroir
       ...where one   practices a   tasty   cooking of country
       '...where one practices a tasty traditional local cuisine'
    c. il a pratiqué   {un sérieux décapage / un décapage   sérieux}
       he has practised {a   serious scouring / a scouring   serious}
    Lit.: 'He undertook a serious scouring.' (i.e. a strong scouring)

(66) a. Ce jeune homme [...]   pratique une   danse   plutôt   méconnue du   grand
       this young man   [...]   practices a   dance   rather   unknown of.the   large
       public
       audience
       Lit.: 'This young man practices a dance (that is) rather unknown by a large audience.'
    b. Il y   pratique un   jardinage   respectueux de la nature
       he there practice a   gardening   respectful   of the Nature
       Lit.:'He practices there gardening respectful of Nature.'
cf.   c. *Il   pratique {une méconnue danse / un   respectueux   jardinage}
       he   practices {an   unknown   dance / a   respectful   gardening}

We are now able to provide a description of the combination of adjectives and determiners for activity as well as quality nominals. When in count use, both classes accept any class of adjectival modifiers, i.e. direct taxonomic and non-taxonomic, and indirect. When in mass use, only subsective / taxonomic modification allows the partitive article to be used; conversely, non-subsective direct as well as indirect modifiers coerce the replacement of the partitive by the indefinite *un(e),* a fact that deserves taking into account.

In fact, both Kleiber (2003) and Kupferman (2004) attempted to provide a semantic explanation for this constraint.

According to Kupferman (2004), the referent of the modified mass noun has to stand in a part-whole relation with that of another noun in the sentence for *un(e)* to appear in the case of modification by a characterizing adjective (a qualifying adjective in our terms); this is indeed the case in the following example where *eau* 'water' is necessarily understood as *eau du lac* 'lake water':

(67) Le   lac   avait ce jour-là {une /   *de l'}   eau   verdâtre.
    the   lake   had   that day   {a /   *PART.ART.FEM} water greenish
    Lit.: 'The lake had that day a greenish water.' (Kupferman 2004, 77)

Kupferman applies this analysis to quality nominals, which he analyzes as abstract parts of (human) referents, as exemplified by the parallel between (67) and (68) (see also Van de Velde 1995, Flaux & Van de Velde 2000, Beauseroy & Knittel 2007, Beauseroy 2009):

(68) Notre concierge manifestait une   grande éloquence
      our   concierge exhibited   a   great   eloquence
      Lit.: 'Our concierge exhibited a great eloquence.' (Kupferman 2004, 87)

Yet, the condition requiring a part-whole relationship seems to be too strong for activity nominals (65-66), which cannot be analyzed in this way.

On the other hand, Kleiber's (2003) explanation relies on the idea that the instance of the modified noun has to be delimited spatiotemporally for *un(e)* to appear. In the case of example (67), it is precisely the reference to *lac* 'lake' that enables the spatiotemporal delimitation of the noun's (i.e. *eau* 'water') referent. This spatiotemporal delimitation is what distinguishes this kind of structure from those where the adjective enables reference to a subkind. In (67), the adjective is used to qualify a precise instance of spatiotemporally delimited water. The result of this process is to bring about an individualizing reading[11], as Kleiber calls it, which, in turns, entails a specific reading of the noun *eau* 'water'.
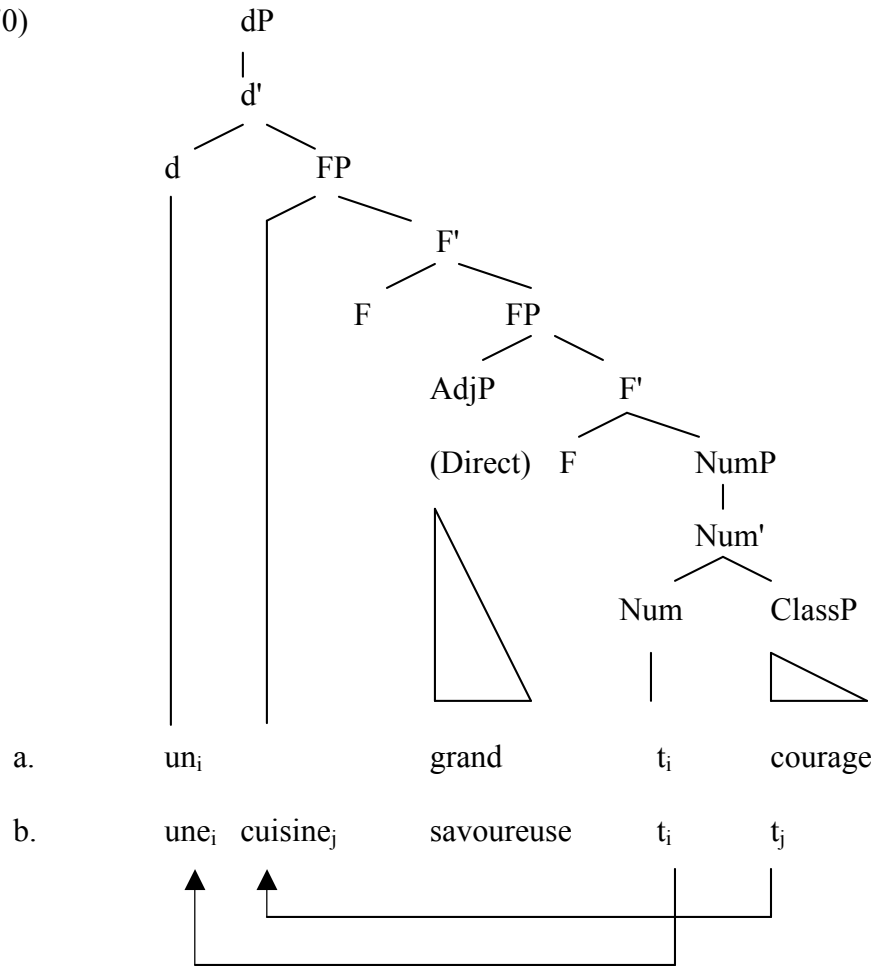
However, this explanation is only partially valid, since modified nominals introduced by *un(e)* can also be found as generic subjects, which are not spatiotemporally anchored[12]:

(69) a. Une grande patience   est   nécessaire avec les   enfants
         a   great   patience   is   necessary with the   children
         Lit.: 'A great patience is necessary with children'
     b. Un   vrai courage permet de   braver toutes les   épreuves
         a   true courage allows to   face   all   the   ordeals
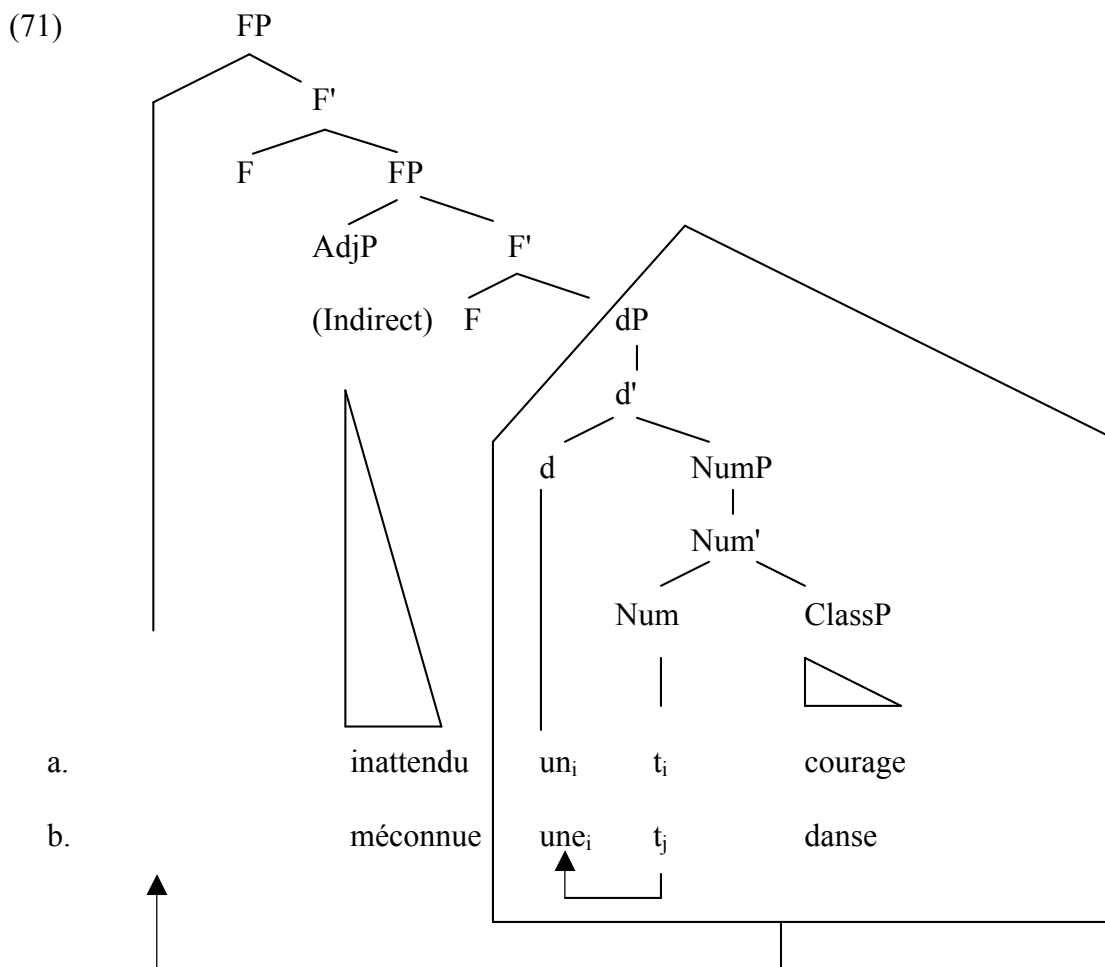   Lit.:'A true courage allows facing all the ordeals.'

Leaving aside the idea of spatiotemporal delimitation, and taking Kleiber's argument the other way round, we suggest that the partitioning of a mass referent is a necessary condition for a non-subsective adjective to appear, this partitioning effect being due to the presence of NumP, as suggested by Borer (2005, Chapter 4). According to Borer, NumP[13] is fundamentally a partitioning projection; its effect is to divide nouns, which primarily denote mass entities, into individuals, thus enabling the identification of particular occurrences of a given mass noun. In the cases under examination here, the occurrence of the mass noun distinguished by NumP is then given a particular qualitative feature by the adjective, giving rise to a referent distinct from that which is referred to by the unmodified noun. Still following Borer's analysis, we can consider that the indefinite singular article, which has both a dividing and a counting function, by contrast with other numerals, is generated under NumP and moved to the position of quantifiers, #P. On the other hand, Cinque (2010) suggests that weak indefinites merge under a specific projection labelled dP, which is inserted between the FPs of direct and indirect modification.

Taking both analyzes into account, we suggest that *un(e)* is generated under NumP and moved to dP, as in (70):
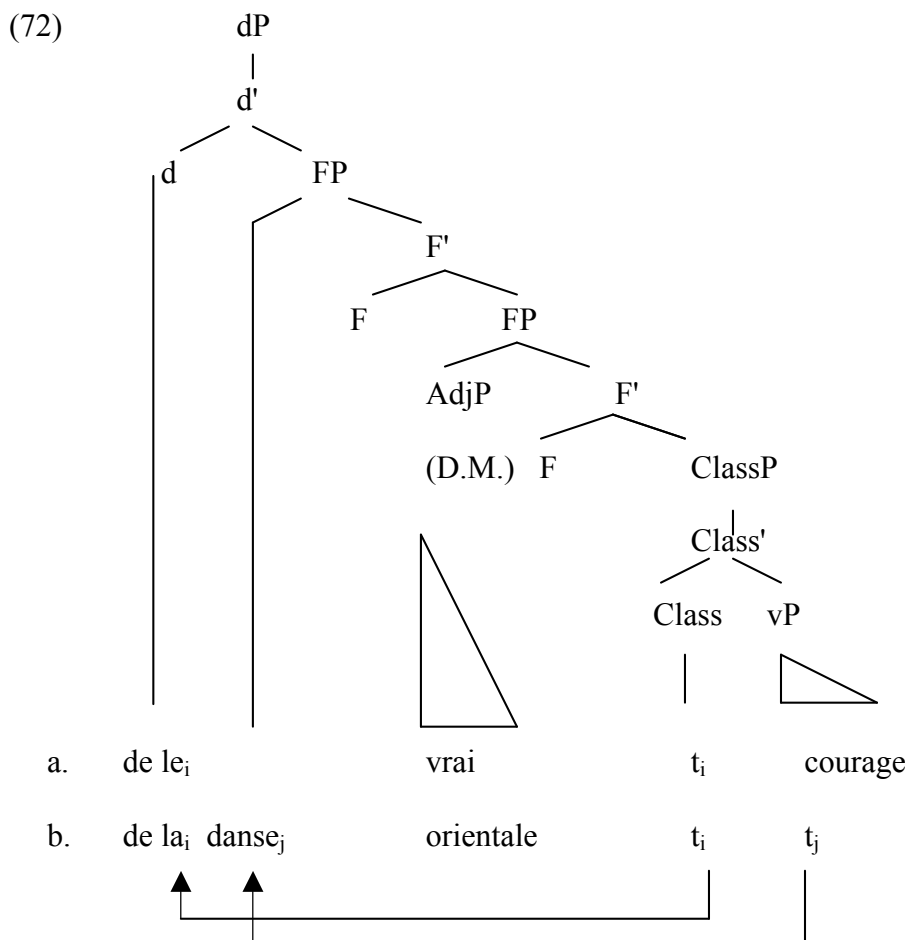
(70)

```
                          dP
                          |
                          d'
                       /     \
                    d           FP
                           /        \
                                      F'
                                   /      \
                                  F        FP
                                        /       \
                                     AdjP        F'
                                               /     \
                                   (Direct)   F       NumP
                                                        |
                                                       Num'
                                                      /     \
                                                   Num       ClassP
```

a.   un_i   grand   t_i   courage

b.   une_i cuisine_j   savoureuse   t_i   t_j

This analysis also accounts for indirect modification, the only difference being that the adjectival projections merge above dP.

(71)

```
                    FP
                   /  \
                  /    F'
                 /    /  \
                /    F    FP
               |        /   \
               |     AdjP    F'
               |       |    /  \
               |   (Indirect) F   dP
               |              |    |
               |              |    d'
               |             /    /  \
               |            /    d    NumP
               |           /     |     |
               |          /      |    Num'
               |         /       |   /    \
               |        /       Num    ClassP
               |       /         |
               |      /          |
        a.         inattendu    un_i   t_i      courage

        b.         méconnue     une_i  t_j      danse
```

Finally, the above analysis raises the question of the status of the partitive article. As we have seen above, this determiner appears with activity and quality nominals in two cases: when they are unmodified or when they are associated with taxonomic / subsective adjectives.

The major morphosyntactic peculiarity of the partitive lies in the fact that it is made up of two parts: *de*, originally a preposition (see Carlier 2007), which is considered as a quantifier by Kupferman (2004) and Zribi-Hertz (2006), and a definite article, *la* in the feminine and *le* in the masculine, *de+le* being expressed as *du*[14]. Following Kupferman, and in the terms of our analysis, let us assume that *de*, as a quantifier, merges under dP. Now, despite the fact that *le / la* have the form of definite articles, they cannot allow such an analysis when they occur in partitives, which are indefinites[15]. One possible interpretation is that they are gender markers since, in French, in contrast to Italian or Spanish, for example, nouns do not exhibit gender marking, gender being only expressed by the article form in the singular. As such, they could merge under ClassP, and then move to dP, giving rise to the partitive, as shown below (72):

(72)

dP

d'

d   FP

F'

F   FP

AdjP   F'

(D.M.)   F   ClassP

Class'

Class   vP

a.   de le$_i$ vrai   t$_i$ courage

b.   de la$_i$ danse$_j$ orientale   t$_i$ t$_j$

5. CONCLUSION

In this article, we have argued that an accurate description of French modified abstract nouns such as quality and activity nominals must rely on the interaction between the presence of NumP, dP and the positions of adjectival projections in the functional structure of the noun.

We first showed that qualifying modification, whether direct or indirect in Cinque's (2010) terms, occurs only if the nouns exhibit number inflection, that is, when NumP is present in the functional nominal structure. Since NumP is restricted to activity and quality nominals with a specific interpretation, that is, to nouns occurring in non-generic and non-incorporated contexts, qualifying modification is restricted to such uses.

In contrast, taxonomic modification, which corresponds to the expression of subkinds, is independent of the presence of NumP and does not rely on the interpretation the quality and activity nominals receive. To account for these distributional properties, we hypothesize that, whereas taxonomically used adjectives select the nominal projection ClassP, qualifying adjectives necessarily select NumPs as their complements.

Yet activity and quality nominals also accept direct and indirect qualifying modification while keeping their eventive interpretation, provided they are introduced by the singular indefinite article instead of the partitive. Elaborating on Borer's (2005) analysis, we propose that the indefinite *un(e),* which merges under NumP, allows partitioning of the mass referent. In this case, the adjective qualifies the instance of the noun distinguished by the means of *un(e)*.

A final desirable consequence of the analysis proposed here is that no special stipulation is needed to account for the behaviour of quality and activity nominals with regards to modification, since it arises from independent adjectival (i.e. taxonomic vs. qualifying reading) and nominal (i.e. the mass / count distinction) properties.

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ENDNOTES

[1] Some nouns can be preceded by a definite article in such contexts; in these cases, the sentences can exhibit telic aspect, depending on the noun:

(i) J'ai fait {le ménage / la lessive / la vaisselle} en dix minutes.
I have done {the housework / the laundry / the dishes} in ten minutes
'I did {the housework / the laundry / the dishes} in ten minutes.'

(ii) J'ai fait {le ménage / la cuisine} pendant une heure.
I have done {the housework / the cooking} for one hour
'I did {the housework / the cooking} for one hour.'

[2] 'Taxonomic' is synonymous with Knittel's (2005) 'typifying', and corresponds roughly to the label 'classifying' used in Kupferman (2004).

[3] From a semantic point of view, *danse* in (17a) and *marche* in (17b) allow a resultative rather than an eventive reading. Yet, since they accept aspectual modification (cf. *les marches régulières* 'the regular walks'), they cannot be classified in Grimshaw's (1990) 'result nominals' class. In (17c), the nouns are understood as the instruments required to practise the sport *(moto, cheval)* or artistic activity *(piano)*.

[4] In negative contexts, *de* alone is generally used instead of the full form (i.e. *de* +definite article) of the partitive article to introduce mass nouns. The partitive article can however be used in contrastive contexts:

(i) Je n'ai pas fait de la danse, mais du jardinage
I Neg-have not done PART.ART.FEM dance, but PART.ART.MASC gardening
'I have not done any dancing, but some gardening'.

[5] Incorporated nouns generally appear without a determiner. Yet, cases of determinerless nouns are very restricted in French: partitive articles are used where other languages use bare nouns, as shown by Dobrovie-Sorin & Laca (2003). Consequently, we can hypothesize that the presence of the partitive article does not prevent incorporation in French, a situation reminiscent of Maori, where a particular determiner is used with incorporated nominals (Polinsky 1992, Chung & Ladusaw 2003).

[6] The possibility of taxonomic modification, as well as the presence of the partitive determiner discussed in section 2.2.2., shows that we are dealing with pseudo-incorporation (i.e. incorporation of maximal projections). See Massam (2001) for a discussion.

[7] N to Num movement was originally proposed to account for the postnominal placement of adjectives (Cinque 1994) and noun complements (Valois 1991) in Romance; when raising to Num, the noun would move over adjectives and complements, causing them to surface postnominally. However, as observed by Lamarche (1991) and Laenzlinger (2005), this analysis is unable to account for the adjectives that surface both pre- and postnominally, since it would imply optional N movement. Moreover, as noted by Laenzlinger, an XP-movement accounts more accurately for cases such as (ii), where the adjective necessarily occurs after the noun's complement:

(i) une immense maison / une maison$_i$ immense t$_i$
a huge house / a house huge
'a huge house'

(ii) un [homme d'église]$_i$ français t$_i$ / *un homme$_i$ français t$_i$ d'église
a man of church French / a man French of church
'a French clergyman'

[8] Note however that *beaucoup* can receive allows the habitual reading of *souvent* 'often' when combined with an S-level adjectival predicate:

(i) a. Il   est beaucoup   malade   (ces temps-ci).
       he   is   a lot   ill   (these times)
    Lit: 'He has been a lot ill these days.'
= b. Il   est   souvent malade   (ces temps-ci).
       he   is   often   ill   (these times)
    'He is often ill these days.'

[9] As shown in (52b), the partitive article is not realized phonologically when it follows the preposition *de* 'of', due to the so-called 'cacophony rule' already observed by the Port-Royal grammarians in the 17th century (see Gross 1967). This prepositional *de* should not be confused with the reduced form of the partitive article, which also surfaces as *de* in (52d) due to negation (see note 3).

[10] Modification of generics by such adjectives is possible, providing a further argument in favour of our analysis. However, since the partitive is generally impossible in subject position, such strings are introduced by the definite article:

   (i) La   vraie gratitude   est   rare.
       the   true   gratitude   is   rare
       'True gratitude is rare.'

[11] Our translation of *lecture individualisante*.

[12] We thank the anonymous reviewer of *Studia Linguistica* for having pointed this out.

[13] Borer labels this projection CLP.

[14] *de* also enters in the plural indefinite article form, which is realized as *des* in the unmarked cases. This form can be accounted for by considering that *de* is combined with the plural marker *-s* merged under NumP and moved to dP, the gender marker generally being neutralized in the plural forms of French determiners.

[15] For the string *de+la* in a sentence such as (i), there are two different underlying structures, distinguished by their interpretations:

   (i) J'ai mangé de la glace
      (a)   I ate some ice cream.
      (b)   I ate some (part of) the ice cream.
The partitive article proper only occurs in the structure corresponding to the (a) reading. When (i) receives the (b) reading, *la* is a definite determiner, and alternates with other determiners: 'j'ai mangé de {ta / cette} glace': *I ate some (part of) {your / this} ice cream.*) *De* is closer to a preposition, as show by the fact that it has to occur with the corresponding interrogative pronoun, see the contrast in (ii) / (iii):

   (ii)   De quoi as-tu mangé?   [(b) reading]
   Lit.: 'Of what did you eat?'
   (iii)   Qu'as-tu mangé?   [(a) reading]
          'What did you eat?'
See Kupferman (2004), Zribi-Hertz (2006) for a discussion.