



Possession vs pseudo-incorporation in the nominal domain: evidence from event nominals dependencies

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► To cite this version:

Marie-Laurence Knittel. Possession vs pseudo-incorporation in the nominal domain: evidence from event nominals dependencies. 2009. hal-00418072

HAL Id: hal-00418072

<https://hal.science/hal-00418072>

Preprint submitted on 17 Sep 2009

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POSSESSION VS PSEUDO-INCORPORATION IN THE NOMINAL DOMAIN:**EVIDENCE FROM EVENT NOMINALS DEPENDENCIES****MARIE LAURENCE KNITTEL****NANCY-UNIVERSITÉ / UMR 7118 ATILF****1. Introduction**

This paper aims to examine the syntactic behaviour of French Event nominals, whose main peculiarity lies in the fact that they result from verb nominalizations.

The proposal which is put forward is that event-denoting nominals do not exhibit any peculiarities at the syntactic level, contrary to what Grimshaw (1990) claims. It will be shown that the special behaviour of these nouns is simply due to the fact that they generally occur as lexical heads of possessive DPs (Szabolci 1981; Kayne 1993), and that their alleged syntactic properties, such as obligatory complements and the necessary use of definite articles to introduce them, are in fact due to the possessive construction itself.

The paper also examines the behaviour of the complements of event nominals, which appear either as full-fledged DPs, or as morphosyntactically deficient constituents. In the latter case, they exhibit the typical properties of pseudo-incorporated NPs (Massam 2001), such as number neutrality and adjacency to the head they incorporate into. A unified syntactic analysis of both kinds of complements is suggested, relying on the hypothesis that the element *de* regularly occurring between the head noun and its complement is the head of a Rel(ational) P(rojection) enabling nouns to take nominal dependencies.

This is how the paper is organized. Section 2 reviews the properties of Complex and Simple Event nominals put forward by Grimshaw (1990), and shows that they apply in French as well as in English. Section 3 is dedicated to the examination of the determiner system of French event nominals, and provides arguments in favor of the hypothesis developed in Section 4, namely that the alleged properties of event nominals are better analyzed as properties of any

DP occurring as the head of a possessive construction. Section 5 focuses on determinerless complements of event nominals, and compares them to pseudo-incorporated elements. In Section 6, the basis of a syntactic analysis of event nominals as relational nouns is set up, and further developed in Section 7.

2. Evidence for CENS in French

The notion of "complex event nominal" (henceforth CEN) has been put forward by Grimshaw (1990), who distinguishes between two types of nouns resulting from verb nominalizations¹.

According to this author, CENs, as opposed to SENs (i.e. simple event nominals), possess an event structure, which enables them to have an argument structure. In other words, only CENs keep the argument structure of the verb they are built on.

As a consequence, CENs denote only processes, as opposed to SENs, that may denote processes or results. Among process nominals, CENs can be identified by the fact that they admit the same aspectual modifiers as the corresponding verbs (1) as well as infinitival purpose clauses (2), contrary to SENs (3–4):

1. a. The city was totally destroyed [in two days] / *[for two days].
 b. the total destruction of the city [in two days] / *[for two days].

(Grimshaw 1990: [28])

2. the translation of the book [in order to make it available to a wider readership]

(Grimshaw 1990: [26])

3. a. They danced *[in two days] / [for two days].
 b. the dance *[in two days] / *[for two days]

(adapted from Grimshaw 1990: [33])

4. *the dance [in order to keep the audience waiting]

1

(adapted from Grimshaw 1990: [27])

As shown by the following examples, the French counterparts of (1–4) exhibit the same behaviour:

5. a. *La ville a été totalement détruite [en deux jours] / *[pendant deux jours].* (= [1a])
 - b. *la destruction totale de la ville [en deux jours] / *[pendant deux jours]* (= [1b])
6. *la traduction du livre [pour le rendre disponible à un plus grand public]* (= [2])
7. a. *Ils ont dansé *[en deux heures] / [pendant deux heures].* (= [3a])
 - b. *la danse *[en deux heures] / *[pendant deux heures]* (= [3b])
8. *?? la danse [dans le but de faire attendre le public]* (= [4])

Grimshaw proposes other tests to distinguish CENs from SENs in English. Among these, some can be applied to French data,² and thus confirm that CENs do exist in French too.

A first test having to do with aspect is provided by the fact that modifiers inducing an habitual reading when occurring in the VP, such as *constant* or *frequent*, may only occur with CENs. As shown by (9b), their presence is restricted to constructions where the object of the nominalized verb is expressed too:

9. a. The frequent expression of one's feelings is desirable.
 - b. *The frequent expression is desirable.

(Grimshaw 1990: [7])

According to Grimshaw, these examples reveal that *expression* in (9a) is a CEN, whereas it is not in (9b). Examples (10) show that the same observation holds for French:

10. a. *l'expression fréquente de ses sentiments est recommandée.* (= [9a])
 - b. *?? l'expression fréquente est recommandée.* (= [9b])

Grimshaw deduces from such examples that objects of CENs are obligatory when they are obligatorily required by the corresponding verbs. In French however, CEN objects may

remain unexpressed if they have been previously mentioned, a case not observed by Grimshaw for English:

11. a. *En ce qui concerne l' alcool, la vente est interdite, mais la consommation*
 in that what regards the alcohol, the sale is forbidden, but the drinking
 reste autorisée.
 remains authorized

Lit.: 'As for alcohol, selling is forbidden but drinking remains authorized.'

- b. *J' ai visité sa nouvelle maison. Savais-tu que la construction*
 I have visited his / her new house. know-PAST you that the building
 a duré six mois ?
 has lasted six months ?

Lit.: 'I visited {his / her} new house. Did you know that its construction has lasted for six months?'

Grimshaw also shows that agent realization by *by*-phrases provides another test for CENs. Examples (12) show that in English, agents can be introduced by 'by' only if objects are realized too; (13) indicate that the same is true for agents introduced by *par* in French:

12. a. the expression [of aggressive feelings]_{Object} [by patients]_{Agent}
 b. *the expression [by patients]_{Agent}
 (Grimshaw 1990: [14])
13. a. *l'expression [de sentiments d'agressivité]_{Object} [par les patients]_{Agent}* (=[12a])
 b. **l'expression [par les patients]_{Agent}* (=[12b])

Another test is provided by the fact that agent-oriented adjectives can modify CENs only. As a result, they can occur in examples such as (12a) and (13a) but not in (12b) and (13b):

14. a. the uncontrolled expression of aggressive feelings by patients
 b. *the uncontrolled expression by patients
 (adapted from Grimshaw [1990: 51])

15. a. *l'expression incontrôlée de sentiments d'agressivité par les patients* (= [14a])
 b. **l'expression incontrôlée par les patients* (= [14b])

Finally, CENs can only be introduced by definite or zero article in English, contrary to SENs, which admit numerals, indefinite articles and demonstratives:

16. a. They studied {the / one / that / an} assignment. SEN
 b. They observed {the / *one / *that / *an} assignment of the problem. CEN
 c. ∅ Assignment of long problems always causes difficulties. CEN
 (Grimshaw 1990: [17])

Note however that bare nouns are much more restricted in French than in English (see Curat 1999; Bouchard 2003; Roodenburg 2004; Dobrovie-Sorin and Laca 2003 for a discussion), and that CENs themselves do not allow zero determiners, as (17) shows when compared to its English equivalent (16c):

17. **(La) distribution de long-s problèmes cause toujours des*
 (the) assignment of long-PL problems cause always INDEF.PL
difficultés.
 difficulties
 'Assignment of long problems always causes difficulties.'

We will pay closer attention to the determination of French nominalizations in the following section.

3. French Event nominals and determiners

In Grimshaw's (1990) analysis, the use of the definite article to introduce CENs is a fairly important property since it reveals that the CEN appears in its regular use. Conversely, if a CEN is introduced by another determiner, this reveals that it has undergone a type shifting process (Grimshaw 1990: 55). From the semantic point of view, shifted CENs are understood

as if denoting cases or instances of the event referred to by the noun. The following examples (from Grimshaw 1990: 55) illustrate this point:

18. a. They observed that assignment of the problem.

= b. They observed that {case / instance} of assignment of the problem.

This observation applies to French CENs too. However, two distinct behaviours are observed.

In the case of *construction* 'building', the shifted reading is better expressed by the introduction of a classifier of some sort, such as *opération* 'operations' or *campagne* 'campaign':

19. a. *Cet architecte supervise la construction de deux nouveaux hôpitaux.*

this architect oversees the building of two new hospitals

'This architect is overseeing the building of two new hospitals.'

b. *?(?) Cet architecte a supervisé {une / plusieurs} construction(s) d' hôpitaux.*

this architect has overseen {one / several} building(PL) of hospitals

'This architect has overseen several hospital buildings.'

= c. *Cet architecte a supervisé {une / plusieurs} {opération(s) / campagne(s)} de*

this architect has overseen {one / several} {operation(PL) / campaign(PL)} of

construction d' hôpitaux.

building of hospitals

'This architect has overseen {one / several} {operation(s) / campaign(s)} of hospital building.'

For others, such as *attaque* 'attack' for example, no classifier is needed: the shifted reading is readily available:

20. a. *Des loups affamés ont entrepris l' attaque d'animaux isolés.*

INDEF.PL wolves hungry have undertaken the attack of animal-PL isolated

'Hungry wolves have undertaken the attack of (=against) isolated animals'.

b. *Des loups affamés ont entrepris {une / plusieurs} attaque(s) d'*

INDEF.PL wolves hungry have undertaken {one / several} attack(PL) of
animaux isolés.

animal-PL isolated

'Hungry wolves have undertaken {one / several} attack(s) of (=against) isolated animals'.

Several other syntactic differences distinguish the above examples.

First, CENs such as *attaque* exhibit number variation when indefinite, as shown in (20b), and also when introduced by definite articles (21b). This is not the case for *construction*, whatever its determiner is (19b, 21a):

21. a. ?? *Les construction-s de nouveaux hôpitaux ont provoqué des*
 the-PL building-PL of new hospital-PL have provoked INDEF.PL
polémiques.
 polemics.

lit. 'The buildings of new hospitals have caused polemics.'

- b. *Les attaque-s d'animaux isolés se sont multipliées dans la région.*
 the-PL attack-PL of animal-PL isolated REFL are multiplied in the area
 'The attacks of (=against) isolated animals have increased in the area.'

Second, the morphosyntactic properties of CEN complements vary according to the determiner introducing the whole structure. The following examples show that indefinite plural complements of definite CENs appear as undetermined nominals, which we note by using *e* for the unrealized determiner:

22. a. *Cet architecte supervise la construction {d'un / du} nouvel hôpital.*
 this architect oversees the building {of a / of.the} new hospital
 'This architect oversees the building of {a / the} new hospital.'

- b. *Cet architecte supervise la construction {de e / des} nouveaux hôpitaux.*
 this architect oversees the building {of e / of.the.PL} new hospital-PL
 'This architect oversees the building of { \emptyset / the} new hospitals.'

c. **Cet architecte supervise la construction de e nouvel hôpital.*

This architect oversees the building of e new hospital

23. a. *Des loups ont entrepris l' attaque {d'un / de l'} animal blessé.*

INDEF.PL wolves have undertaken the attack {of a / of.the} animal wounded

'Wolves have undertaken the attack of {a / the} wounded animal.'

b. *Des loups ont entrepris l' attaque {d' e / des} animaux blessés.*

INDEF.PL wolves have undertaken the attack {of e / of.the.PL} animal-PL wounded

'Wolves have undertaken the attack of {ø / the} wounded animals.'

c. **Des loups ont entrepris l' attaque d' e animal blessé.*

INDEF.PL wolves have undertaken the attack of e animal wounded

Indefinite (i.e. shifted) CENs also admit bare complements. However, contrary to those occurring as definite CEN complements, they exhibit number variation:

24. *La ville a entrepris {une / des} (campagne(s) de) construction(s) d'*

the city has undertaken {a / INDEF.PL} campaign(PL) of building of
{hôpital / hôpitaux}.

{hospital / hospital-PL}

'The city has undertaken {a campaign / campaigns} {of hospital building / of
building of hospitals}.'

25. *Les éleveurs ont filmé {une / des} attaque(s) {d'animal blessé / d'animaux*

the-PL breeders have filmed {a / INDEF.PL} attack(PL) {of animal wounded / of animal-PL
blessés}.

wounded-PL}

Lit.: 'The breeders have filmed {an attack / attacks} against wounded {animal /
animals}.'

As for CEN determined complements, they are subject to distributional variation depending on the CEN itself. Examples (26–27) show that number variable CENs do not admit indefinite singular complements, whereas CENs requiring quantifiers do not admit complements at all:

26. *Les éleveurs ont filmé {une / plusieurs} attaque(s) {d'un animal / de l'animal /*
 the-PL breeders have filmed {a / several} attack(PL) {*of an animal / of the animal /
des animaux} (par des loups).

of.the animal-PL} (by INDEF.PL wolves)

lit. 'The breeders have filmed {an attack / several attacks} {*of an animal / of the animal / of animals} (by wolves).'

27. a. ?? *La ville a entrepris une (opération de) construction {d'un hôpital /*
 the city has undertaken a (operation of) building {of an hospital /
de l'hôpital / des hôpitaux}.

of the hospital / of.the hospital-PL}

'The city has undertaken a building (operation) {of a hospital / of the hospital / of the hospitals}.'

- b. * *La ville a entrepris plusieurs (opérations de) construction(s) {d'un*
 the city has undertaken several (operation of) building(PL) {of an
hôpital / de l'hôpital / des hôpitaux}.

hospital / of the hospital / of.the.PL hospital-PL}

Lit.: 'The city has undertaken several building operations {of a hospital / of the hospital / of the hospitals}.'

Note finally that both kinds of indefinite nominalizations may appear without complement:

28. a. *La ville a entrepris {une (vaste campagne de) construction / plusieurs*
 the city has undertaken {a (vast campaign of) building / several
contruction-s}.

building-PL

Lit.: 'The city has undertaken {a (huge campaign of) construction / several construction projects}.'

- b. *Les éleveurs ont filmé {une / plusieurs} attaque(s).*

the- PL breeders have filmed {one / several attack(PL)

'The breeders have filmed {one / several} attack(s).'

Grimshaw (1990) provides a straightforward explanation for such data. Recall that shifted (i.e. indefinite) CENs behave like SENs. SENs in turn do not have arguments. As a consequence, no indefinite nominalization, whether it originates as a simple or a complex event nominal, can have arguments.

To sum up, we have first shown that French CENs behave in the same manner as their English equivalents, apart from the fact that they have to be introduced by overt determiners, which is not always the case in English. This property is rather to be analyzed as pertaining to the determiner systems of the considered languages rather than that of CENs properly.

The shifted reading noticed by Grimshaw for English CENs is also observed in French. For some nouns, it is directly available, while for others a classifier is generally used. As a consequence, only CENs of the first kind exhibit number variation. They thus behave as count nouns, while CENs preferably appearing with classifiers, which cannot be introduced by *un* nor pluralized, behave as mass nouns.

CEN complements also exhibit interesting properties. Indefinite plural nouns occurring as definite CEN complements appear as bare nouns (22, 23), since the article *des*, used in French to introduce indefinite plural nouns, is ungrammatical in such structures:

29. a. *Ils construisent {des / *∅} maisons.*

they build {INDEF.PL / ∅} houses

'They are building houses.'

b. *la construction de (*des) maisons*

the building of (*INDEF.PL) houses

'building of houses'

c. *l' attaque d' (*des) animaux*

the attack of (*INDEF.PL) animals

'attack of (=against) animals'

This fact is also observed for indefinite mass nouns, normally introduced by the so-called 'partitive article' *du*_{Masc} / *de la*_{Fem}, but occurring without a determiner when complements of definite CENs:

30. a. *Ils produisent du pétrole.*

they produce PART.ART petrol

'They are producing petrol.'

b. *la production de (*du) pétrole*

the production of (*PART.ART) petrol

'the production of petrol'; 'petrol production'

Interestingly, bare nouns naturally receive indefinite mass and plural interpretations in English, where their distribution is not restricted, contrary to French.

Shifted CENs exhibiting the 'instance' reading admit bare singular and plural complements (24–25), as well as mass nouns, as shown under (31):

31. *Une production de pétrole insuffisante pourrait poser des problèmes*

a production of petrol insufficient could cause INDEF.PL problems

d'approvisionnement.

of supply

'An insufficient (level of) petrol production could cause supply problems.'

Indefinite CENs exhibiting the instance reading also impose other restrictions upon the determination of their complements. As we have seen, all nominalizations do not admit the same type of complements. The 'mass type' (i.e. *construction*) only admit bare complements (27), contrary to the 'count' type (*attaque*), which takes any complement, except indefinite singular complements if the head noun itself is also indefinite singular (26). Both nouns types may, however, be used without any complement at all.

We are thus faced with a series of questions concerning the distribution and the interpretation of bare nouns occurring as complements of the various types of event nominals described

above. First of all, note that the fact that CENs can be shifted somewhat blurs the distinction first established by Grimshaw between various types of event nominals. Recall that, according to this author, this peculiar class of nouns is fundamentally ambiguous: even when they exhibit an abstract reading, event nominals may be simple or complex. If complex event nouns are distinguished by a series of syntactic properties, do they keep their complex nature when deprived of those properties while keeping the same event reading? In other words, do shifted complex nominals still keep their argument structure? Grimshaw does not seem to provide any clear answer to this question.

In what follows, we will adopt a different point of view. More precisely, we will not use this distinction as a basis for our analysis. Rather, we will show that such a phenomenon is not typical of event nominals, and that it does not pertain to the event-referring character of the nouns examined here. We will show that a purely syntactic analysis is able to account for the distributional variations observed, especially those regarding the determination of event nominals and that of their complements, as well as the differences observed.

In the following section, we will pay close attention to event nominals introduced by definite articles, and suggest analyzing them as possessive DPs. As we will see, our analysis will provide an appropriate framework to explain the behaviour of some of the above examples.

4. CENS as heads of possessive DPs

In this section, we are going to see that determiner selection, a property assigned to CENs by Grimshaw, can be viewed as a consequence of the regular use of French CENs as lexical heads of possessive DP.

4.1. Possessive DPs

Possessive DPs have been subject to a vast amount of studies (see in particular Coene and D'hulst 2003, as well as den Dikken 1999, among many others). In this paper, I will adopt the

syntactic analysis developed by Szabolci (1981, 1983, 1992, 1994), Kayne (1993, 1994) and Zribi-Hertz (1998), and rely on Milner's (1982) and Godard's (1986) description of French data.

The basic idea leading the syntactic approach adopted here is that possessive DPs are parallel to sentences. According to Szabolcsi and Kayne, possessive sentences and possessive DPs have the same underlying structure. Possessive DPs exhibit in particular an Agr(eement) P(rojection) parallel to that of sentences. In English, the Agr head is realized, according to Kayne, by the so-called genitive marker 's and cliticizes to the noun denoting the possessor:

32. John's_{Agr} book

In Hungarian, the Agr head is realized on the noun denoting the Possessee as an inflectional suffix encoding the Person and Number features of the Possessor, which in turns appears in the nominative case:

33. a. *az én ház-am*
 the pro.1SG.NOM house-1SG
 'my house'
- b. (a) *János-Ø ház-a*
 (the) John-NOM house-3SG
 'John's house'

In French as well as in other Romance languages, the situation is at first sight different, since no Agreement marker surfaces in possessive DPs:

34. *le livre de Marie*
 the book of Mary
 'Mary's book'

In such structures, *de* is analyzed as a genitive marker by Milner (1982) and Zribi-Hertz (2003a). In some languages, genitive case is obviously checked by Agr. As an illustration,

consider the case of Turkish (Knittel 2007). It can be seen from the contrast between (35b) and (35c) that genitive case cannot appear if Agr does not:

35. a. *Hasan-In kitab-I-∅*

Hasan-GEN book-POSS-3SG

'Hasan's book'

b. *sen-In kitab-I-n*

you-GEN book-POSS-2SG

'your book'

c. * *sen-In kitab-(I)*

you-GEN book-(POSS)

We will assume for the moment that French parallels Turkish, and consider that genitive case is assigned by a phonetically unrealized Agreement head. The complete structure of French possessive DPs will be further discussed in Sections 6 and 7.

According to Zribi-Hertz (1998), the Agreement Projection in possessive DPs is the syntactic reflex of the more general syntactic relation of predication, which links the Possessor to the Possessee in the DP. More precisely, the Possessee acts as a predicate whose subject is the Possessor. As a consequence, any possessive DP may alternate with a minimally simple tensed predication (Zribi-Hertz 1998: 132). This is exemplified under (36):

36. a. *la [voiture]_{Possessee} [de [la voisine]_{Possessor}]_{KP}*

the car of the neighbour

'the neighbour's car'

b. *[La voisine]_{Possessor} [a une [voiture]_{Possessee}]_{VP}*

the neighbour has a car

'The neighbour has a car.'

Another way of analyzing the relationship between (36a) and (36b) is to say that (36a) implies (36b), which amounts to say that possession implies predication. This analysis has a major

consequence: that of distinguishing the possessive relationship, which is by nature a syntactic structure, from the semantic notion of 'belonging', that represents only a subset of the possible uses of possessive constructions. Accordingly, the terms 'Possessor' and 'Possessee' are to be understood here as denoting grammatical functions, and not semantic roles of some sort. Consider examples (37):

37. a. *le retour de Paul*

the return of Paul

'Paul's return'

= b. *Paul a fait un retour / est revenu*

Paul has done a return is come back

'Paul has come back.'

c. *le retour de la plage*

the return of the beach

'the return from the beach'

≠ d. *la plage a un retour / est revenue*

the beach has a return is come back

'The beach has come back.'

The possible alternation between (37a) and (37b) show that *le retour de Paul* 'Paul's return' qualifies as a possessive DP, which is not the case for (37c). Note that the alternation exemplified by (a–b) provides a useful test to distinguish possessive DPs from DPs containing a PP introduced by *de*, that do not admit it.

Another test, due to Milner (1982) and Godard (1986), may be used to distinguish PPs from Possessors, and, as a consequence, possessive DPs from DPs containing a PP. These authors observed that nominal possessors do not alternate with tonic (i.e. strong) pronouns but with possessive determiners (38), whereas the reverse holds for PPs (39):

38. a. *la voiture de la voisine*

the car of the neighbour

'the neighbour's car'

b. * *la voiture d' elle*

the car of her

c. *sa voiture*

her car

'her car'

39. a. *une lettre pour la voisine*

a letter for the neighbour

'a letter for the neighbour'

b. *une lettre pour elle*

a letter for her

'a letter for her'

≠ c. *sa lettre*

her letter

'her letter'

The contrast between (38) and (39) reveals another difference between DPs containing PPs and possessive DPs: whereas possessive DPs are naturally introduced by definite articles, DPs containing PPs regularly select indefinite articles when first mentioned. As a matter of fact, possessive DPs share this property with CENs. As we are going to see in the following section, CEN complements also behave like Possesseees with regards to pronominalization.

4.2. *CENs as Possesseees*

Consider now the CENs under (40):

40. a. *La ville a entrepris la construction d' un hôpital.*

the city has undertaken the building of an hospital

'The city has undertaken the building of an hospital.'

b. *Il a été condamné pour la destruction de ces documents confidentiels.*

he has been condemned for the destruction of these documents confidential

'He has been condemned for the destruction of these confidential documents.'

c. *L'attaque de plusieurs animaux par les loups n' a pas pu*

the attack of several animals by the wolves NEG has not be able

être évitée.

be avoided

'The attack of (=against) several animals by the wolves couldn't be avoided.'

d. *La police enquête sur le vol du tableau.*

the police investigates on the theft of the painting

'The police are investigating the theft of the painting.'

All of them answer positively to the above tests. First, they alternate with tensed clauses:

41. a. *la construction d' une école*

the building of a school

'the building of a school'

b. *Une école est en construction.*

a school is in building

'A school is under construction.'

42. a. *la destruction de ce document confidentiel*

the destruction of this document confidential

'the destruction of this confidential document'

b. *Ce document confidentiel a été détruit.*

this document confidential has been destroyed

'This confidential document has been destroyed.'

43. a. *l' attaque de plusieurs animaux*

the attack of several animals

'the attack of (=against) several animals'

b. *Plusieurs animaux ont été attaqués.*

several animals have been attacked

'Several animals have been attacked.'

44. a. *le vol du tableau*

the theft of.the painting

'the theft of the painting'

b. *Le tableau a été volé.*

the painting has been stolen

'The painting has been stolen.'

Such an analysis has an important consequence, since it amounts to analyzing the so-called complements of CENs as (surface) subjects of the possessive relationship, like Possessors. In such a view, CENs are parallel to passive structures, where the internal argument is moved to Spec,IP to receive nominative case. In the terms of our analysis, internal arguments of CENs are moved to Spec,AgrP to receive genitive case.

Second, objects of CENs alternate with possessive determiners, but not with pronouns, like other Possessors:

45. a. *la construction d' une école*

the building of a school

b. **la construction {d' elle / de ça³}*

the building {of it / of that}

c. *sa construction*

its building

'its building'

46. a. *la destruction de ces document confidentiels*

the destruction of these documents confidential

b. * *la destruction {d'eux / de ça}*

the destruction {of them / of that}

c. *leur destruction*

their destruction

'their destruction'

47. a. *l' attaque de plusieurs animaux*

the attack of several animals

b. * *l' attaque d' eux*

the attack of them

c. *leur attaque (par les loups)*

their attack (by the wolves)

Lit.: 'their attack (by the wolves)'

48. a. *le vol du tableau*

the theft of.the painting

b. * *le vol de lui / de ça*

the theft of it / of that

c. *son vol*

its theft

'its theft'

The parallel behaviour of event nominals (henceforth ENs) and possessive DPs with regards to these tests provides arguments in favor of the proposed analysis. It also has another desirable consequence: it explains some of their properties with regards to determiner selection, as will be shown in the following section.

4.3. *Determiner selection explained*

Recall from Section 3 that the so-called 'CENs' are introduced by definite determiners in French. As we have seen in Section 4.1., this property is shared by possessive DPs. This

constitutes a further argument to treat DPs lexically headed by CENs as possessive DPs. Moreover, it also explains why some of them admit indefinite articles, while others do not.

Consider first (19a) and (20a), repeated here under (49):

49. a. *Cet architecte supervise la construction de deux nouveaux hôpitaux.*

This architect oversees the building of two new hospitals

'This architect is overseeing the building of two new hospitals.'

- b. *Des loups affamés ont entrepris l'attaque d'animaux isolés.*

INDEF.PL wolves hungry have undertaken the attack of animal-PL isolated

'Hungry wolves have undertaken the attack of isolated animals.'

If we disregard the 'shifted' interpretation, these ENs admit only definite articles. As observed by Zribi-Hertz (2003a) after Vendler (1967), Vergnaud (1985), Guillaume (1975) and Kleiber (1990), such examples illustrate the 'cataphoric' use of the definite article, where this element is licensed by the syntactic dependencies of the head noun, even at first mention. Crucially, the cataphoric use of the definite article is subject to one constraint: the presence of a predication relationship into the DP. That is why the following contrast can be observed ([\emptyset] represents here absence of previous context):

50. a. [\emptyset] {*le / un*} *livre que j'ai lu dernièrement...*

{the / a} book that I have read recently

'{the / a} book that I have read recently...'

- b. [\emptyset] {*le / un*} *livre de Marie traînait sur la table.*

{the / a} book of Mary laid on the table

'{Mary's book / a book of Mary's} was lying on the table.'

- c. [\emptyset] {**le / un*} *livre pour les enfants*

{*the / a} book for the children

'a book for children'

In (50a–b), a predicative relationship links the head-noun and the relative clause (Williams 1980), and the Possessor to the Possessee, whereas no such relation is established between *livre* 'book' and *pour les enfants* 'for children' in (c). As a consequence, only the indefinite determiner can be selected at first mention in (50c), while definite as well as indefinite articles may appear in (a) and (b). This constitutes a further argument in favor of the analysis of CEN-headed DPs as possessive DPs. However, if the parallel between CENs and possessive DPs suggested above is correct, we should expect the former to be introduced by indefinite articles too, parallel to (50b). This prediction is born out, as shown by the following examples (see also [20]):

51. a. *Une attaque du troupeau (par des loups) a été filmée.*
 one attacks of.the cattle (by INDEF.PL wolves) has been filmed
 'An attack against the cattle (by wolves) has been filmed.'
- b. *Plusieurs attaques des troupeaux (par des loups) ont été filmées.*
 several attacks of.the cattle-PL (by INDEF.PL wolves) have been filmed
 Lit.: 'Several attacks against the cattles (by wolves) have been filmed.'
52. a. *La police enquête sur le récent cambriolage de ces banques.*
 the police investigates on the recent burglary of these banks
 Lit.: 'The police are investigating the recent burglary of these banks.'
- b. *La police enquête sur {un / deux} récent(s) cambriolage(s) de cette banque.*
 the police investigates on {one / two} recent(PL) burglary(PL) of this bank
 Lit.: 'The police are investigating {one / two} recent burglaries of this bank.'

The examples above correspond in fact to what Grimshaw terms 'shifted CENs'. Now, as was shown in Section 3, some ENs do not admit indefinite articles when associated with determined complements:

53. * *La ville a entrepris {une / plusieurs} construction(s) {de l'hôpital /
the city has undertaken {one / several} building(PL) {of the hospital /
des hôpitaux}.*

of.the hospital-PL }

Lit.: 'The city has undertaken {one / several} buildings {of a hospital / of the hospital / of the hospitals}.'

54. * *Il a été condamné pour {une / des} destruction(s) de ces
he has been condemned for {one / INDEF.PL } destruction(s) of these
documents confidentiels.*

documents confidential-PL

Lit.: 'He has been condemned for {a / ø} destruction(s) of these confidential documents.'

55. * *Elle a participé à {une / deux} fabrication(s) des colliers.
she has taken part to {one / two} manufacturing(PL) of.the necklaces*

Lit.: 'She has taken part in {one / two} manufacturing(s) of the necklaces.'

If the possessive construction itself allows its head noun, whether an EN or a 'simple' noun, to be introduced by an indefinite article, then the ill-formedness of the above examples cannot be syntactic. We must then have a closer look at the construal of these CENs. Recall that any possessive DP contains a predication relationship, which allows it to alternate with a tensed clause. Thus (56a) entails (56b):

56. a. # *{une / deux} fabrication(s) des colliers
{one / two} manufacturing(PL) of.the necklaces*

Lit.: '{one / two} manufacturing of the necklaces'

- b. # *Les colliers ont subi plusieurs fabrication-s.*

the necklaces have undergone several manufacturing-PL

Lit.: 'The necklaces have undergone several manufacturing (processes).'

These examples reveal in a straightforward way the origin of the unacceptability of the indefinite article: as *fabrication* is a 'once-only predicate', it cannot be applied several times to the same object or group of objects: once manufactured, the necklaces cannot undergo the same process for another time. Thus, reference to one or several processes of manufacturing of the same object(s) is semantically unacceptable.

The same explanation holds for *construction* 'building' and *destruction* 'destruction', as illustrated in (57) and (58):

57. a. # {une / plusieurs} construction(s) {de l'hôpital / des hôpitaux}

{one / several} construction(PL) {of the hospital / of.the hospital-PL}

Lit.: '{one / several} construction(s) of the hospital(s)'

- b. # {L'hôpital / les hôpitaux} {a / ont} subi plusieurs constructions

{the hospital / the-PL hospital-PL} {has / have} undergone several constructions

Lit.: 'The hospital(s) have undergone {one / several} construction(s).'

58. a. # {une / des} destruction(s) de ce document confidentiel

{one / INDEF.PL} destruction(PL) of this document confidential

Lit.: '{one / ø} destruction(s) of this confidential document'

- b. Ce document confidentiel a subi {??une / #des} destruction(s)

this document confidential has undergone {a / INDEF.PL} destruction(PL)

Lit.: 'This confidential document has undergone {a / ø} destruction(s).'

There is in fact one context where the indefinite article becomes acceptable: when the sentence exhibits a hypothetical value, as is the case in the following examples:

59. a. Une construction rapide de l'hôpital est souhaitable.

a building rapid of the hospital is desirable

Lit.: 'A rapid construction of the hospital is desirable.'

- b. Une fabrication des colliers avant ce soir est improbable.

a manufacturing of.the necklaces before this evening is unlikely

Lit.: 'A manufacturing of the necklaces before tonight is unlikely.'

c. *Une destruction de ce document serait catastrophique.*

a destruction of this document be-COND catastrophic

Lit.: 'A destruction of this document would be catastrophic.'

Such contexts however do not legitimate *plusieurs* 'several' or numerals (cf. **plusieurs constructions rapides de l'hôpital seraient souhaitables*). We can thus conclude that *un(e)* has to be understood here as an indefinite article, and not as a numeral. This observation is consistent with the idea put forward in Section 3 that some ENs have properties similar to that of mass nouns. As a matter of fact, the use of *un(e)* or *plusieurs* to introduce a mass noun, whether event-denoting or not, entails the same ill-formedness, which disappears when a classifier is used⁴:

60. a. ?? *{Une / plusieurs} fabrication(s) des colliers {a / ont} été*

{one / several} manufacturing(PL) of.the necklaces {has / have} been

interrompue(s).

suspended(PL)

Lit.: '{One / several} manufacturing(s) of the necklaces have been suspended.'

b. ?? *{Un / plusieurs} tissu(s) des drapeaux {est / sont} déchiré(s).*

{one / several} fabric(PL) of.the flags {is / are} torn(PL)

Lit.: '{One / several} fabrics of the flags are torn.'

c. *{Une / plusieurs} opération(s) de fabrication des colliers {a / ont} été*

{one / several} operation(PL) of manufacturing of.the necklaces {has / have} been

interrompue(s).

suspended(PL)

Lit.: '{One / several} operation(s) of manufacturing of the necklaces have been suspended.'

d. *{Une / plusieurs} pièce(s) de tissu des drapeaux {est / sont} déchiré(s).*

{one / several} piece(PL) of fabric of.the flags {is / are} torn(PL)

Lit.: '{One / several} pieces of fabric of the flags are torn.'

In a sense, once-only predicates can also be compared to 'one-only' inalienable Possessees, which behave in the same manner:

61. a. # {une / des} mère(s) de Paul

{one / INDEF.PL mother(PL) of Paul

Lit.: '{one / ø} mother(s) of Paul'

b. # {une / plusieurs} tête(s) du chien

{one / several} head(PL) of.the dog

Lit.: '{one / several} head(s) of the dog'

The nouns *mère* 'mother' and *tête* 'head' cannot be introduced by indefinite articles or *plusieurs* due to the fact that they denote objects unique for a given possessor: Paul cannot have several mothers, and the dog has only one head.⁵ In the same way, there cannot be several building, destruction or manufacturing processes for the same object.

Consider now the nominalizations of other predicates:

62. a. {une / plusieurs} attaque(s) du troupeau

{one / several} attack(PL) of.the cattle

Lit.: '{one / several} attack(s) of the cattle'

b. *Le troupeau a subi {une / plusieurs} attaque(s).*

the cattle has undergone {one / several} attack(PL)

Lit.: 'The cattle has undergone {one / several} attack(s).'

63. a. {un / deux} cambriolage(s) de cette banque

{one / two} burglary(PL) of this bank

'{one burglary / two burglaries} of the bank'

b. *La banque a subi {un / deux} cambriolage(s).*

the bank has undergone {one / two} burglary(PL)

'The bank has undergone {one burglary / two burglaries} '

Since the predicates denoted by the nominalizations may apply several times to the same object or group of objects, the DPs as well as the corresponding sentences are perfectly well-formed from a semantic and pragmatic point of view.

The semantic origin of the unacceptability of the examples (53–55) is confirmed by the fact that indefinite articles may become possible if the nominal is modified by ordinals or adjectives such as *nouveau* 'new' or *autre* 'other', or when morphologically modified by the iterative prefix *re-* (Meinschaefer 2005):

64. a. *Une première destruction de la ville par les Allemands a eu lieu en 1914.*
 a first destruction of the city by the Germans has had place in
 1914.

1914.

'A first destruction of the city by the Germans occurred in 1914.'

- b. *Une réédition du roman est prévue pour septembre.*

a re-publishing of the novel is scheduled for september

'A republishing of the novel is scheduled for September.'

The above observations parallel those of Meinschaefer (2005) about the possible use of the adjective 'frequent' in DPs resulting from nominalizations. This author observes that this adjective can modify only deverbal nouns having a possible iterative reading:

65. a. *the frequent destruction of the city throughout the centuries*

(Meinschaefer 2005: [10])

- b. *?*the frequent discovery of America (?by different navigators)*

(Meinschaefer 2005: [11])

'Discovery of America' being a once only predicate, it cannot be modified by 'frequent', contrary to 'destruction of the city', that refers to an event likely to occur several times, as the adverbial 'throughout the centuries' suggests.

The common point between (64) and (65b), then, lies in the fact that the events are described as having occurred several times. However, whereas (65a) refers to several instances of the event, (64) refers only to one of them among a series. The latter case is in fact reminiscent of the partitive interpretation of indefinite DPs. According to Kleiber (2002: 62), the referents of partitive DPs 'are introduced as belonging to a set that is already established, known or accessible';⁶ for Enç (1991), a specific NP is linked to a discourse antecedent by an inclusion relation. Both definitions are fit to the semantic description of such DPs, where the head nouns refers to one event among a series. The fact that possessive DPs headed by 'simple' nouns can also exhibit the partitive interpretation, as shown by (66), thus confirms our analysis of CENs as heads of possessive DPs.

66. a. *La voiture des voisins est en panne.*

the car of.the neighbours is out of order

'The neighbours' car is broken down.'

b. *Une voiture des voisins est en panne.*

a car of.the neighbours is out of order

'A car of the neighbours' is broken down.'

= c. *Une des voitures des voisins est en panne.*

one of.the cars of.the neighbours is out of order

= d. *Les voisins ont plusieurs voitures, dont l'une est en panne.*

the neighbours have several cars, RELP.PRO the one is out of order.

'The neighbours have several cars, one of which is broken down.'

The DP *une voiture des voisins* (66b) may be glossed by *une des voitures des voisins* 'one of the neighbours' cars' (66c). It is parallel to the above examples in that it implies that the neighbours in question have several cars and that some proportion of them is broken down (Attal 1994).

Finally, DPs headed by nouns denoting events that may repeatedly affect a given (group of) object(s) are also open to the partitive interpretation, as shown by the fact that negation of the predicate in the second part of example (67) does not entail the denial of the referent of *cambriolage* 'burglary', but rather the existence of two different *cambriolage* events (Kleiber 2002):

67. *Un cambriolage₁ de la banque a été filmé, mais un cambriolage*_{1/2}*

one burglary of the bank has been filmed, but one burglary*_{1/2}

de la banque n' a pas été filmé.

of the bank NEG hasnot been filmed

'One burglary of the bank has been filmed, but one burglary of the bank has not been filmed.'

Recall finally from Section 3 that there is a common point between indefinite singular CENs of the *construction* type and of the *attaque* type: none of them admits indefinite singular complements:

68. a. * *La ville a entrepris une construction d' un hôpital.*

the city has undertaken a building of an hospital

Lit.: 'The city has undertaken a building of an hospital.'

b. * *Les éleveurs ont filmé une attaque d'un animal (par des loups).*

the-PL breeders have filmed an attack of an animal (by INDEF.PL wolves)

Lit.: 'The breeders have filmed an attack of an animal (by wolves).'

Apart from being semantically odd for (68a), these structures are also syntactically ill-formed, due to the presence of *un(e)* introducing the whole DP with a Possessor introduced by *un(e)* too. This ban also holds for 'simple' possessive DPs, as observed by Milner (1982):

69. * *une fille d' un fermier*

{a / one} daughter of a farmer

Even if we are not able to provide an explanation for this phenomenon for the moment, this pattern constitutes a further argument in favor of our analysis.

To sum up, we have seen in this section first that DPs headed by what Grimshaw calls CENs do in fact qualify as possessive DPs. Several pieces of evidence confirm this approach. First, the structure formed by the CEN and its complement can be glossed by a tensed sentence, as is the case for those establishing a relationship between a Possessor and a Possessee. Second, like Possessors, complements of CENs alternate with possessive determiners, but not with strong pronouns. This property has been attributed to the presence of a predication relationship in the DP, parallel to that occurring in sentences. Third, CENs as well as Possessees can be introduced at first mention by definite articles.

On semantic grounds however, two classes of ENs have to be distinguished. On the one hand, some ENs exhibit a regular 'instance' reading, as shown by the fact that they can be pluralized and are regularly introduced by *un* or *plusieurs*. They thus behave as count nouns. They are also compatible with overtly determined complements. On the other hand, ENs resulting from the nominalization of once-only predicates exhibit different semantic properties, which reflect on their syntactic behaviour: they do not exhibit number variation, unless introduced by classifiers such as *opération* 'operation', *campagne* 'campaign', *acte* 'act', etc.

Recall from Section 3 that Grimshaw supposes that CENs may be shifted, in which case they denote instances of a given event. A possible syntactic account for this shifting operation is to consider that it amounts to the shifting of a mass noun to a count noun by the means of the insertion of a Num(ber) Projection in the functional structure of the nominal.

Due to their meaning, nominals referring to once-only events do not admit complements introduced by overt indefinite determiners, since it would imply that such predicates may apply several times to the same object or set of objects. The unacceptability of the indefinite article disappears however in hypothetical contexts. Finally, the introduction of some

adjectives (ordinals, *nouveau* 'new', *autre* 'other', etc) may give rise to the partitive interpretation, also available for the other class of ENs as well as for 'simple' Possesseees.

We now turn towards the examination of the determiners introducing EN complements.

5. The determiner system of EN complements

Some observations have been made above about the compatibility of determined complements with both types of ENs. We will now adopt a different point of view, and have a look at some examples introduced in Section 3 that have not been submitted yet to examination.

As was shown in the preceding section, determiners introducing complements of indefinite nominalizations of once-only predicates are subject to semantic restrictions. These ENs however admit undetermined singular and plural complements, as was illustrated by (24) previously, and under (70) and (71):

70. a. *La ville a entrepris une (vaste campagne de) construction d' {hôpital /*
 The city has undertaken a (vast campaign of) building of {hospital /
hôpitaux}.

hospital-PL }

'The city has undertaken a huge campaign {of hospital building / of building of
 hospitals}.'

b. *La ville a entrepris plusieurs (campagnes de) construction(s) d' {hôpital /*
 The city has undertaken several (campaigns of) building(PL) of {hospital /
d'hôpitaux}.

hospital-PL }

lit. 'The city has undertaken several (campaigns of) hospital construction(s).'

71. *{Une / deux} (opération(s) de) récupération(s) d' {animal / animaux} dangereux*
 {one / two} (operation(PL) of) retrieval of {animal / animals} dangerous

{a / ont} eu lieu au cours des derniers mois.

{has / have} taken place during the-PL last months

'{One / two} operation(s) of retrieval of dangerous animal(s) {has / have} taken place during these last months.'

This property is shared by other ENs:

72. a. *Les éleveurs ont filmé {une / plusieurs} attaque(s) {d'animal blessé /*

the-PL breeders have filmed {one / several} attack(PL) {of animal wounded /

d'animaux blessé-s}.

of animal.PL wounded-PL}

'The breeders have filmed {one attack / several attacks} of (=against) {a wounded animal / wounded animals}.'

b. *Les élèves infirmiers ont fait {une / des} visite(s) d'{hôpital/hôpitaux}.*

the student nurses have made {a / INDEF.PL} visit(PL) of {hospital / hospitals}

lit. 'The student nurses have done {a visit / visits} of {hospital / hospitals}.'

The former examples contrast with (73–76), where ENs of both types are introduced by definite articles. In such cases, they admit determined complements, and their bare complements are restricted to plural nouns:

73. a. *Ce terrain est destiné à la construction {d'un / de l' / *d'} hôpital.*

this field is intended to the building {of a / of the / *of} hospital

'This field is designated for the building of {a / the} hospital.'

b. *Ce terrain est destiné à la construction {des / d'∅} hôpitaux.*

this field is intended to the building {of.the.PL / of ∅} hospital

'This field is designated for the building of (the) hospitals.'

74. a. *Le vétérinaire a procédé à la récupération {d'un / de cet / *d'} animal.*

the vet has proceeded to the retrieval {of a / of this / *of} animal

'The vet has proceeded to the retrieval of {an / this} animal.'

b. *Le vétérinaire a procédé à la récupération {de ces / d'∅} animaux.*

the vet has proceeded to the retrieval {of these / of \emptyset } animals

'The vet has proceeded to the retrieval of (these) animals.'

75. a. *La police enquête sur le vol {d'un / du / *de} bijou.*

the police investigates on the theft {of a / of.the / *of} jewel

'The police are investigating the theft of {of a / of the} jewel.'

b. *La police enquête sur le vol {des / de \emptyset } bijoux.*

the police investigates on the theft {of.the.PL / of \emptyset } jewels

'The police are investigating the theft of {of the / of \emptyset } jewels.'

76. a. *Les élèves ont commencé la lecture {d'un / de ce / *de} roman.*

the pupils have begun the reading {of a / of this / *of} novel

'The pupils have begun the reading {of a / of this} novel.'

b. *Les élèves ont commencé la lecture {de ces / de \emptyset } romans.*

the pupils have begun the reading {of these / of \emptyset } novels

'The pupils have begun the reading {of these / of \emptyset } novels.'

In what follows, our primary concern will be the status of bare plural complements exemplified in (73–76). We will next turn to the examination of bare complements exhibiting number variation.

5.1. *Bare plural complements*

Examples (71–74) raise the question of the status of bare nouns, and of their syntactic complexity. It is generally assumed that the functional projections associated with NPs are Num(ber)P (Valois 1991; Ritter 1991; Carstens 1991) and D(eterminer)P (Abney 1987; Szabolcsi 1983; Longobardi 1994; Giusti 1997; among others). In some languages however, NPs can be deficient and lack one or several of their usual functional projections. On the other hand, languages may also exhibit phonologically null Ds.

Consider the case of *romans* in *la lecture de romans* (76b). In such a structure, *romans* is overtly plural, as shown by the presence of the written -s ending, and by the phonological change affecting *hôpital* and *animal* in the same contexts (73–74). The NP has thus to be dominated by a NumP so as to check its morphological [plural] feature with the abstract [plural] feature of a Num head.

77. $[romans_i \ [t_i]_{NP} \]_{NumP}$

Now, *romans* is not introduced by an overt D. It is worth asking then if *roman* is introduced by a null D, or if it is deprived of DP. Both options are sketched in (78):

78. a. *la lecture de* $[\emptyset_D \ [romans]_{NumP} \]_{DP}$

b. *la lecture de* $[romans]_{NumP}$

In fact, several pieces of evidence indicate that *romans* is dominated by a DP with a null head. First, in the same context, the definite singular and plural and the indefinite singular counterparts of *romans* are introduced by overt Ds, and thus qualify as DPs. The unmarked hypothesis is then to suppose that *romans* is a DP too. In the same vein, *romans* is necessarily understood as indefinite in such a context, a value that can be assumed to be carried by determiners.

Moreover, it is a well-known fact that French, even if it does not qualify as a language exhibiting null Ds, is subject to the 'règle de cacophonie', first described by the Port Royal grammarians, and preventing two instances of *de* to be adjacent. Gross (1967) gives the following examples as illustrations:

79. a. *Jean parle de (*des) chevaux.*

Jean speaks of (*INDEF.PL) horses.

'John is talking about horses.'

(Gross 1967: [107])

b. *Marie est aimée de (*des) personnes que nous connaissons bien.*

Mary is loved by (*INDEF.PL) people(PL) that we know well
 'Mary is loved by people we know well.'

(Gross 1967: [109])

In these structures, the preposition *de* is followed by indefinite plural nouns, normally introduced by the indefinite plural article *des*. However, *des* cannot surface here, due to its adjacency with *de*. Consequently, *des* remains unexpressed, and the nouns are not overtly determined, contrary to what happens with their singular and definite counterparts:

80. a. *Jean parle {d'un cheval / du cheval / des chevaux}.*

Jean speaks {of a horse / of.the horse / of.the.PL horses.}

'John is talking about {a horse / the horse / the horses}.

b. *Marie est aimée {d'une personne / de la personne / des personnes} (que...)*

Mary is loved {by a person / by the person / by.the.PL persons} (that...)

'Mary is loved by {a person / the person / the people} (that...).'

The instances of non-overtly determined plural indefinite nouns exhibited in examples (73–76) can be analyzed in the same manner: since they are introduced by *de* and surface as determined nouns when definite and / or singular, their indefinite plural determiner cannot be overt due to the cacophony rule.

As shown in the following examples, the same restriction applies to indefinite mass nouns, normally introduced by the partitive articles *du* (= *de le*) / *de la*, but surfacing undetermined when occurring after *de* in both contexts:

81. a. *Jean parle de {(*du) sable / (*de la) soupe}.*

Jean speaks of {(*PART.ART.MASC) sand / (*PART.ART.FEM) soup}

'John is talking about {sand / soup}.'

b. *Les élèves ont étudié la fabrication de {(*du) papier /*

the pupils have studied the manufacturing of {(*PART.ART.MASC) paper /

(*de l') encre}.

(*PART.ART.FEM) ink}

'The pupils have studied the manufacturing of {paper / ink}.'

In such cases however, *le* and *la* may surface, only the *de* part of the partitive articles remaining unexpressed:

82. *Les élèves ont étudié la fabrication {du (=de le) papier / de l' encre}.'*

the pupils have studied the manufacturing {of.the} paper / {of.the} ink}

'The pupils have studied the manufacturing of {paper / ink}.'

Finally, recall that the bare nouns in question here have been analyzed as the internal arguments of the ENs they depend on (see Section 3). Now, if we assume Longobardi's (2000) claim that only DPs can be arguments, we have to consider these indefinite plural bare nouns as arguments too.

In the following section, we will see if the analysis carried above also applies to bare complements of indefinite ENs.

5.2. Number variable bare complements

As was shown above, indefinite ENs admit bare singular as well as bare plural complements.

83. a. *{Une / deux} (opérations de) récupération(s) d' {animal / animaux} dangereux*

{one / two} (operations of) retrieval(PL) of {animal / animals} dangerous

ont eu lieu au cours des derniers mois.

have taken place during the.PL last months

'{One / two} operation(s) of retrieval of dangerous animal(s) {has / have} taken place during these last months.'

b. *Les élèves infirmiers ont fait {une / des} visite(s) d' {hôpital / hôpitaux}.*

the students nurses have made {a / INDEF.PL } visit(PL) of {hospital / hospitals}

Lit.: 'The student nurses have done {a / ø} visit(s) of {hospital / hospitals}.'

The fact that the EN complements in question here exhibit number variation raises the question of their functional complexity, and more precisely that of the presence of NumP. The unmarked hypothesis is that the presence of NumP is a prerequisite for number variation to appear. However, contrary to what happens in other contexts, the non-plural forms of these nouns are not necessarily understood as referring to a single individual. Thus, *hôpital* in *{une / des} visite(s) d'hôpital* does not necessarily refer to a single hospital (cf. in English 'hospital visit(s)'). As a further illustration, consider (84):

84. a. *Les éleveurs organisent une vente de {?? cheval / chevaux} la semaine prochaine.*
 the breeders organize a sale of {?? horse / horses} the week
prochaine.

next

'The breeders will organize a sale of {?? horse / horses} next week.'

- b. *Le boucher a programmé une vente de {cheval / ?? chevaux} la semaine prochaine.*
 the butcher has scheduled a sale of {horse / ?? horses} the
semaine prochaine.

week next

'The butcher has scheduled a sale of {horse / ?? horses} next week.'

In example (a), the plural form of the bare noun is preferred, even if the sentence can also refer to the sale of a single horse. Sentence (b) exhibits the opposite requirement, due to the fact that the butcher is supposed to sell horse meat rather than horse individuals. What these examples reveal, in fact, is that the non-plural form of the bare noun has to be understood as a mass noun, and not as a singular noun. As a matter of fact, other mass nouns can also appear in the same context:

85. a. *{une / des} vente(s) de {vin / confiture / papier / bière / métal / mobilier / outillage}*
 {a / INDEF.PL} sale(s) of {wine / jam / paper / beer / metal / furniture / (sets of) tools}
 'a sale / sale(s) of {wine / jam / paper / beer / metal / furniture / (sets of) tools}'

The use of *outillage* rather than *outil* 'tool' in the preceding example is particularly interesting, since it is a collective noun, referring under a mass form (*de l'outillage*) to a collection of objects (cf. in English 'weapon(s) / weaponry'), whereas *outil* is rather understood as a singular noun referring to one tool.

When depending on indefinite ENs, bare nouns are thus either understood as plural or as mass nouns, but cannot be singular, contrary to what would have been expected if these nouns were dominated by a NumP projection. Moreover, the morphological indication of plurality is a semantic and not a syntactic requirement, as shown by the fact that singular collective nouns, such as *troupeau* 'cattle' (62) are possible in such contexts, despite their morphosyntactic singular Number. We will then consider that the nouns in question here are simply NPs, and that they are deprived of NumP.

The above observations are in fact reminiscent of Farkas and de Swart's (2003), Mithun's (1984) and Van Geenhoven's (1998) remarks about the interpretation of Number with incorporated nominals. On the one hand, Farkas and de Swart observe that non-plural incorporated nominals in Hungarian are never interpreted as singulars. On the other hand, Mithun notes that incorporated nominals exhibit a weak degree of individuality, and Van Geenhoven argues that they cannot refer to particular individuals in West Greenlandic.

Since incorporated objects generally lack determiners⁷, like complements of indefinite ENs, a possible analysis of the latter is that they qualify as incorporated nominals. This hypothesis will be examined in the following section.

5.3. NP complements as incorporated nominals

Apart from being number neutral, incorporated nominals in various languages can be identified by a series of morphosyntactic and semantic properties. In particular, they always

take scope under operators (Bittner 1998, De Hoop 1992, Van Geenhoven 1998, Farkas and de Swart 2003). This is also true of the bare NPs occurring in DPs headed by indefinite ENs:

86. a. *Il faut que la ville entreprenne {une / plusieurs} (campagne(s) de)*
 it must that the city undertake.SUBJ {one / several} (campaign(PL) of)
construction(s) d'{hôpital / d'hôpitaux}.
 building(PL) of {hospital / hospital.PL}

Lit.: 'The city must undertake several {hospital buildings / hospital building campaigns}.'

- a'. \neq *Il existe {un hôpital / des hôpitaux} dont il faut que la ville entreprenne la construction.*

'There is {a hospital / hospitals} that the city has to undertake the building of.'

- b. *La police n'enquête pas sur {un / des} vol(s) de bijou(x).*
 the police NEG-investigates not on {a / INDEF.PL} theft(PL) of jewel(PL)

'The police are not investigating {a / \emptyset } theft(s) of jewel(s).'

- b'. \neq *Il existe {un bijou / des bijoux} dont la police n'enquête pas sur le vol.*

'There is {a jewel / jewels} that the police are not investigating the theft of.'

Examples (86a') and (86b') show that the nominals appearing as complements of indefinite ENs cannot take scope over the modal *falloir* 'must' nor over negation. They can only have narrow scope, a property typical of incorporated nominals.

The NP complements examined in this section also share the morphosyntactic properties of incorporated nominals. An observation current in the literature is that incorporated nominals have to appear in a 'special position'. In a language such as West Greenlandic, incorporated objects form compounds with the verb⁸:

87. *Arnajaraq eqalut-tur-p-u-q*
 Arnajaraq-ABS salmon-eat-INDIC-[-TR]-3SG
 'Arnajaraq has eaten salmon.'

(Van Geenhoven 1998: [13])

In Hungarian, no morphological reflex of incorporation is observed. That is why Farkas and de Swart (2003) refer to this phenomenon as 'semantic incorporation'. However, semantically incorporated objects must appear left adjacent to the verb.

88. a. *János-ø vers-et olvas-ø.*
 John-NOM poem-ACC read-PRES.3SG

'John is reading a poem / poems.'

- b. * *János olvas-ø vers-et*
 John-NOM read-PRES.3SG poem-ACC

(Farkas and de Swart 2003: [12])

Consider now examples (89) and (90):

89. a. ?? *La police enquête sur {un / des} vol(s) audacieux de tableau(x).*
 the police investigates on {a / INDEF.PL} theft(PL) daring of painting(PL)

'The police are investigating {a / ø} daring theft(s) of painting(s).'

- b. *La police enquête sur {un / des} vol(s) de tableau(x) audacieux.*
 the police investigates on {a / INDEF.PL} theft(PL) of painting(PL) daring

'The police are investigating {a / ø} daring theft(s) of painting(s).'

- c. *La police enquête sur {un / des} audacieux vol(s) de tableau(x).*
 the police investigates on {a / INDEF.PL} daring theft(PL) of painting(PL)

'The police are investigating {a / ø} daring theft(s) of painting(s).'

90. a. ?? *{Une / des} vente(s) intéressante(s) de bijou(x) {aura / auront} lieu*
 {a / INDEF.PL} sale(PL) interesting(PL) of jewel(PL) {have.FUT-3SG/3PL} take place

la semaine prochaine.

the week next

'{An / ø} interesting sale(s) of jewel(s) will take place next week.'

- b. *{Une / des} vente(s) de bijou(x) intéressante(s) {aura / auront} lieu*
 {a / INDEF.PL} sale(PL) of jewel(PL) interesting(PL) {have.FUT-3SG/3PL} take place

la semaine prochaine.

the week next

'{An / ø} interesting sale(s) of jewels will take place next week.'

c. *{Une / des} intéressante(s) vente(s) de bijou(x) {aura / auront}*

{a / INDEF.PL} interesting(PL) sale(PL) of jewel(PL) {have.FUT-3SG/3PL}

lieu la semaine prochaine.

place the week next

'{An / ø} interesting sale(s) of jewel(s) will take place next week.'

The above examples show that no adjective modifying the head noun can be inserted between it and its complement. Adjectives such as *audacieux* 'daring' and *intéressant* 'interesting', that can be placed either before or after the noun they modify, have to occur before the whole expression or after the bare complement, but not in their usual position, after the head noun itself, even though it may be the case when the EN is definite:

91. *La construction rapide de {cette / ces} maison(s) a occasionné beaucoup*

the building fast of {this / these} house(PL) has caused a lot

de bruit.

of noise

'The rapid building of {this / these} house(s) has provoked a lot of noise.'

92. *Les attaques imprévisibles de troupeaux par les loups ont désorganisé*

the attack-PL unpredictable-PL of cattle-PL by the wolves have disrupted

l'élevage.

the breeding

'The unpredictable attacks of cattle(PL) by wolves have disrupted the breeding.'

The bare nominals occurring as complements of indefinite ENs thus exhibit the typical adjacency requirement of incorporated nominals. Note also that the bare plural complement of the definite EN *attaque* in (92) is not subject to the adjacency requirement observed above.

This constitutes a further argument to distinguish its internal structure from that of bare number-variable complements.

A second property shared by the bare nouns observed here and incorporated nominals is their reduced modification capacities. Dayal (2003) notes that in Hindi, incorporated nouns cannot be quantified:

93. a. * *Anu har bacca sambhaal rahii hai.*

Anu each child look after-PRES

Intended reading: 'Anu is looking after each child.'

(Dayal 2003: [4])

- b. *Anu har bacce-ko sambhaal rahii hai.*

Anu each child-ACC look after-PRES

'Anu is looking after each child.'

(Dayal 2003: [4])

In Hindi, semantically incorporated objects are identified by the absence of accusative marking. Example (93a) shows that a non case-marked object cannot be modified by a quantifier, contrary to its accusative counterpart.

The situation is however a little different in French. In fact, quantifiers are possible if they contribute to express a subkind of the modified noun. Consider the contrast between (94a) and (94b):

94. a. *Un vol de trois tableaux est toujours plus sévèrement puni qu'un*

a theft of three paintings is always more severely punished than a

vol de deux tableaux.

theft of two paintings

'A theft of three paintings is always more severely punished than a theft of two.'

- b. *Il a été condamné pour {?? un / le} vol de trois tableaux.*

he has been condemned for {?? a / the} theft of three paintings

'He has been condemned for {??a / the} theft of three paintings.'

Example (94a) is a generic sentence and compares the seriousness of two kinds of theft: the theft of three paintings and that of two. In such a context, quantification of the bare nominal is possible, since it contributes to the expression of a subtype of theft. However, in (94b), where no such notion is at stake, the indefinite nominal is preferably used as complement of a definite EN when preceded by *trois* 'three'.

Interestingly, the modification of bare complements of indefinite ENs by adjectives and PPs in French is submitted to the same requirement.

95. a. *J' ai assisté à des ventes de bijoux {antiques / en or}.*

I have attended to INDEF.PL sales of jewels {antique / in gold}

'I attended sales of {antique / gold} jewels.'

b. *J' ai assisté à des ventes de bijoux {?? chers / *de la comtesse}*

I have attended to INDEF.PL sales of jewels {?? expensive / *of the countess}

'I attended sales of {expensive jewels / of the countess's jewels}.'

96. a. *La police enquête sur un vol de tableaux {impressionnistes / de*

the police investigates on a theft of paintings {impressionist / of

grande valeur}.

great value}

Lit.: 'The police are investigating a theft of {impressionist / valuable} paintings.'

b. *La police enquête sur un vol de tableaux {?? du Musée / ?? magnifiques}*

the police investigates on a theft of paintings {?? of.the Museum / ?? magnificent}

Lit.: 'The police are investigating a theft of {the Museum's / beautiful} paintings.'

The difference between (95a) and (96a) on the one hand, and (95b) and (96b) on the other hand, lies in the fact that the modifiers of the (a) examples are 'classifying' modifiers, in the sense of Kupferman (2004):⁹ they are used to denote subkinds of the noun they modify. In the

(b) examples, the modifiers are 'characterizing'. Since characterizing modifiers do not denote subkinds, they cannot be used in the context of indefinite ENs' incorporated complements.

Modification is also a property of incorporated complements in Niuean (Massam 2001), as shown by (97):

97. *Ne inu [kofe kono] a Mele.*

PAST drink coffee bitter ABS Mary

'Mary drank bitter coffee.'

(Massam [2001]: 158)

According to Massam (2001), the presence of an adjective in (97) reveals that Niuean exhibits phrasal incorporation, as opposed to head incorporation, since only phrases can contain modifiers. That is why she terms Niuean incorporation 'pseudo-incorporation'. If such a distinction is maintained, the kind of incorporation observed in French also deserves the name of pseudo-incorporation. Another property of pseudo-incorporation observed by Massam is that pseudo-incorporated complements may be coordinated. Example (98) shows an Niuean example of coordinated complements, and (99) presents a corresponding example in French:

98. *Ne kai [sipi mo e ika mitaki] a Sione.*

PAST eat fish with ABS fries good ABS Sione

'Sione ate good fish and chips.'

(Massam [2001]: 159)

99. *Il a été condamné pour un vol de tableaux et de bijoux.*

he has been condemned for a theft of paintings and of jewels

'He has been condemned for a theft of paintings and jewels.'

All of the examples in this section provide strong evidence supporting the hypothesis that number-variable bare complements of French indefinite ENs are pseudo-incorporated. From a semantic point of view, they are number-neutral, and cannot refer to singular individuals; they also exhibit narrow scope with regards to operators. Syntactically, these constituents lack

NumP, and have to appear adjacent to the nouns they incorporate into. The possible modification of incorporated nominals reveals that French exhibits pseudo (i.e. phrasal) incorporation. Modification is however restricted semantically, in that modifiers, as well as quantifiers, have to express subkinds to be possible.

Recall that incorporated complements appear undetermined. They have to be distinguished however from mass and plural indefinite determined complements, which are introduced by null Ds. Such complements do not display the properties of incorporated nominals: they are typically plural, and can thus be analyzed as dominated by a NumP projection. They do not exhibit the adjacency requirement typical of incorporation (91–92). The following example show that quantification and characterizing modification of bare plural complements are also possible:

100. *La récupération périlleuse de deux animaux particulièrement dangereux*
 the retrieval hazardous of two animals particularly dangerous
s'est finalement bien passée.
 REFL-BE finally well done
 'The hazardous retrieval of two dangerous animals ultimately went well.'

Now, the data presented so far and the analysis provided leave two residual questions that have not been addressed so far. First, what are exactly the syntactic and semantic relationships between ENs and their complements? Second, what is the status of the *de* element intervening between ENs and their complements? These questions will be addressed in Sections 6 and 7.

6. The EN-Complement relation

In the preceding section, it has been suggested that bare complements of indefinite ENs are pseudo-incorporated nominals. Let us first put this observation into the general background of the analysis provided in the sections before. We have first shown that full-fledged complements of ENs (i.e. DPs) can be analyzed as Possessors. As such, they are syntactically

legitimated by the means of genitive case (see also Alexiadou 2001, for the hypothesis that genitive case is assigned by an Aspect Projection). The need for the possessive structure is easily explained if we consider that, contrary to verbs, nouns do not assign case in languages such as French or English. Since DPs require case, the Agreement projection of the possessive structure is the only means for these constituents to get case. DP complements of ENs can thus be described as semantic arguments of nouns, syntactically legitimated (i.e. case-marked) by the possessive construction. On the other hand, bare NP complements of ENs do not need case, since only DPs require case. As a consequence, the possessive construction is not required. If, as suggested in Section 4.3., the occurrence of the definite article at first mention is a reflex of the use of the possessive construction, our analysis explains why the definite article does not appear to introduce the whole construction — in other words, why ENs may be indefinite.

From the point of view of case-marking, the fact that incorporated nominals do not require case is an observation regularly pointed out by most of the authors quoted above (see in particular Mithun 1984; Van Geenhoven 1998; Dayal 2003; Massam 2001).

Even if incorporated nominals are considered to merge as complements of incorporating heads like their full-fledged counterparts (see Baker 1988; Massam 2001), they have been analyzed as denoting properties rather than arguments (Van Geenhoven 1998), and are considered as co-predicates (Dobrovie-Sorin and Laca 2003) by semanticists. These analyses are in fact reminiscent of Grimshaw's, who considers that SEN arguments are represented in the lexical-conceptual structure of the noun, but absent at the level of A-structure, which she considers to be syntactic. Even if they use different frameworks, all of these authors put forward the idea that phrases referring to the participants to an event may have different statuses. While some exhibit all the properties of arguments both at syntactic and semantic

levels, others may be considered syntactically and semantically deficient, and, for this reason, benefit from a different analysis.

There is, however, a major difference between the data examined by Grimshaw and that pertaining to incorporation: while Grimshaw's work deals with properties of nouns, incorporation is usually considered to be a phenomenon occurring in the VP.

There are in fact some clear data showing that the capacity to incorporate in French is a widespread phenomenon, and that it is not restricted to verbal complements.

According to Mathieu (2006), French prepositions incorporate their bare complements:

101. a. *Il est arrivé sans (*la) cravate.*

he has arrived without (the) tie

'He arrived without tie.'

b. *Il a souri avec (*la) grâce.*

he has smiled with (*the) grace.

'He smiled gracefully.'

(adapted from Mathieu 2006: [37])

These examples reveal that prepositions are incorporating heads.

Moreover, a deverbal noun such as *attaque* 'attack' for example, is able to incorporate its agent argument as well as its object argument. This is exemplified under (102):

102. a. *Une attaque de tigre(s) s'est produite hier au zoo.*

an attack of tiger(PL) REFL-is occurred yesterday at.the zoo

'A tiger attack occurred yesterday at the zoo.'

b. *Une (terrible) attaque (*terrible) de tigre(s) s'est produite hier au zoo.*

a (terrible) attack (*terrible) of tiger(PL) REFL-is occurred yesterday at.the zoo

'A terrible tiger attack occurred yesterday at the zoo.'

c. *Il ne s'est pas produit une attaque de tigre(s) hier au zoo.*

it NEG REFL-is not occurred an attack of tiger(PL) yesterday at.the zoo

'No tiger attack occurred yesterday at the zoo.'

≠ c'. *Il existe {un / des tigre(s)} qui n'{a / ont} pas attaqué (des visiteurs) hier au zoo.*

'{There is a tiger / there are tigers} that did not attack (visitors) yesterday at the zoo.'

d. ?? *Une attaque de deux tigres s'est produite hier au zoo.*

an attack of two tigers REFL-is occurred yesterday at.the zoo

'An attack by two tigers occurred yesterday at the zoo.'

e. *Une attaque de tigre(s) {?? énorme / de Sibérie} s'est produite hier au*

an attack of tiger(PL) {?? huge / of Siberia} REFL-is occurred yesterday at.the
zoo.

zoo

'A {?? huge / Siberian} tiger attack occurred yesterday at the zoo.'

The examples under (102) indicate that *tigre(s)* 'tiger(s)', even though it is understood as an agent, exhibits all the properties of incorporated nominals: it can be singular as well as plural (a), cannot be separated from the noun *attaque* by an adjective (b), takes scope under negation (c), cannot be introduced by numerals (d), and admits only classifying modification (e). It can be concluded that incorporation into nouns does not depend on the original syntactic function or role of the incorporated nominal.

Finally, a more striking fact about incorporation and argumenthood is provided by the fact that 'simple' nouns can also be used with bare NPs exhibiting all the properties of incorporated nominals. Consider examples (103):

103. a. *Ce magasin vend seulement des vêtements de femme(s).*

this shop sells only INDEF.PL clothes of woman(PL)

'This shop only sells {woman's / women's} clothes.'

b. *Ce magasin vend seulement des vêtements (*très chers) de femme(s)*

this shop sells only INDEF.PL clothes (*very expensive) of woman(PL)

(très chers).

(very expensive)

'This shop only sells very expensive {woman's / women's} clothes.'

c. *Ce magasin ne vend pas de vêtements de femme(s).*

this shop NEG sells not INDEF.PL clothes of woman(PL)

'This shop does not sell {woman's / women's} clothes.'

≠ c.' *Il existe {une / des} femme(s) dont ce magasin ne vend pas de vêtements.*

'{There is a woman / there are women} from whom this shop does not sell clothes.'

d. !! *Ce magasin vend seulement des vêtements de vingt femmes.*

this shop sells only INDEF.PL clothes of twenty women

'This shop only sells twenty women's clothes.'

e. *Ce magasin vend seulement des vêtements de femme(s) {enceinte(s) /*

this shop sells only INDEF.PL clothes of woman(PL) {pregnant(PL) /

?? *petite(s)}*.

?? small(PL)}

'This shop only sells {pregnant / ??small} {woman's / women's} clothes.'

As shown by (103a), *femme* in *vêtements de femme(s)* 'women's clothes' may appear in a singular or a plural form.¹⁰ (104b) shows that no material can separate *vêtements* from *de femme(s)*, which exhibits narrow scope with regards to negation (104c–c'). Finally, examples (d) and (e) reveal that *femme(s)* can only be modified by classifying adjectives.

The same properties hold for other *N de N* structures such as *histoire de fille* 'girlish story' / 'girl business', *voiture de sport* 'sportscar', *vêtement de travail* 'work clothes', *robe de mariée* 'wedding dress' (lit. 'bride's dress'), etc.

What these examples reveal is that incorporation, and particularly incorporation into nouns, is a widespread phenomenon in French, and that it does not depend on the argument status of the incorporated noun. Another property of examples (102–103) which is shared by DPs headed by ENs is that they alternate with possessive constructions licensing full-fledged

complements, as shown by the fact that the properties typical of possessive DPs in French (see Section 4) are also verified by (102–103):

104. a. *Le dompteur craint {une / l'} attaque du tigre.*

the tamer fears {a / the} attack of.the tiger

'The tamer fears {the tiger's attack / an attack by the tiger}.'

b. * *Le dompteur craint l'attaque de lui.*

the tamer fears the attack of him

c. *Le dompteur craint son attaque.*

the tamer fears its attack

'The tamer fears its attack.'

d. *Le tigre attaque.*

the tiger attacks

'The tiger {attacks / is attacking}.'

105. a. *Les vêtements de cette femme sont magnifiques.*

the clothes of this woman are beautiful

'This woman's clothes are beautiful.'

b. * *Les vêtements d' elle sont magnifiques.*

the clothes of her are beautiful

c. *Ses vêtements sont magnifiques.*

her clothes are beautiful

'Her clothes are beautiful.'

d. *Cette femme a des (magnifiques) vêtements.*

this woman has INDEF.PL (beautiful) clothes

'This woman has (beautiful) clothes.'

The above examples show in fact that incorporation in French is a regular counterpart of the possessive construction: when a DP enters into a dependency relationship with a noun, it

naturally appears as a Possessor, whereas the corresponding NP is incorporated. Argumenthood does not seem to interfere in this case.

As a consequence, such data raise the question of the putative peculiarities of Event nominals. There is in fact an analysis, put forward by Heller (2002) and Vikner and Jensen (2002), suggesting that the possessive construction has the property to introduce an argument position into DPs. By this means, any 'simple' noun can be turned into a relational noun and thus behave as an argument-taking category. The following examples present the semantic typology of possessive relations established by Heller (2002) after Partee (1997), Barker (1995) and Vikner and Jensen (2002). As shown by examples (b), all of them exhibit the incorporating variant:

106. Inherent relation

a. *la blancheur de la neige*

the whiteness of the snow

'(the) snow's whiteness'

b. *une blancheur de neige*

a whiteness of snow

'a snow-like whiteness'

107. Part-whole relation

a. *le tronc de l'arbre*

the trunk of the tree

'the tree's trunk'

b. *un tronc d'arbre*

a trunk of tree

'a tree trunk'

108. Possessive (i.e. belonging) relation

a. *le chien du berger*

the dog of.the shepherd

'the shepherd's dog'

b. *un chien de berger*

a dog of shepherd

'a sheepdog'

109. Free (i.e. contextually defined) relation

a. *l' histoire de la fille*

the story of the girl

'the girl's story'

b. *une histoire de fille*

a story of girl

'a girl(ish) story'; 'girl business'

Along the lines of the hypothesis developed here, we may add 'agent relation' and 'patient relation' to the list:

110. Argument relation

a. *l' attaque du troupeau*_{Patient}

the attack of.the cattle

'the cattle attack'

b. *une attaque de troupeau*

an attack of cattle

'a cattle attack'

c. *l'attaque du tigre*_{Agent}

the attack of.the tiger

'the tiger's attack'

d. *une attaque de tigre*

an attack of tiger

'a tiger attack'

Finally, the fact that relational nouns also exhibit incorporated complements constitutes a further argument supporting our hypothesis:

111. a. *la fille du fermier*

the daughter of.the farmer

'the farmer's daughter'

b. *une fille de fermier*

a daughter of farmer

'a farmer's daughter'

Heller's hypothesis thus provides a satisfactory answer to the question of argumenthood: if we consider that the possessive structure opens an argument position into any nominal structure, definite as well as indefinite ENs can have arguments when used in possessive constructions. A consequence is that ENs should not be distinguished from simple nominals by their argument structure.

7. Some speculations about *de*

In all the examples discussed in this paper, as well as in other possessive constructions and their incorporating variants, nominal dependencies are introduced by *de*. As we have seen in Section 4, *de* has been analyzed as a genitive case marker by Milner (1982). Even if we assume Milner's analysis, a question remains regarding its role in incorporating constructions. Recall from Section 6 that incorporated elements do not need case in most languages.¹¹ A reasonable assumption then is that *de* in incorporating structures is not a case marker. As a consequence, the question of the nature of this element arises.

The element *de* is in fact very frequent in French. Apart from genitive case, it appears as a preposition, as part of partitive articles (see Sections 4.1. and 5.1.), and as a functional head

linking some quantifiers to DPs / NPs (Hulk 1996; Kupferman 1999, 2001; Zribi-Hertz 2003b). These uses are illustrated by examples (112):

112. a. *Il parle [de [la mer]_{DP}]_{PP}*

he speaks of the sea

'He is talking about the sea.'

b. *Il veut [de la soupe]_{DP}*

he wants PART.ART soup

'He wants (some) soup.'

c. *Il a mangé [beaucoup de [(cette) soupe]_{NP / DP}]_{QP}*

he has eaten a lot of (this) soup

'He has eaten a lot of (this) soup.'

If *de* is not a case marker in structures such as *attaque de troupeau(x) / de tigre(s)* 'cattle / tiger attack' or *vêtement de femme(s)* 'women's clothes', can it be one of the above elements?

On the one hand, we can eliminate the quantificational head hypothesis, since no quantificational relationship is at stake in the structures discussed here: neither *attaque* nor *vêtement* can be analyzed as quantifying elements.

On the other hand, arguments against the hypothesis that *de* is a preposition can also be found. When introducing verbal arguments, *de* generally conveys a Source meaning, which is maintained in the corresponding nominalizations:

113. a. *Il arrive de Paris.*

he arrives from Paris

'He is arriving from Paris.'

b. *son arrivée de Paris*

his arrival from Paris

'his arrival from Paris'

c. *Il a disparu de la région.*

he has disappeared from the area

'It has disappeared from the area.'

d. *sa disparition de la région*

its disappearance from the area

'its disappearance from the area'

Incorporated nominals discussed in this paper are obviously not interpreted as Source.

Recall also from Section 4.1. that PPs introduced by *de* can be pronominalized, which is not the case of incorporated nominals introduced by *de*:

114. a. *un cadeau de Marie*

a gift from Mary

'a gift from Mary'

b. *un cadeau d' elle*

a gift from her

'a gift from her'

115. a. *une attaque {de tigre / d'animaux blessés}*

an attack {of tiger / of animals wounded}

'a tiger attack' ; 'an attack against wounded animals'

b. *une attaque {??de lui / ?? d'eux}*

an attack {?? of him / ?? of them}

Finally, we have seen that the NPs incorporated into ENs correspond to direct arguments (i.e. object and subject) in verbal structures. Analyzing *de* as a preposition would then mean that direct arguments become indirect ones when incorporated, which is certainly not a desirable analysis.¹²

Let us finally turn towards the third hypothesis, namely that *de* is a fragment of an article. In such an analysis, *de* could be analyzed as a partitive determiner deprived of one of its parts. As was seen in Section 5, partitive articles are made up of two elements: *de* and the definite

articles *le* and *la*. Indefinite plural determiners can be analyzed in the same way, either as *de* and the plural morpheme *-s*, or as *de* and the plural definite article *les*:

116. a. *de la bière*

'beer'

b. *du (=de le) vin*

'wine'

c. *de+s pommes*

'apples'

d. *des (=de les) pommes*

'apples'

A solution, along the lines of Mathieu (2004, 2006), would then be that *de* is an unmarked, deficient determiner, introducing pseudo- (or semantically) incorporated nouns in French, in negative (117a), quantified (b) and DP (c) structures:

117. a. *Je n'ai pas mangé de pomme(s).*

I NEG-have not eaten *de* apples

'I have not eaten (any) apples.'

(Mathieu 2004: [20])

b. *J' ai beaucoup vu de films américains.*

I have a lot seen *de* movies American

'I have seen a lot of American movies.'

(Mathieu 2006: [21])

c. *Il a commis des attaques de banque(s).*

he has committed INDEF.PL attacks *de* bank(PL)

'He has committed attacks on banks.'

Various arguments can be raised against this analysis however.

First, why should French incorporate determined NPs, whereas other languages incorporate simple NPs? Even if French generally uses determiners where other languages do not, it would be surprising that it should use overt Ds in contexts of incorporation, where DPs are excluded.

Note also that French exhibits dummy determiners, introducing non-specific or even non-referential NPs. In such contexts, definite, indefinite and partitive articles may be used:

118. a. *aller à l' école; fumer le cigare*

go to the school ; smoke the cigar

'to go to school'; to smoke cigars'

b. *boire un verre; chercher des histoires*

drink a glass ; look for INDEF.PL stories

'to have a drink' ; 'to try to pick fights'

c. *faire de la peine ; avoir du mal*

make PART.ART grief ; have PART.ART pain

'to make sad' ; 'to have difficulties'

Interestingly, in structures such as (c), it is always the complete (i.e. *de + le / la*) partitive articles that are used. Even in cases where partitive articles are optional, *de* cannot be found alone:

119. a. *Il a repris (du) courage.*

he has taken again (PART.ART) courage

'He mustered up courage.'

b. **Il a repris de courage.*

120. a. *Il y a (de l') école.*

there is (PART.ART) school

'There is school.'

b. **Il y a d'école.*

121. a. *Elle lui cherche (des) noise(s).*

she him look for (INDEF.PL) quarrel(PL)

'She is trying to pick a quarrel with him.'

b. * *Elle lui cherche de noises*

Mathieu's analysis of *de* does not seem fit to describe the *de* element in question here.

Apart from the above proposals, it is possible to suggest another, typologically based hypothesis. Recall that *de* occurs in possessive as well as in incorporation structures. In languages such as English and Turkish, some similar facts can be observed. In English, the morpheme *'s*, typical of possessive structures, can also be used with non-referential nominal dependencies (Munn 1995; Zribi-Hertz 1997):

122. a. the girl's bicycle

b. a girl's bicycle (i.e. a bicycle designed for girls)

123. a. this man's shoes

b. men's shoes (i.e. shoes for men)

The same observation holds for Turkish, where the possessive marker *-(s)i* appears on the head noun in possessive DPs as well as with bare NP dependencies (Lewis 1967):

124. a. *üniversite-nin profesör-i*

university-GEN teacher-POSS

'the university's teacher'

b. *üniversite profesör-i*

university teacher-POSS

'a university teacher'

125. a. *kadın-ların elbise-ler-i*

woman-GEN clothing-PL-POSS

'the woman's clothes'

b. *kadın elbise-ler-i*

woman clothing-PL-POSS

'women's clothes'

Similar examples are found in Hebrew (Heller 2002: [10]), where nominals in the construct state can have full DPs as well as bare NPs dependencies. Note that in this language, the construct state is morphologically marked by a phonological change of the head noun (i.e. the Possessee), *anfeý* being the construct state form for *anaf* 'branch':

126. a. *anfeý oren exad*

branch.CS pine one

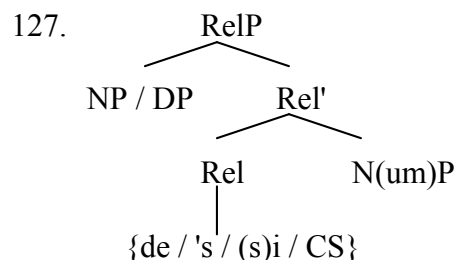
'branches of one pine '

b. *anfeý oren*

branch.CS pine

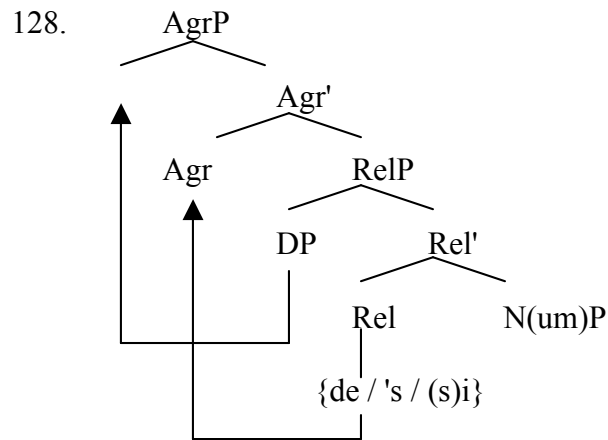
'(a) pine branch'

These observations lead us to suggest that *de* in French, *'s* in English, *-(s)i* in Turkish, as well as the specific Construct State component of the nominal form in Hebrew may be the heads of the projections introducing arguments into DPs, originally suggested by Heller and discussed in Section 6. The argument would then merge into the specifier position of the projection headed by *de / 's / (s)i* and the CS in Hebrew. Since, in Heller's terms, this projection changes 'simple' NPs into relational NPs, let us term it Rel(ational)P:

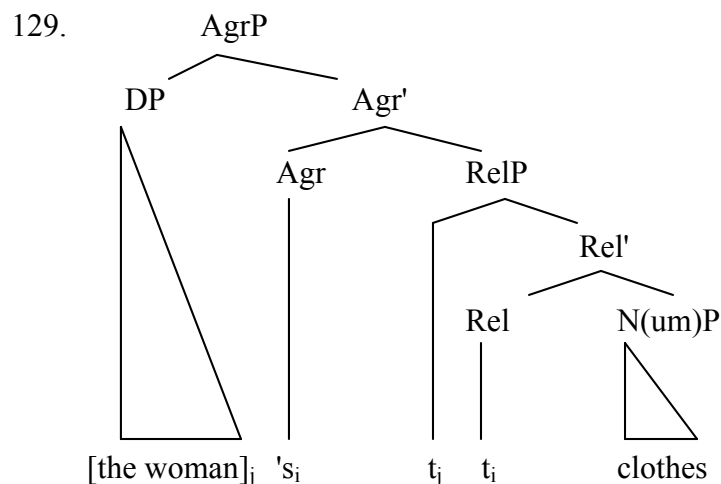


Recall that only DPs need case. Thus, if a DP is merged into Spec,Rel, an AgrP projection is also needed to ensure case marking of the argument, whereas no such projection is needed if

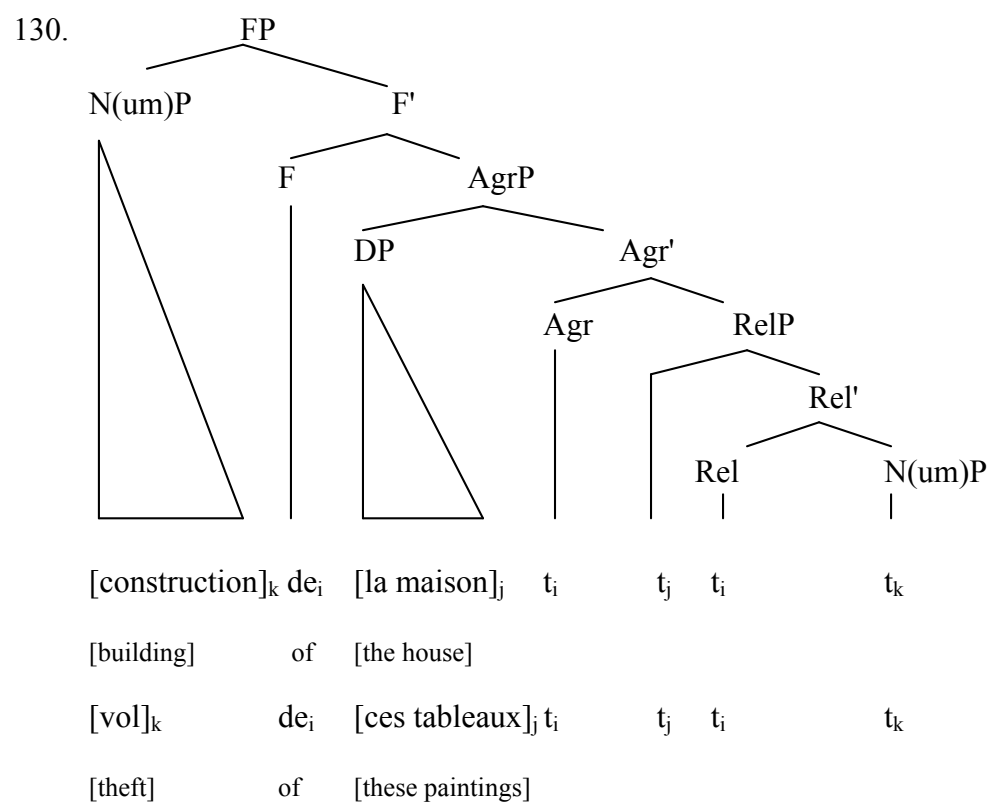
the added constituent is NP. We will assume that DP moves to Spec,AgrP to check genitive case. In parallel, Rel moves to Agr:



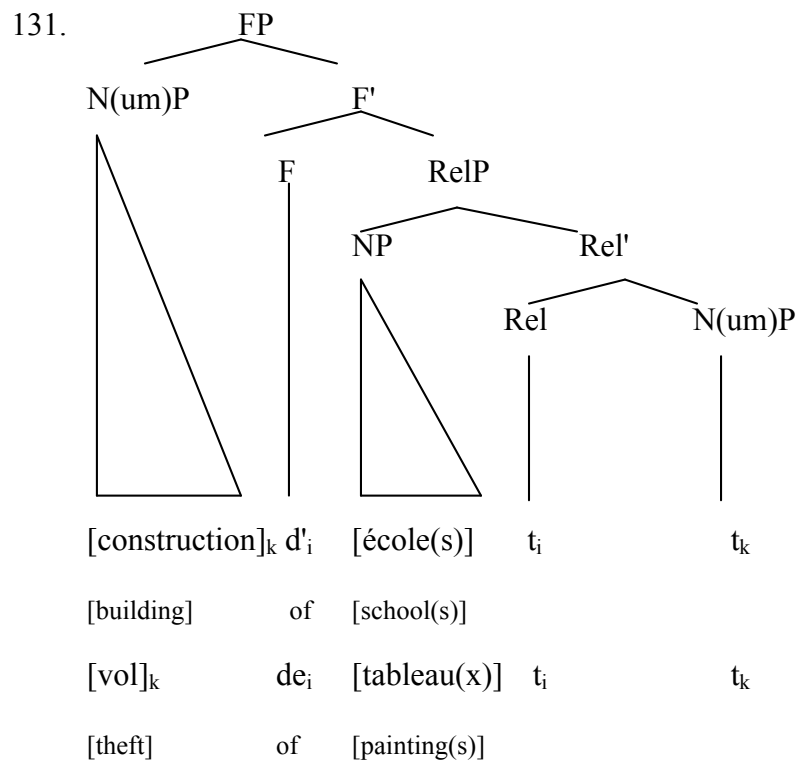
This proposal has some consequences for the analysis of *de* in French possessive DPs: if *de* is a Rel head, it cannot be analyzed as a genitive marker anymore. As no other marker surfaces, we will assume that genitive case is phonologically null in French. The same analysis can be applied to English. According to Kayne (1993, 1994) *'s* in English is an Agr head, which implies in turn that there is no overt genitive marker in this language. To integrate the description of English into our analysis, we may consider *'s* as originally a Rel head that has moved to a phonologically null Agr, like its French equivalent. We can then account for structures such as (122–123) without any further speculation:



The situation is however different in French, since the NP / DP argument necessarily surfaces to the right of the head-noun. To account for this order, we suggest that AgrP is dominated by a functional projection FP, where both the head noun and the Agr head move:



FP also appears in cases of incorporation:



The above analysis offers several advantages. First, it provides a unified account of *de* in possessive as well as in incorporating structures. Second, it sets this element and its role into a typological perspective, since *de* is seen as the realization of a Rel head which also occurs in other languages including English, Turkish and Hebrew, at least.

8. Conclusion

The main proposal of this paper is that Event nominals do not differ syntactically from simple nouns in French, contrary to what Grimshaw (1990) claims.

Various arguments have been put forward in support of this hypothesis. First, I have shown that the two major peculiarities of French Event nominals, namely the selection of the definite article and the necessity of a complement, also characterize simple nouns used as possesseees in possessive DPs. A closer examination has also shown that the properties of the constituents

of possessive DPs are also shared by those of DPs headed by Event nominals. As a consequence, I have suggested that Event nominals do not differ from simple nouns, and that their supposed peculiarities are in fact those of the possessive construction itself.

Another point of Grimshaw's analysis which has been discussed and put into a more general frame is the regular vs. instance reading of CENs. The hypothesis I have proposed to account for this variation is that the instance reading is simply due to the count use of Event nominals, whereas their regular reading is due to their use as mass nouns. With regards to this property however, it has been shown that nouns built up on once-only predicates exhibit different behavior: they cannot be directly shifted into count nouns, and require a noun acting as a classifier for the instance reading to appear.

The examination of the complements of Event nominals has also led to further interesting observations. Apart from DPs behaving as regular possessors, Event nominals also admit bare nouns as complements. Those exhibit the semantic as well as the syntactic peculiarities of pseudo-incorporated NPs. As a consequence, it has been suggested that pseudo-incorporation into nouns is an option available in the grammar of French. It has also been shown that this mechanism is not restricted to Event nominals, thus enforcing the idea that these do not constitute a specific class of nouns.

Finally, I have proposed a syntactic analysis accounting for the behaviour of Event nominals as well as simple nominals, based on Heller's (2002) idea that possessive constructions turn simple nouns into relational nouns. The basic proposal I have suggested is that nominal constituents depending on nouns merge into the specifier position of a Rel(ational) P(hrase) headed by *de*, and, if they are DPs, move to Spec,AgrP where they are case-checked. This hypothesis offers the advantages of accounting for the presence of *de* in DPs as well as in NPs occurring as nominal dependencies, and also of setting the data displayed by French into a

more typological point of view, since it is also able to describe the behaviour of complex DPs in other languages.

ENDNOTES

¹ For an application of Grimshaw's proposals to languages other than English, see Samvelian (1995) for French, Siloni (1997) for Hebrew and Szabolcsi (1990) for Hungarian.

² The tests that do not apply to French have to do first with the acceptability and interpretation of prenominal genitive possessors, a construction that does not exist in French:

(i) *the doctor_{Agent}'s examination of the patients*

(ii) **le médecin le / son examen des malades*

Second, the fact that English CENs necessarily appear in the singular even when referring to several events is not always true of their French equivalents. See Roodenburg (2007), Alexiadou, Iordachioaia and Soare (2008) for a discussion. Conditions on pluralization of French CENs are discussed in Section 3.3.

³ *Ça* is impossible when used as a pronoun having an inanimate antecedent (cf. 'it'), although it is possible when used ostensively, i.e. when corresponding to 'that'.

⁴ This is the case in possessive as well as non-possessive DPs.

⁵ Note however that a DP such as *{une / des} tête(s) du dragon* 'one / several of the dragon's head(s)' is pragmatically acceptable, since it may be assumed that at least some dragons have several heads.

⁶ Our translation of: *[ces nouveaux référents] se présentent ou sont donnés comme appartenant à un ensemble déjà installé, connu ou accessible*.

⁷ In a language such as Maori however, incorporated nominals are introduced by special Ds. See Polinsky (1992) and Chung and Ladusaw (2003: 41).

⁸ For other examples of this kind of incorporation, see Baker (1988).

⁹ Kupferman (2004) distinguishes between characterizing and classifying adjectives only. However, the behaviour variation exhibited by PPs in these examples shows that this

distinction can also be applied to these constituents, since some of them express subkinds while others do not. Note also that Possessors (*[du Musée]* and *[de la comtesse]*) qualify as characterizing only.

¹⁰ See Munn (1995) for a discussion of English data.

¹¹ The accusative case-marking of Hungarian incorporated nominals (see Farkas and de Swart 2003) is an exception to this general rule.

¹² This argument is derived from that of Gaatone (1971) about the status of *de* introducing indefinite objects of negated verbs, cf: *Je ne lis pas de livres* 'I don't read *de* books.'

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