

On bare nominals and argument structure*

M.TERESA ESPINAL & JAUME MATEU

Centre de Lingüística Teòrica, Universitat Autònoma de Barcelona
Teresa.Espinal@uab.cat, Jaume.Mateu@uab.cat

This paper aims at focusing on a set of phenomena related to the syntax and semantics of bare count nominals: bare count nominals (BNs) in argument position, BNs in predicate position, and the relationship between argument structure and the interpretation of bare nominals. The novelty of this paper is to relate the occurrence of bare nominals with the argument structure position in which they may occur at a syntactic level of representation.

1. Introduction

Although some authors such as Chierchia (1998) have claimed that BNs are not found in the Romance languages, ample data (cf. Schmitt and Munn 1999, Dobrovie-Sorin et al. 2006, among others) show that they are in fact a well-attested and productive phenomenon. However, there are some well-known puzzles that have to be solved on the distribution of BNs in Romance.

One of these puzzles, on which we will focus in this paper, is that not all argument structure positions allow BNs: internal object positions of unaccusative (1a) and causative transitive verbs (1b), as well as external subject positions (1c) are not appropriate recipients of BNs (cf. Suñer 1982). In Espinal & McNally (2007) it is hypothesized that BNs can only be found in unergative-like argument structures, as bare objects of verbs, a hypothesis that has been extended to existential *haver-hi* ‘there be’ sentences. See the contrasts between the Catalan examples in (1) and (2). The Spanish examples in (3) further illustrate the presence of BNs in object position of (birelational) prepositions (cf. Bosque 1996, Laca 1999).

- (1) CATALAN
- a. *Va morir *nen*
PAST die child
 - b. *Hem tancat *finestra*
have closed window
 - c. *Gat *miola*
cat mews

* This research has been funded by the following grants: HUM2006-13295-C02-01FILO, HUM2006-13295-C02-02FILO, HF2007-0039, and 2005SGR-00753.

- (2) a. Té *cotxe*.
has car
'(S)he has a car.'
b. Busquem *dependenta*.
look for shop-assistant
'We are looking for a shop-assistant.'
c. Hi ha *piscina*.
there has swimming pool
'There is a swimming pool.'

(3) SPANISH

- a. Está en *prisión*.
is in prison
'(S)he is in prison.'
b. Voy a *casa*.
go. 1sg to home
'I'm going home.'

Second, not all BNs can occur in predicate position. Only capacity nominals such as *director* 'director' / *candidate* 'candidate' (De Swart et al. 2007), and relational nominals such as *primo* 'cousin' / *padre (de alguien)* 'father of somebody', when occurring with their complements, are allowed in this position, as shown in (4). Occasionally, bare abstract nouns and BNs are also allowed in postcopular predicate position, as illustrated in (5), similar to adjectives, past participles and adverbs.

(4) SPANISH

- a. Juan es *director* / *candidato* / *noble* / *atleta*.
Juan is director / candidate / noble / athlete
'Juan is a(n) director ...'
b. Juan es *primo* *(de mi cuñada) / *padre* *(de Luisa)
Juan is cousin of my sister-in-law / father of Luisa
'Juan is the cousin of my sister-in-law / the father of Luisa.'

(5) a. Juan es muy *hombre* / está muy enamorado.

Juan is very man / is very in-love
'Juan is very manlike / very much in love.'

b. Es *verano* / *invierno*.

is summer / winter
'It's summer / winter.'

c. Dios es (todo) *Amor*.

God is all love

Other BNs such as *periódico* 'newspaper', and event nominals, such as *respuesta* 'answer', which differ lexically from capacity and relational nominals, are discarded in postcopular position, but are allowed in other predicate contexts such as those preceded by the particle *como* 'as' (Munn & Schmitt 2005). See the contrasts in (6) and (7)¹.

¹ In contrast with the claim just made, see the following text, which include two uses of non-relational nouns in predicate position. We think that the BNs in italics that occur in the second

(6) SPANISH

- a.* El País es *periódico*.
El País is newspaper
- b. Como *periódico* suele comprar El País.
as newspaper is-used-to buy El País
'As a newspaper (s)he usually buys El País.'

- (7) a.* Lo que me ha dicho es *respuesta*.
what that me has said is answer
- b. Como respuesta me ha dicho ...
as answer me has told
'What (s)he told me as an answer ...'

With this presentation in mind, in this paper we intend to provide an answer to the following two questions:

1. Why is it the case that BNs seem to be allowed only in V+N argument structures (as illustrated in (2)), in object position of Prepositions (see (3)), and in predicate position (see (4-5)).
2. Do all these three possibilities have anything in common from the perspective of their syntactic argument structure?

Assuming a syntactic approach to argument structure (Hale & Keyser 2002, Mateu 2002) and its extension from lexical-syntax to sentential-syntax, we are going to show that the syntactic structures underlying the examples in (2), (4), and (5) have a crucial syntactic pattern in common: they all introduce bare NPs in complement position.

Following these assumptions we will argue for the next two hypotheses:

H1. BNs can only occur as internal arguments of relational categories (V, P) to which bare nouns can move and conflate at some point during the syntactic derivation.

H2. BNs can never occur as internal arguments of unaccusative or complex transitive verbs due to a structural constraint on subjects / specifiers: they must be properly licensed by appropriate functional categories.

paragraph are licensed, because (i) they keep a discourse relationship with previously quoted nominals, and (ii) they are under the scope of negation.

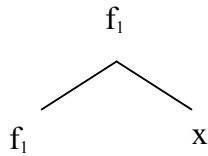
“el 20 de marzo de 2003 empezaron a morir iraquíes bajo las bombas y los misiles estadounidenses. Era lo que Bush llamaba y sigue llamando “ataque preventivo” o “guerra contra el terrorismo”, pero que no es ni lo uno ni lo otro.

No es preventivo porque ... Y no es *guerra* porque un ataque con medios aplastantes, sin defensa enfrente, no es una batalla sino una masacre impune, que avergonzaría a auténticos guerreros (...). Tampoco es *combate* contra el terrorismo pues nadie en su sano juicio puede creer que el mejor sistema de lucha contra grupos terroristas dispersos consiste en arrasar países enteros.” (José Luis Sampedro, *Los mongoles en Bagdad*, Madrid: Destino, 2003, p.114).

2. Theoretical framework

Following previous syntactic approaches to argument structure (Hale & Keyser 2002, Mateu 2002), we assume the following structures: the unergative (8), exemplified in (9), the unaccusative (10), exemplified in (11), and the transitive (12), exemplified in (13).

(8) Unergatives

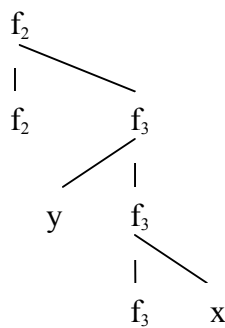


In (8) f_1 stands for an eventive relational category, which can be associated to two “semantic flavors” (DO and HAVE). x is a non-relational slot that can be occupied by different nominal-like expressions: i.e., $x = \{N, NP, NumP, DP\}$.

- (9) a. John {danced/did a dance}
 b. The cow {calved/had a calf}

The external argument (‘Originator’) is not introduced in the lexical argument structure (see Hale & Keyser 2002, i.a.), whereas the internal argument x is assumed to be conflated with the head f_1 giving then an intransitive denominal verb.² For our present purposes, two important restrictions put forward by Hale & Keyser (2002) will be the following ones: (i) only bare roots can be conflated; (ii) specifiers cannot conflate at l-syntax, only complements can.

(10) Unaccusatives



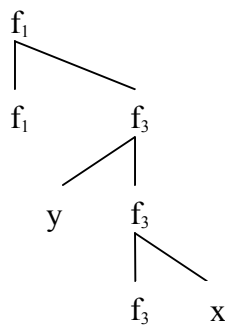
In (10) f_2 stands for an eventive relational category that can take two basic semantic flavors: BE and BECOME. No external argument will then be required in s-syntax. f_3 is a non-eventive birelational category, i.e., with specifier and complement; if stative, it corresponds to a *central coincidence relation*; if

² According to Hale & Keyser (2002:11): “an empty phonological matrix must be eliminated from the morphosyntactic representation of sentences. This is accomplished, we assume, through conflation. *Conflation* may be a specific kind of incorporation, conforming to an especially strict version of the *Head Movement Constraint*, according to which the phonological matrix of a complement replaces the empty matrix of the governing head”.

dynamic, it corresponds to a *terminal coincidence relation*.³ Finally, y and x are read off from (10) as ‘Figure’ and ‘Ground’, respectively. Since y is a specifier, those nominal expressions occupying this position will be shown to have functional features that must be appropriately valued: i.e., $y = \{\text{DP}, \text{NumP}\}$.

(11) John is in prison / John went to prison / John got imprisoned.

(12) Transitives



In (12) f_i stands for an eventive relational category, which can be associated to CAUSE and HAVE. Accordingly, unlike (10), an external argument will be required in s-syntax. On the other hand, as in (10), f_3 in (12) is a non-eventive birelational category: it relates a Figure with a Ground. Crucial to our analysis will be to show that, although both y and x are nominal categories, specifiers of relational categories cannot be bare nominals (i.e., $y = \{\text{DP}, \text{NumP}\}$), whereas complements can (i.e., $x = \{\text{N}, \text{NP}, \text{NumP}, \text{DP}\}$).

(13) Peter put John into prison / Peter had John in prison / Peter imprisoned John.

3. Postverbal nominals in unergative-like structures

As is well-known, bare abstract nouns can occur in object position and have been postulated to be incorporated into either V or P at the syntactic level of representation standardly known as Logical Form. See the Spanish data in (14) (e.g., Masullo 1996).

(14) SPANISH

- a. hacer mención, tener afecto, tomar cariño
do mention have affection take affection
‘to mention, to show affection to grow fond of’
- b. en oposición (a), a pesar (de), en práctica
in opposition to in spite of in practice

³ Roughly, a terminal coincidence relation (e.g. cf. *to*, *out of*, *from*, etc.) involves a coincidence between one edge or *terminus* of the theme’s path and the place, while a central relation (e.g. cf. *with*, *at*, *on*, etc.) involves a coincidence between the center of the theme and the center of the place. See Hale & Keyser (2002), for further discussion.

See also Mateu (2002) for the claim that Adjectives involve an abstract relational element similar to f_3 (see Kayne 2008 for a similar claim). Accordingly, ‘Adjective’ is not a primitive l-syntactic category but is the result of conflating x with f_3 : e.g., *John went to prison* & *John went crazy* are claimed to involve the same argument structure in (10).

More recently, in the linguistic literature on Spanish and Catalan (cf. Bosque 1996, Laca 1999, Espinal 2001, Dobrovie-Sorin et al. 2006, Espinal & McNally 2007), the incorporation of object complements at a later stage of the derivation has also been postulated for data such as the examples in (15), which include both non-idiomatic expressions (see (15a)) and idiomatic ones (see (15b)).

(15) CATALAN

- a. portar barret, tenir pis, necessitar cangur, buscar metge
wear hat, have flat, need baby-sitter, look-for doctor
'to wear a hat, to have an apartment, to need a baby sitter, to look for a doctor.'
- b. tenir cap, fer forat.
have head, make hole
'to be intelligent, to impress.'

Interestingly, those verbs in (15a) can be regarded as instantiations of so-called 'characterizing *have* predicates' (Espinal & McNally 2008), which have been argued to involve unergative structures headed by a light HAVE⁴. Similarly, the following Catalan examples with *fer-ho* 'do so' seem to lead us to conclude that the relevant light verb in (15a) is not DO but rather HAVE⁵.

- (16) a. ??En Joan porta barret i la Maria també ho fa.
Det John wears hat and Det Maria also does so
- b. *En Joan necessita cangur i la Maria també ho fa.
Det Joan needs babysitter and Det Maria also does so
- c. ??En Joan busca metge i la Maria també ho fa.
Det Joan looks-for doctor and Det Maria also does so

However, for our present purposes, what should be noticed is that the nominal head, no matter whether it is an abstract noun (see (14)) or a sortal / count noun (see (15)), can form a complex unit with f_i at some level of representation if, and only if, the basic argument structure in which they occur is the one that corresponds to what we call unergative-like structures: see (8). Accordingly, the relevant generalization that can be drawn from the analysis of the data presented so far is the following one:

- (17) If a BN expression is allowed in syntactic complement position of a HAVE relation, a full NP, NumP or DP can also occur in that position.⁶

⁴ See also Harves & Kayne (2008) for the claim that transitive *need* involves incorporation of a bare nominal root NEED into an abstract light verb HAVE.

⁵ In contrast to (16a) and (16c) notice the well-formedness of (i a-b).

- (i) a. En Joan porta *el/un* barret a la Maria i en Pere també ho fa.
Det John wears the/a hat and Det Maria also does so
'Joan takes the / a hat to Mary, and does so too.'
- b. En Joan busca *el/un* metge de capçalera i la Maria també ho fa.
Det Joan looks-for doctor of family and Det Maria also does so
'Joan is looking for a family doctor, and Maria does so too.'

⁶ In complement position of a DO relation BNs can never occur (e.g., **fer polca* lit. do polka, **ballar polca* lit. dance polka), and this parallels the fact that cognate and hyponymous objects always require either NumP or DP (e.g., *balla la/una polca* 'dance the / a polka').

To summarize, postverbal nominals of unergative-like structures can be BNs, because they merge with the complement position of a relational head, and can incorporate (either syntactically or semantically) into this relational head at some point of the derivation (either at l-syntax, at s-syntax, or at the syntax-semantics interface). This is possible because BNs in complement position are not canonical arguments: syntactically, they lack a specification of Number and Determiner, and are nor bearers of a referential index; semantically, they are property-denoting expressions (Espinal & McNally 2007, 2008).

4. Postverbal nominals of unaccusative / causative transitive verbs

Let us now consider the contrasts in (18) and (19). *Morir* ‘to die’ is an unaccusative verb, and *netejar* ‘to clean’ is a causative transitive verb since it denotes a caused change of state. None of them allows a BN in postverbal position, as illustrated in (18c) and (19c).

(18) CATALAN

- a. Van venir {trens, nens}.
PAST.PL come trains children
‘Some {trains, children} came.’
- b. Va venir {l’avi, un canari, en Pere, gent}.
PAST.SG come the grandfather a canary Det Pere people
‘{The grandfather, a canary, Pere, people} came.’
- c. * Va venir {tren, nen}.
PAST come train child

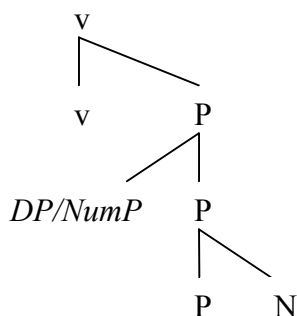
- (19) a. Aquest producte neteja {taules, finestres}.
this product cleans tables windows
‘This product cleans {tables, windows}.’
- b. Aquest producte neteja {les taules, unes superfícies, el vidre, greix}.
this product cleans the tables some surfaces the glass grease
‘This product cleans {the tables, some surfaces, the glass, grease}.’
- c. * Aquest producte neteja {taula, finestra}.
this product cleans table window

These examples, and further data that we have extracted from a *Corpus of the Use of Catalan at the Web* (Cucweb), show that the nominal expression occurring in postverbal position of an unaccusative verb can be either a proper name, a bare plural, a bare mass term, and a definite or indefinite DP, but not a BN. This distribution correlates with a particular semantic denotation: the postverbal nominal of an unaccusative verb like *venir* ‘to come’ can denote an entity (this is clearly the case when the nominal expression is a proper name, a definite DP, a bare plural or a mass term), or a generalized quantifier expression (in the case of a singular indefinite), but not a property (which, following Espinal & McNally 2007, we assume to correspond to the denotation of BNs in object argument position in Romance), as illustrated in (18c) and (19c).

Examples of the sort exemplified by Catalan *fer tesi* lit. do thesis ‘make progress in the thesis’ are legitimate because the nominal has a mass interpretation, one which allows a degree modifier: *fer molta tesi* lit. do much thesis ‘make quite a lot of progress in the thesis’.

Following Mateu (2002), we assume for unaccusatives an argument structure such as the one represented in (10). This structure, repeated in (20), makes explicit that the subject position of the small clause-like PP must be filled up by a DP/NumP, whereas the object position can be filled by a bare count nominal. For our present purposes, we will assume that mass nouns are NumPs, since they are inherently plural.

(20)



The fact that the postverbal nominal in (18c) and (19c) actually corresponds to the external argument of a PP or small clause-like projection is derived from the lack of BNs in specifier position. Those nominals that occur in specifier positions are subjects of predication relationships, and require an appropriate syntactic domain (i.e., a functional information, either encoded in a Number or Determiner projection), in order to be properly valued. We assume, following Baker (2003:26), that the “agent <our Originator: MTE & JM> and theme <our Figure> roles can only be assigned to specifier positions”.⁷ Notice that in (20) the specifier of P corresponds to the theme or figure.

Some apparent counterexamples to this analysis of the distribution of BNs with unaccusative verbs appear in (21):

(21) CATALAN

- a. *Cau pedra.*
falls stone
'Hailstones are falling.'
- b. ...s'evitarà que caigui *producte* damunt la taula de treball...
CL avoid that falls product on the table of working
'One should avoid that some product drops on the working table.'
Cucweb <http://ramsesii.upf.es/cgi-bin/cucweb/search-form.pl>(13.02.08)
- c. M'ha arribat *correu.*
me has arrived mail
'I've received some mail.'
- d. Vam aconseguir que arribés *senyal* a l'altaveu. (Brucart 2002:1455)
PAST manage that arrive signal to the loudspeaker
'We managed that some signal arrived to the loudspeaker.'

However, the Catalan examples in (21) contain nominal expressions that have been lexically massified and are similar to the mass nouns in italics in (22). An

⁷ In contrast to Mohawk (where subjects of unaccusative verbs can incorporate), Romance non-complements cannot incorporate, because they require some sort of syntactic valuation.

argument in support of the mass-like status of these BNs that occur in postverbal position of unaccusative verbs is the fact that these nominals allow some degree quantifiers (e.g., *massa* ‘too much’) and some number non-agreeing adnominal quantifiers (e.g., *molt* ‘much’, *força* ‘quite a lot’, *una mica de* ‘a little of’, etc.) in prenominal position. See the data in (23).

- (22) a. Cau *calamarsa* / *pluja* / *neu*.
 falls hail rain snow
 ‘It is {hailing, raining, snowing}.’
- b. ...s’evitarà que caigui *líquid* / *oli* / *lleixiu* damunt la taula.
 CL avoid that falls liquid oil bleach on the table
 ‘One should avoid that some {liquid, oil, bleach} drops on the working table.’
- (23) a. M’ha arribat *força* correu.
 me has arrived quite a lot mail
 ‘I’ve received quite a lot of mail.’
- b. Vam aconseguir que arribés *una mica de* senyal a l’altaveu.
 PAST manage that arrive a little of signal to the loudspeaker
 ‘We managed that some amount of signal arrived to the loudspeaker.’

This test contrasts the nominals in (22), which are mass nouns, with the ones in (15) above, which cannot be preceded by degree and non-agreeing adnominal quantifiers, as shown in (24).

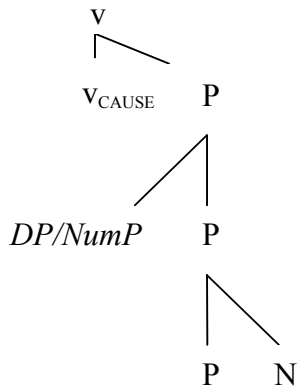
- (24) a. *Avui porta *molt* barret.
 today wears much hat
- b. *Aquest noi té *força* pis.
 this boy has quite-a-lot apartment
- c. *Busca *una mica de* metge.
 looks-for a little of doctor

Mass and massified nouns have the formal properties of being cumulative and having no quantized reference (Krifka 1989). In this respect the nominals in (21) as well as the ones in (22) share these two properties.

Regarding causative transitive verbs such as *netejar* ‘to clean’, we have also observed (see (19)) that the postverbal object cannot be a BN, but must be either a BP, a bare mass term, or a full-fledged DP. That is, the object of a complex transitive verb must be specified by number and/or definiteness. This behaviour is explained exactly in the same way as has already been done with unaccusatives.

The argument structure postulated for a causative transitive verb (initially represented in (12) and repeated in (25)) subordinates a PP under a causative-like verbal head. This structure consists of two functional / relational projections. Below this v_{CAUSE} we find a PP predication-like complement. As above, this small clause-like structure requires a NumberP or full-fledged DP in subject position, in order to guarantee appropriate valuation of the subject in the syntactic domain.

(25)



Once again the question is: why a BN cannot be licensed in specifier position? BNs, being roots, do not have any formal feature that requires to be checked: if merged in complement position, nothing justifies their movement to subject position; if merged in subject position, they cannot value any formal feature of a functional projection because they lack formal features. On the other hand, BNs cannot be interpreted as semantic arguments; they are interpreted as neither agents nor themes, which are the thematic roles normally associated with specifier positions (Baker 2003).

In other words, if we conceive causative transitive structures as complex structures that combine a v_{CAUSE} relational head with a P relational category, BNs are never allowed in the immediate postverbal position, since postverbal BNs correspond to the theme / figure argument, and as such they must be licensed by a Determiner or a Number head⁸. See (26).

(26) CATALAN

- a. *La Maria ha netejat *taula*.
Det Maria has cleaned table
- b. *Hem tancat *finestra*.
have closed window

Finally, let us consider what is the argument structure corresponding to those nominals that occur as complements of the inner birelational projection P postulated in (25). Consider the examples in (3), repeated here for convenience.

(27) SPANISH

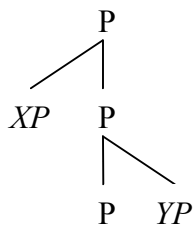
- a. Está en *prisión*.
is in prison
'(S)he is in prison.'

⁸ Here we hypothesize that there are two transitive structures: those unergative ones that show the V+N pattern (that include 'have'-predicates), and those proper transitive ones that have a canonical argument in a V+DP/NumP pattern. The former allows non-massified BNs in complement position, the latter only allows massified BNs in specifier position, as represented in (25).

- b. Voy a *casa*.
 go to home
 ‘I’m going home.’

These prepositions either denote a central coincidence relation (27a) or a terminal coincidence relationship (27b), and project the dyadic structure in (28) characteristic of the lexical category P (cf. Hale & Keyser 2002:218). For those prepositions that express central coincidence, the entity in subject position (i.e., pro) has the attribute denoted by the prepositional complement (being in prison). For those prepositions that express terminal coincidence, the entity in subject position (i.e., pro) is related dynamically to a place (at home).

(28)



However, what should be remarked is that whereas the external argument (specifier) of P must be a nominal category different from a bare nominal (i.e., it cannot be N; see (29)), the internal argument (complement) of P can be a BN, independently of the fact that P might denote either central coincidence or terminal coincidence.

(29) SPANISH

- a. Desde el principio la asociación ha servido a *los inmigrantes en prisión*.
 from the beginning the association has served to the immigrants in prison
 ‘From the very beginning the association helped the immigrants in prison.’
- b. Así, de esta manera expresas tu parecer, que es totalmente aceptable, y
 dejas a *los políticos en casa*.
 thus of this manner express your opinion that is totally acceptable and
 leave to the politicians at home
 ‘Thus, you express by this means your opinion, which is absolutely
 acceptable, and leave politicians at home.’
<http://www.google.es> (24.06.08)

To sum up, BNs are not allowed as objects of unaccusative and causative transitive verbs because – under an argument structure analysis – these apparent objects are, in fact, internal subjects of a small clause like PP predication, and subjects need to be licensed by some functional projection (either one that expresses number, or definiteness, or both).⁹

⁹ Following Munn & Schmitt (2005:825), we assume that those apparent BNs in (i) “are DPs with an empty determiner, and no number projection”.

- (i) a. Criança lê revistinha. Munn & Schmitt (2005: ex. (1b))
 child read.3sg comic book
 ‘Children read comic books.’

- Krifka, M. (1989) Nominal reference, temporal constitution and quantification in event semantics. In R. Bartsch, J. van Benthem & P. van Emde Boas (Eds.) *Semantics and contextual expression*, (pp. 75–115). Stanford, CA: CSLI Publications.
- Laca, B. (1999) Presencia y ausencia de determinante. In I. Bosque & V. Demonte (Eds.) *Gramática descriptiva de la lengua española*, (pp. 891–928). Madrid: Espasa Calpe.
- Masullo, P. (1996) Los sintagmas nominales sin determinante: una propuesta incorporacionista. In I. Bosque (Ed.) *El sustantivo sin determinación. La ausencia de determinante en la lengua española*, (pp. 169–200). Madrid: Visor.
- Mateu, J. (2002) *Argument structure. Relational construal at the syntax-semantics interface*. Bellaterra: UAB dissertation. <http://seneca.uab.es/ggt/tesis.htm>
- Munn, A. & C. Schmitt (2005) Number and indefinites. *Lingua* 115, 821–855.
- Schmitt, C. & A. Munn (1999) Against the nominal mapping parameter: bare nouns in Brazilian Portuguese. *NELS* 29, 339–353.
- Suñer, M. (1982) *Syntax and semantics of Spanish presentational sentence-types*. Washington: Georgetown University Press.
- de Swart, H., Y. Winter & J. Zwarts (2007) Bare nominals and reference to capacities. *Natural Language and Linguistic theory* 25(1): 195–222.