

## Spanish adjectives of completeness as maximizers of property concept nouns\*

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### 1 Introduction

- Adjectives of completeness (ACs, *completo* ‘complete’, *total* ‘total’, *absoluto* ‘absolute’) modify some nouns denoting property concepts (PC)

(1) a. La **completa oscuridad** de la sala le impide ver al asesino.  
the complete darkness of the room DAT prevents see.INF to.the murderer  
‘The complete darkness of the room prevents her from seeing the murderer.’

b. Nos sorprendió la **total claridad** de su programa para la legislatura.  
ACC surprised.3SG the total clarity of her platform for the term  
‘The total clarity of her platform for the next term surprised us.’

(2) a. ?? La **completa altura** del armario le impide ver al asesino  
the complete height of.the closet DAT prevents see.INF to.the murderer  
Intended: ‘The complete height of the closet prevents her from seeing the murderer.’

b. ?? Nos sorprendió la **total inseguridad** del barrio  
ACC surprised.3SG the total insecurity of.the neighborhood  
Intended: ‘The total insecurity of the neighborhood surprised us.’

- Their adverbial counterparts (*completamente* ‘completely’ and so on) are degree modifiers sensitive to the adjective’s scale

(3) a. Completamente oscuro/??alto                      b. Totalmente claro/??inseguro  
completely dark tall                                      totally clear dangerous

#### • Questions

- Are ACs degree modifiers in the nominal domain?
- What is the source of gradability? What is the relation between gradability and parthood?
- What is the relation between the adverb and the adjective?

#### • In this talk I will

- show that the distribution of ACs with abstract mass nouns can be predicted by the scale used by their related adjective

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- argue for an approach to Spanish PC nouns as denoting substances, following [Francez and Koontz-Garboden's 2015](#) proposal for Ulwa
- discuss the differences between adjectives and nouns and their ways to denote properties and being measured
- provide an analysis for ACs as degree modifiers of maximality

## 2 Maximality modifiers in the adjectival domain

- Adjectives differ with respect to the structure of the scale they lexicalize ([Kennedy and McNally, 2005](#))

Open scale	○————○	( <i>alto</i> ‘tall’, <i>guapo</i> ‘handsome’)
Upper closed scale	○————●	( <i>limpio</i> ‘clean’, <i>oscuro</i> ‘dark’)
Lower closed scale	●————○	( <i>sucio</i> ‘dirty’, <i>impuro</i> ‘impure’)
(Fully) closed scale	●————●	( <i>lleno</i> ‘full’, <i>opaco</i> ‘opaque’)

- Maximality modifiers are sensitive to the scale structure of the adjective: They only appear with upper and totally closed scale adjectives ([Rotstein and Winter, 2004](#); [Kennedy and McNally, 2005](#))

- (4) a. completamente oscuro/lleño/libre/visible/opaco  
 completely dark/full/free/visible/opaque
- b. ?? completamente alto/ancho/guapo/impuro/peligroso  
 completely tall/wide/handsome/impure/dangerous

- Maximizers are degree modifiers that restrict the value of the degree argument of the adjective  $G$  to being a maximum on the adjective's scale  $S_G$ .

$$(5) \llbracket \text{completely} \rrbracket = \lambda G \lambda x. \exists d [d = \mathbf{max}(S_G) \wedge \mathbf{G}(d)(x)] \quad (\text{Kennedy and McNally, 2005})$$

- Maximality modifiers have the following properties:

1. They entail that the end of the scale has been reached

- (6) a. # El avión está **completamente lleno**; hay un asiento libre en la parte de atrás.  
 the plane is completely full there.is a seat free in the part of back

‘The plane is completely full. There is an empty seat in the rear.’

- b. # El suelo está **totalmente seco**; queda un charquito en ese rincón.  
 the floor is totally dry remains a puddle-DIM in that corner

‘The floor is totally dry. There is a small puddle in that corner.’

2. The construction *maximizer G* is a total construct, in the sense that it has the distribution of an upper-closed scale adjective ([Rotstein and Winter, 2004](#)). This is shown by the fact that it is compatible with *almost*

- (7) a. El avión está **casi completamente lleno**.  
 the plane is almost completely full

- b. El suelo está **casi totalmente seco**.  
the floor is almost totally dry
3. Total adjectives accept exceptive phrases (Rotstein and Winter, 2004). As a total construct, *maximizer G* is also compatible with the construction *except for*.

- (8) a. El avión está **completamente lleno**, excepto un asiento en la primera fila.  
the plane is completely full except a seat in the first row  
'The plane is completely full, except for a seat in the first row.'
- b. El suelo está **totalmente seco**, menos en este rincón.  
the floor is totally dry except in this corner  
'The floor is totally dry, except for this corner.'

### 3 ACs modifying PC nouns

- ACs are able to modify nouns related to gradable adjectives that denote properties or qualities<sup>1</sup>

- (9) a. La **completa oscuridad** de la sala le impide ver al asesino.  
the complete darkness of the room DAT prevents see.INF PREP-the murderer  
'The complete darkness of the room prevents her from seeing the murderer.'
- b. La prensa tiene **total libertad** para informar y expresar opiniones.  
the press has total freedom PREP inform and express opinions  
'The press has total freedom to inform and express opinions.'

- They display the properties of maximality modifiers (cf. point 4 in §2)

1. They entail that the end of the scale has been reached (cf. 6),

- (10) a. # La sala está en **completa oscuridad**; puedes apagar otra luz.  
the room está in complete darkness can.2SG switch.off other light  
'The room is in complete darkness. You can switch off another light.'
- b. # La prensa tiene **total libertad**; solo tiene que pasar un pequeño control del gobierno.  
of.the government  
'The press has total freedom. It just has to pass a small inspection from the government.'

2. The construction is compatible with *casi* 'almost' (cf. 7),

- (11) a. La **casi completa oscuridad** de la sala le impide ver al asesino.  
the almost complete darkness of the room DAT prevents see.INF to.the murderer  
'The almost complete darkness of the room prevents her from seeing the murderer.'
- b. La prensa tiene **casi total libertad** para informar y expresar opiniones.  
the press has almost total freedom for inform.INF and express.INF opinions  
'The press has almost total freedom to inform and express opinions.'

<sup>1</sup>I only address nouns denoting properties or qualities here; ACs modifying nominalizations of adjectives that denote states or occurrences of events, such as *estupidez* 'stupidity' or *crueldad* 'cruelty' (see e.g. Beuseroy, 2009; Arche and Marín, to appear) are left for future work.

3. and it accepts exceptive phrases (cf. 8).

- (12) a. La sala está en **completa oscuridad**, excepto por la tenue luz de la luna.  
 the room is in complete darkness except for the faint light of the moon  
 ‘The room is in complete darkness, except for the faint light of the moon.’  
 b. La prensa tiene **total libertad**, salvo en asuntos religiosos.  
 the press has total freedom except in issues religious  
 ‘The press has total freedom except for religious issues.’

- The acceptability of PC nouns with maximality modifiers depends on the scale used by the related adjective. Therefore, **the noun and the adjective share the same scalar properties**.

(13) a. Upper closed scale adjectives:

*completa aridez, total claridad, absoluta libertad, total oscuridad, completa lealtad*  
 complete aridity total clarity absolute freedom total darkness complete loyalty

b. Totally closed scale adjectives:

*completa opacidad, total soledad, absoluta visibilidad*  
 complete opacity, total loneliness absolute visibility

(14) a. Open scale adjectives:

*??completa anchura, ??total belleza, ??absoluta altura, ??absoluta sabiduría*  
 complete wideness total beauty absolute tallness absolute wisdom

b. Lower closed scale adjectives:

*??completa impureza, ??total inseguridad ?absoluta suciedad*  
 complete impurity total insecurity absolute dirtiness

- This does **not** mean that these nouns, like their cognate adjectives, have a **maximum standard**. I.e., it is not the case that, in order for something to qualify as *N*, it must have a maximal amount of the property. (15b) is thus not contradictory.

(15) a. # La prensa es libre. Solo tiene que pasar un control del gobierno.

the press is free only has to pass a inspection of the government

‘The press is free. It just has to pass an inspection from the government.’

b. La prensa tiene libertad. Solo tiene que pasar un pequeño control del gobierno.  
 the press has freedom only has to pass.INF a small inspection of the government

‘The press has freedom. It just has to pass a small inspection from the government.’

- This is also shown in the different entailments of the comparative construction. *X is  $G_{max}$ -er than y* entails that *y* is not  $G_{max}$  (Kennedy and McNally, 2005), but that is not the case for the nouns.

(16) a. La prensa local es más libre que la prensa nacional.  $\models$  La prensa nacional no es libre.  
 the press local is more free than the press national the press national NEG is free

free

‘The local press is freer than the national press.’  $\models$  ‘The national press is not free.’



- The difference will lie in **the relation between the property and the holder**, which I will analyze as a **possession relation**, following [Francez and Koontz-Garboden \(2015\)](#), and in being a bit more precise about the dimension of ordering shared by the adjective and the noun.

## 4.2 PC lexemes as predicates of portions

- [Francez and Koontz-Garboden \(2015\)](#) model the mass denotation of property concept nouns by drawing on the mereological approach to mass terms ([Link, 1983](#))
- Substances are predicates over a domain that is partially ordered
  - Let  $\mathcal{A}$  be a non-empty set of portions of a substance. Substances are subsets of  $\mathcal{A}$  that form a join semi-lattice with the join operation  $\sqcup$  (commutative, idempotent, and associative).  $\sqcup$  induces an ordering relation  $\preceq$  on  $\mathcal{A}$ , that can be thought of as a ‘part-of’ relation.
- Gradability is modeled as an ordering of portions of substances with two postulates:
  - Any substance  $P \subset \mathcal{A}$  is ordered by a total preorder  $\leq$ , intuitively thought of as ‘smaller or equal to’
  - The preorder  $\leq$  preserves the mereological part-of relation  $\preceq$ , so that given a substance  $P$ , and two portions  $p, q \in P : p \preceq q \rightarrow p \leq q$ .

([Francez and Koontz-Garboden, 2015](#))

- A substance-denoting property concept term denotes the set of all portions of the substance.

(21)  $\llbracket \text{minisih-} \rrbracket = \lambda p. \text{dirtiness}(p)$  (Ulwa; [Francez and Koontz-Garboden, 2015](#))

- Substance denoting PCs require possessive morphosyntax to be related to an individual

(22) **Substance possession**

For any individual  $a$  and substance  $P$ ,  $a$  has  $P$  iff  $\exists p[P(p) \wedge \pi(a, p)]$

([Francez and Koontz-Garboden, 2015](#))

- In Ulwa, the possessive suffix *-ka* is required in PC constructions. This morpheme is a function from substances to property of individuals that stand in the possession relation to some portion of the substance

(23) Yang as-ki-na minisih-ka.

1SG shirt.1SG dirty-3SG.POSS

‘My shirt is dirty.’

(Ulwa; Green 2004, cited by [Francez and Koontz-Garboden, 2015](#))

(24)  $\llbracket \text{minisih-ka} \rrbracket = \lambda x \lambda D. \exists^D z [\text{dirtiness}(z) \wedge \pi(x, z)]$

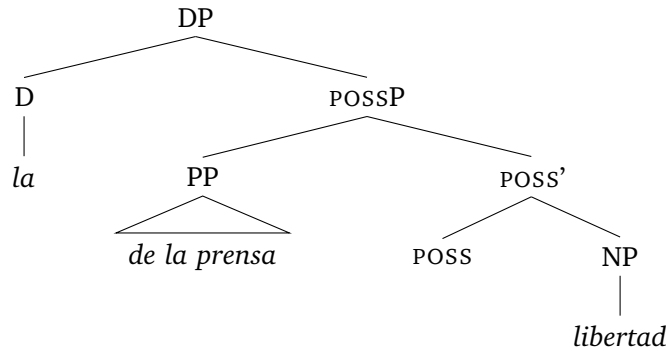
([Francez and Koontz-Garboden, 2015](#))

## 4.3 Spanish PC nouns denote predicates of portions

- (25) denotes the unique portion that the press possesses and is a portion of freedom (26). The individual in the PP complement of the nominalization is analyzed as a possessor, and the relation is mediated by the null head POSS (26e).

(25) la libertad de la prensa  
the freedom of the press

(26)



- a.  $[[NP]] = \lambda p.\mathbf{freedom}(p)$
- b.  $[[POSS]] = \lambda P\lambda x\lambda y.[\pi(x, y) \wedge P(y)]$
- c.  $[[POSS']] = \lambda x\lambda p.[\pi(x, p) \wedge \mathbf{freedom}(p)]$
- d.  $[[PP]] = \iota x.\mathbf{the\text{-}press}(x)$
- e.  $[[POSSP]] = \lambda p.[\pi(\mathbf{the\text{-}press}, p) \wedge \mathbf{freedom}(p)]$
- f.  $[[DP]] = \iota p.[\pi(\mathbf{the\text{-}press}, p) \wedge \mathbf{freedom}(p)]$

(Barker, 1995, 54)

### On the relation between the noun and the adjective

- I will assume that Spanish gradable adjectives (*libre* ‘free’) and their correspondent nouns (*libertad* ‘freedom’) are derived from a common root, but not from one another
  - A first piece of evidence for this is the fact that it is not always the case that the noun is derived from the adjective (*silencioso* ‘silent, quiet’, *silencio* ‘silence’; *hambriento* ‘hungry’, *hambre* ‘hunger’), and there are also cases of suppletion (*viejo* ‘old’, *edad* ‘age’)
  - Some Spanish PC nouns do not have correspondent adjectives but their behavior is parallel to that of those that have one (*fe* ‘faith’, *amor* ‘love’, *coraje* ‘courage’)
- Property concepts can be gradable (their denotation is an ordered set) or non-gradable and, if gradable, bounded or unbounded. This information is part of the root and passes on to its different lexicalizations
- The domain of the (mass) noun forms a join semilattice, whereas the domain of the adjective forms a scale, and there is a mapping between the two
  - This relies in the standard account: nouns denote properties  $\langle e, t \rangle$ , (gradable) adjectives include measure functions in their meanings  $\langle d, \langle e, t \rangle \rangle$ ; or alternatively,  $\langle e, d \rangle$
  - Evidence for this comes from the presence of *much* in nominal but not in adjectival comparatives in English (*John is as tall as Mary*; *John drinks as much coffee as Mary*) and the constraint in the dimensions of measurement allowed by nouns (the monotonicity constraint, see Schwarzschild, 2006; Wellwood, 2014)

## 5 ACs as maximality modifiers of PC nouns

- ACs modify only PC nouns whose related adjective uses a closed scale. The semantics for ACs will be the same as the one for their adverbial counterparts (5)

$$(27) \llbracket AC \rrbracket = \lambda G_{\langle d, \langle e, t \rangle \rangle} \lambda x. \exists d [d = \mathbf{max}(S_G) \wedge \mathbf{G}(d)(x)]$$

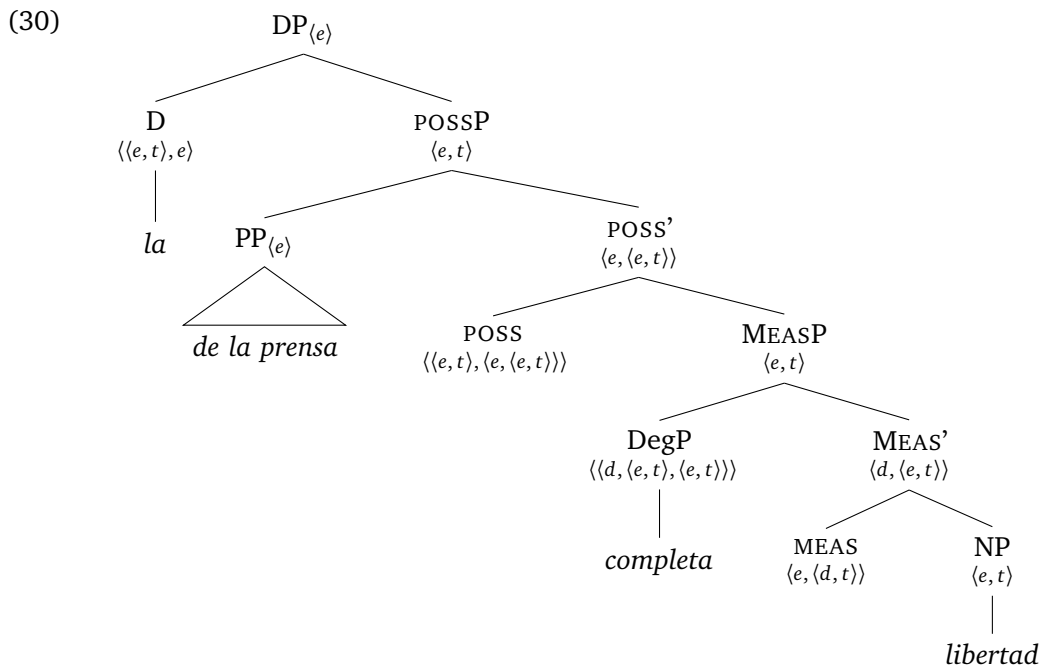
- However, the semantics for PC nominals provided above includes an ordering on portions, but no degree argument. The degree argument will be introduced by a null head Meas (Solt, 2015; cf. Schwarzschild's (2006) Mon, Rett's (2008) QUANTITY). Meas takes an individual and returns a set of degrees representing its amount or number.

$$(28) \llbracket \text{MEAS} \rrbracket^{g_c} = \lambda x \lambda d. \mu_S(x) \geq d \quad (\text{Solt, 2015, 236})$$

- MEAS may combine with a expression denoting a property ( $\langle e, t \rangle$ ) via a special mode of variable identification, Degree Argument Introduction (Solt, 2015, 237)

### (29) Degree Argument Introduction (DAI)

If  $\alpha$  is a branching node,  $\{\beta, \gamma\}$  are the set of  $\alpha$ 's daughters, and  $\llbracket \beta \rrbracket = \lambda x. P(x)$ ,  $\llbracket \gamma \rrbracket = \lambda x \lambda d. Q(d)(x)$ , then  $\llbracket \alpha \rrbracket = \lambda d \lambda x. [P(x) \wedge Q(x)(d)]$



- $\llbracket \text{NP} \rrbracket = \lambda p. \mathbf{freedom}(p)$
- $\llbracket \text{MEAS} \rrbracket = \lambda x \lambda d. \mu_S(x) \geq d$
- $\llbracket \text{MEAS}' \rrbracket = \lambda d \lambda p [\mu(p) \geq d \wedge \mathbf{freedom}(p)]$  DAI
- $\llbracket \text{DegP} \rrbracket = \lambda G_{\langle d, \langle e, t \rangle \rangle} \lambda x. \exists d [d = \mathbf{max}(S_G) \wedge \mathbf{G}(d)(x)]$
- $\llbracket \text{MEASP} \rrbracket = \lambda p [\mu(p) \geq \mathbf{max}(S_{\mathbf{freedom}}) \wedge \mathbf{freedom}(p)]$
- $\llbracket \text{POSS}' \rrbracket = \lambda y \lambda p [\mu(p) \geq \mathbf{max}(S_{\mathbf{freedom}}) \wedge \mathbf{freedom}(p) \wedge \pi(y, p)]$
- $\llbracket \text{PP} \rrbracket = \iota x. \mathbf{the\_press}(x)$
- $\llbracket \text{POSSP} \rrbracket = \lambda p [\mu(p) \geq \mathbf{max}(S_{\mathbf{freedom}}) \wedge \mathbf{freedom}(p) \wedge \pi(\mathbf{the\_press}, p)]$
- $\llbracket \text{DP} \rrbracket = \iota p [\mu(p) \geq \mathbf{max}(S_{\mathbf{freedom}}) \wedge \mathbf{freedom}(p) \wedge \pi(\mathbf{the\_press}, p)]$



**Only lexical scales provide appropriate degrees**

- Under this analysis, ACs measure the size of the portion of a substance and assert that the size is maximal. ACs do so regardless of the part structure and other physical properties of the possessor of the property
- Since the bearer has a certain portion of the property, one of a precise size, a reasonable possibility is that the maximal amount of the property the individual has would provide a maximum for ACs. This is, however, not the case

- (31) a. \* la completa altura del edificio  
the complete tallness of.the building
- b. \* la total inseguridad del barrio  
the total insecurity of.the neighborhood

- This shows that ACs compose directly with the PC noun (before the bearer is introduced) and target their lexical scale

**ACs can modify abstract non-derived mass nouns**

- Although most of the examples involve adjectival nominalizations, having an adjectival counterpart is not a requirement

- (32) a. completa paz, total silencio, absoluta fe  
complete peace total silence absolute faith
- b. \*completo miedo, ??total daño, \*absoluto tiempo  
complete fear total harm absolute time

**On abstract v. concrete mass nouns**

- So far, the only difference between PC (or abstract) and concrete mass nouns is that the former may denote bounded substances
- [Tovena \(2001\)](#) argues that a subset of abstract mass nouns denote quantities that can undergo increase or contraction without a corresponding extension in space or time (*intensive quantities* in [van de Velde's 1995](#) terms). In other words, the quantity and the quality scale in abstract mass nouns blend together
- This can be observed in the equivalence between a quantity and a quality exclamative with an abstract mass noun but not with a concrete mass noun ([Tovena, 2001](#); [Brucart and Rigau, 2002](#))

- |   |  |
|---|--|
| (33) a. iQuanta paciència!<br>how.much patience<br>'What a patience!' | c. iQuanta gent!<br>how.much people<br>'How many people!'  |
| b. iQuina paciència!<br>what patience<br>'What a patience!'           | d. iQuina gent!<br>what people<br>'What (strange) people!' |

(Catalan; [Brucart and Rigau, 2002](#))

- Further evidence comes from the different readings of size adjectives

- (34) a. una gran belleza / libertad; una sabiduría enorme  
 a big beauty freedom a wisdom huge  
 ‘a great beauty / freedom’; ‘a huge wisdom’
- b. una gran casa; un parque enorme  
 a big house a park huge  
 ‘a big house / water’; ‘a huge park’
- c. \*gran agua; \*arroz enorme  
 big water rice huge

- Recast in our terms, this means that the quantity and the quality or intensity scale are the same one in abstract mass nouns. Quantity scales are intrinsically unbounded, but intensity scales can be bounded. The head introducing the measure function (MEAS) uses the scale available. As a result, in abstract mass nouns, the bigger the portion of a substance (*freedom*, for instance), the higher the intensity of the property.

## 6 Conclusion

- PC nouns have been analyzed as predicates of portions of substances (cf. [Francez and Koontz-Garboden, 2015](#)). Their domain forms a mereological structure (accounting for their mass behavior) and it is partially ordered (accounting for their ability to be measured)
- The way of ascribing the property to the individual is via a possessive relation
- In order to be measured by e.g. quantifier adjectives, a degree argument is introduced via a null head MEAS ([Solt, 2015](#))
- In PC nouns that denote qualities (*freedom*), quantity and quality are blend together. Their ordering can be bounded (have a maximum)
- Both adverbs and adjectives of completeness target a relation between degrees and individuals (either a gradable adjective or the result of combining MEAS with the PC noun) and set the degree to the maximum in the scale (if there is one)

### Further issues

- Differences between q-adjectives and ACs

- (35) La prensa tiene **mucha** libertad.  
 the press has a.lot.of freedom

- Other degree uses of ACs: modifying event nominalizations, evaluative nouns ([Masià, to appear](#))

- (36) a. La **total destrucción** de la ciudad tuvo lugar en abril.  
 the total destruction of the city had place in April  
 ‘The total destruction of the city took place in April.’
- b. Juan es un **completo idiota**.  
 Juan is a complete idiot

- Non-degree uses (*completo* only) and adjective position

- (37) a. El museo cuenta con una **completa colección** de grabados de Picasso.  
the museum counts with a complete collection of prints of Picasso  
'The museum has a complete collection of Picasso prints.' (a comprehensive one)
- b. El museo cuenta con una **colección completa** de grabados de Picasso.  
the museum counts with a collection complete of prints of Picasso  
'The museum has a complete collection of Picasso prints.' (all the prints)

## References

- Arche, María J. and Rafael Marín (to appear). On the edge: Nominalizations from evaluative adjectives. In J. Smith and T. Ihsane (Eds.), *Selected Proceedings of the 42nd Linguistic Symposium of Romance Languages*, Amsterdam. John Benjamins.
- Barker, Chris (1995). *Possessive Descriptions*. Stanford: CSLI Publications.
- Beuseroy, Delphine (2009). *Syntaxe et sémantique des noms abstraits statifs : des propriétés verbales ou adjectivales aux propriétés nominales*. PhD thesis, Nancy-Université.
- Brucart, Josep Maria and Gemma Rigau (2002). La quantificació. In J. Solà, M. R. Lloret, J. Mascaró, and M. Pérez Saldanya (Eds.), *Gramàtica del català contemporani*, Volume III, pp. 1517–1589. Barcelona: Empúries.
- Francez, Itamar and Andrew Koontz-Garboden (2015). Semantic variation and the grammar of property concepts. *Language* 91(3), 533–563.
- Kennedy, Christopher and Louise McNally (2005). Scale structure and the semantic typology of gradable predicates. *Language* 81(2), 345–381.
- Krifka, Manfred (1989). Nominal reference, temporal constitution and quantification in event semantics. In R. Bartsch, J. van Benthem, and P. von Stechow (Eds.), *Semantics and Contextual Expression*, pp. 75–115. Dordrecht: Foris Publications.
- Link, Godehard (1983). The logical analysis of plurals and mass terms: a lattice-theoretical approach. In R. Bäuerle, C. Schwarze, and A. von Stechow (Eds.), *Meaning, Use and Interpretation of Language*, pp. 303–323. Berlin: De Gruyter.
- Masià, Melania S. (to appear). Are nouns gradable? Evidence from adjectives of completion. In *Actes du colloque L'Adjectif : approches sémantico-pragmatiques et discursives*, Clermont-Ferrand.
- Moltmann, Friederike (2009). Degree structure as trope structure: A trope-based analysis of positive and comparative adjectives. *Linguistics and Philosophy* 32(1), 51–94.
- Nicolas, David (2004). The semantics of nouns derived from gradable adjectives. In C. Meier and M. Weisgerber (Eds.), *Proceedings of Sinn und Bedeutung 8*, Universität Konstanz, pp. 197–208.
- Rett, Jessica (2008). *Degree Modification in Natural Language*. PhD thesis, Rutgers University.
- Rotstein, Carmen and Yoad Winter (2004). Total adjectives vs. partial adjectives: Scale structure and higher-order modifiers. *Natural Language Semantics* 12(3), 259–288.
- Schwarzschild, Roger (2006). The role of dimensions in the syntax of noun phrases. *Syntax* 9(1), 67–110.
- Solt, Stephanie (2015). Q-adjectives and the semantics of quantity. *Journal of Semantics* 32(2), 221–273.
- Tovena, Lucia (2001). Between mass and count. In K. Megerdooimian and L. A. Bar-el (Eds.), *Proceedings of the 20th West Coast Conference on Formal Linguistics*, Somerville, MA, pp. 565–578. Cascadilla Press.
- van de Velde, Daniele (1995). *Le spectre nominal. des noms de matieres aux noms d'abstractions*. Paris: Peeters.

Wellwood, Alexis (2014). *Measuring Predicates*. PhD thesis, University of Maryland, College Park.