

# **BARE PPS AND THE SYNTAX-SEMANTICS INTERFACE: THE CASE OF *SIN*+bare nominal STRUCTURES IN SPANISH\***

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**Abstract.** Spanish prepositional phrases headed by *sin* “without” with a bare noun complement (*una habitación sin luz* “a room without light”; *un hombre sin corbata* “a man without tie”) show interesting gradability properties: Degree modification is allowed if the N complement is a mass noun (*una habitación muy sin luz* “lit. a room very without light”; \**un hombre muy sin corbata* “lit. a man very without tie”). We claim that *sin*-PPs share syntactic and semantic properties with constructions involving light verbs that select for bare nouns. We argue that (a) a property-denoting bare NP pseudo-incorporates into a null verb *have* that is part of the syntactic-semantic structure of *sin*, and (b) *sin*-PPs can be coerced into gradable properties as long as the bare noun is cumulative and homogeneous (divisive). Our proposal explains the differences between *sin*-(bare)PPs and PPs headed by *sin* with a QP/DP complement, since in the latter there is neither coercion nor pseudo-incorporation.

## **1. Introduction**

This paper develops a formal account of the syntactic/semantic properties of Spanish adnominal PP-modifiers headed by *sin* “without” where the *terminus* of the preposition is a singular/plural bare noun (count or mass) (1). We call these structures, which express a characterizing property of an individual, *sin*-(bare)PPs.

- (1) a. *un hombre sin corbata* (lit. “a man without tie”)

- b. *una habitación sin luz* (lit. “a room without light”)
- c. *una tierra sin piedras* (lit. “a lot without stones”)

We focus on the interaction between countability, degree modification and negation in these structures to explain the contrast in (2): *sin*-PPs can be graded only if the complement of *sin* is cumulative and homogeneous (non-count noun or bare plural) (Oltra-Massuet & Pérez-Jiménez 2011; henceforth OP).

- (2) a. *una habitación muy sin luz* (lit. “a room very without light”)  
*un terreno muy sin piedras* (lit. “a land very without stones”)
- b. \**un hombre muy sin corbata* (lit. “a man very without tie”)

On the other hand, *sin*-(bare)PPs modified by a degree word contrast with *sin*-headed PP that select for a QP as complement:<sup>1</sup> (3)a expresses that the coffee has a high degree of the property *sin azúcar* “without sugar / sugarless”; (3)b conveys that the coffee does not have a large amount/quantity of sugar. Only (3)a felicitously describes a situation in which the coffee is bitter because of the extreme lack of sugar.

- (3) a. *un café muy sin azúcar* (lit. “a coffee very without sugar” ≈ “a very sugarless coffee”)
- b. *un café sin mucho azúcar* (lit. “a coffee without much sugar”)

In §2, we discuss the syntactic properties of *sin*-(bare)PPs and connect them with the properties of V+N combinations of the kind *llevar mochila* “carry

backpack”, *tener corbata* “have tie” in Spanish and Catalan, as analyzed in Espinal and McNally (2011) [EM henceforth]. We decompose *sin* into a series of functional nodes including a verbal projection that combines with a bare nominal via pseudo-incorporation. In §3 and §4, we explore the semantic properties of *sin*-(bare)PPs, and claim that a well-constrained coercion process allows to reinterpret the PP as gradable, explaining the paradigm in (2). In §5, we address the question of whether *muy sin* and *sin mucho* are truth-conditionally different.

## 2. The syntax of *sin*-(bare)PPs

We analyze *sin*-PPs that appear as postnominal modifiers within a DP structure as predicates inside a relative clause, (4) (see Cinque 2010 for this analysis). We follow Kayne’s (1994) proposal that relative clauses are clausal projections complement of a determiner. The antecedent (in traditional terms) originates inside the relative clause and moves to Spec CP. Further, we syntactically decompose *sin*, (5), into a series of functional nodes including a null verb HAVE (see McIntyre 2006, Grønn *et al.* 2010, for the presence of a *have* component in the meaning of *without*), a node encoding negation, and a C=*p* node that introduces the relative clause and attracts the nominal antecedent to its Specifier. We follow Emonds (1985) for the collapsing of the P–C categorial distinction (which, we believe, opens a way to account for the fact that *sin* introduces nominal and clausal complements, cf. fn. 1). That temporal/locative modifiers are possible in these structures, (6), supports the existence of a clausal projection including a verbal head inside the *sin*-PP structure. *Sin* is therefore conceived as a late spellout of a continuous sequence of terminal nodes, e.g. phrasal spell-out (Svenonius *et al.* 2009).

- (4) *una habitación sin luz* (lit. “a room without light”)  
 [DP una [CP habitación<sub>i</sub> [C' C(=p) [NEGP NEG [TP t<sub>I</sub> [... [VP HAVE luz]]]]]]]]
- (5) [CP/PP C=p [NegP ¬ [VP HAVE [NP]]]]
- (6) *una casa sin luz {por la mañana/en el ala oeste}*  
 lit. “a house without light in the morning/in the west wing”

The proposal of a syntactic Neg component in the internal structure of *sin* is supported by its behavior as a negative quantifier, since *sin* licenses N-words (Bosque 1980 for Spanish).

- (7) \**una habitación con nadie* – *una habitación sin nadie*<sub>N-word</sub>  
 “a room {\*with/without} anybody”

The presence of a null verb-HAVE receives support from the fact that *sin*-PPs exhibit definiteness effects, just like *have* constructions, **¡Error! No se encuentra el origen de la referencia.** (Gutiérrez-Rexach 2003: 205): only weak determiners are allowed as complements of *tener* “have” (with an existential reading).<sup>2</sup> Similar restrictions operate in the complement of *sin*. Note the parallelism between *sin*-PPs and the paraphrase *que no tiene* (“that doesn’t have”), (9).

- (8) *Juan tiene un perro.* / \**Juan tiene {el/cada} perro.*  
 “John has a dog.” / “John has {the/every} dog.”
- (9) a. \**Una habitación sin la luz natural no se alquila.*  
 “A room without natural light is difficult to rent.”
- b. \**Una habitación que no tiene la luz natural no se alquila.*

“A room that doesn’t have the natural light is difficult to rent.”

The complement of HAVE in (5) is a bare nominal (i.e. an NP, not a DP with a null D), as shown by the following arguments, inspired by EM.

A) The complement of *sin* (be it a bare singular count noun, a mass noun or a bare plural) always has narrow scope with respect to negation, contrary to what happens when the complement of *sin* is an indefinite DP, (10).

- (10)a. *una directora sin {secretario/secretarios}*  
 “a director without {secretary/secretaries}”  
 unambiguous: “there are no secretaries at all”
- b. *una directora sin un secretario*  
 “a director without a secretary”  
 ambiguous: a) “there is no secretary”; b) “there is a specific secretary that the woman lacks”

B) The N in *sin*-PPs cannot support pronominal discourse anaphora. This suggests that these nouns have the same denotation as common nouns (they denote properties), and do not introduce discourse referents to token individuals.

- (11)a. *Una habitación sin luz<sub>i</sub> resulta triste. #A no ser que la<sub>i</sub> tenga un rato por la mañana.* (lit. “A room without light is sad. Unless it has it for a while in the morning.”)
- b. *Un hombre sin corbata<sub>i</sub> no es elegante. #Y pro<sub>i</sub> debe ser de raso para que el hombre sea realmente*

*elegante*. (lit. “A man without tie is not elegant. And it must be made of satin for the man to be really elegant.”)

C) Nominal modifiers are only allowed if they specify the kind of object the (bare count/mass) noun describes, but not if they are modifiers of individuals.

(12) *una habitación sin {luz natural/\*luz que entra por la ventana}*  
lit. “a room without {natural light / light coming through the window}”

We suggest that the null verb HAVE pertains to the class of *have* predicates claimed to appear in verbal structures like *tener/llevar corbata* (lit. “have/wear tie”) by EM. We thus claim that at the VP level in (4), (5), pseudo-incorporation (Dayal 2011) takes place, and further assume with EM that the NP (which syntactically stays *in situ*) functions as a modifier of the verb, and is thus interpreted as a predicate modifier rather than as an argument of the verb (see §3).<sup>3</sup> Note, however, that bare count nouns, mass nouns and bare plurals behave alike only with respect to diagnostic A. In the contexts described in B-C, bare count nouns and mass nouns pattern alike, but not bare plurals. This raises the question of whether bare count nouns and mass nouns on the one hand and bare plurals on the other encode the same number of functional projections in their structure, specifically whether they project NP or NumP. We leave aside this question here and assume that both project an NP node. However, Dayal (2011) shows that all types of pseudo-incorporated nouns in Hindi project a NumP. NumP denotes in type  $\langle e, t \rangle$ , so pseudo-incorporation is possible (see her (40)).<sup>4</sup>

### 3. *Semantic composition in sin-(bare)PPs*

*Sin*-PPs, e.g. *sin luz* “without light”, in (1), denote properties of individuals, of type  $\langle e,t \rangle$ , which combine with the NP in the external argument position, *habitación* “room”, of type  $\langle e,t \rangle$ , via predicate modification (i.e. intersection). As shown in §2, we decompose *sin* as the combination of negation and a null verb HAVE. Semantically, we propose that *sin* behaves like a transitive verb in selecting for two individuals  $x, y$ , and returning truth only if it is not the case that  $y$  has  $x$ , as in (13).

$$(13) \llbracket \text{sin} \rrbracket = \lambda x \lambda y. \neg \text{HAVE}(x)(y)$$

However, the complement of *sin* in *sin-(bare)PPs* is not a DP that denotes an individual but rather a bare nominal (BN), e.g. *luz* “light”, which denotes a property of individuals (of type  $\langle e,t \rangle$ ). To avoid a type mismatch we propose that the compositional semantics of *sin+N* is analogous to the compositional semantics of light verbs and BNs (e.g. Spanish *tener/llevar corbata* “have/wear tie”), as analyzed by EM. We assume with EM that N does not fill an argument position in the subcategorization grid of the light verb. Following Borthen (2003), whenever N is interpreted as the possessed argument of a predicate that introduces a *have* relation (i.e. the light verb), N behaves like a verbal modifier. In order to turn the (transitive) light verb into an intransitive verb, EM propose a lexical rule that establishes the conditions of theme suppression, as Dayal (2010) puts it. Therefore, V+N do not combine via Functional Application. Alternatively, EM propose an intersective rule to the effect that verbal modification by N amounts to the description of the implicit role function (i.e. the *theme* role) defined for the

verb. Ignoring the details for reasons of space, we adopt the shortcut *N-HAVE* to refer to the pseudo-incorporation process yielding theme suppression.<sup>5</sup> We formalize  $[[\text{sin } N]]$  as in (14).

$$(14) [[\text{sin } N]] = \lambda x_{\langle e \rangle}. \neg [N\text{-HAVE}](x)$$

To illustrate our proposal, consider the syntax-semantics mapping of *sin luz* “without light”, which has the formal translation in (15), where the PP is viewed as the characterizing property of the set of individuals that do not have light.

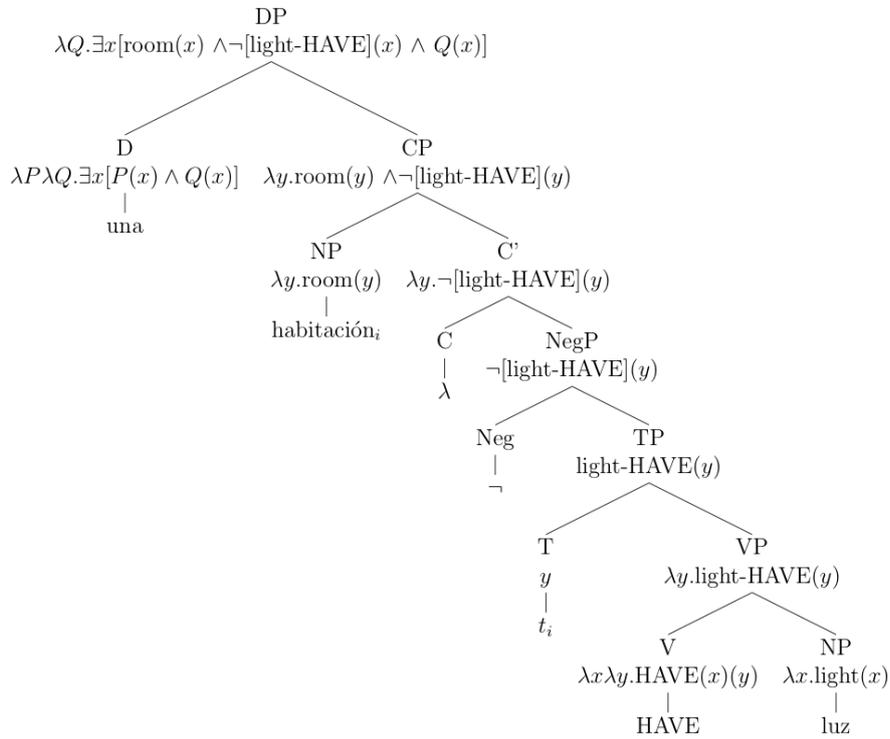
$$(15) [[\text{sin luz}]] = \lambda x_{\langle e \rangle}. \neg [\text{light-HAVE}](x)$$

Assuming for simplicity that the indefinite article is a function from properties to generalized quantifier meanings, *una habitación sin luz* “a room without light” has the denotation in (16).

$$(16) [[\text{una habitación sin luz}]] = \lambda Q_{\langle e, t \rangle}. \exists x [\text{room}(x) \wedge \neg [\text{light-HAVE}](x) \wedge Q(x)]$$

The indefinite *una* in (16) is a function that takes a predicate  $Q$  and is true only if there is a room  $x$  that has the property of light lacking and the predicate  $Q$  applies to  $x$ . 0 shows the semantic composition of the DP *una habitación sin luz*.

$$(17)$$



In this analysis, *N-lacking* is a property of individuals, so in principle it is not gradable. However, we assume that it is coercible into a gradable predicate in Spanish, which is why it allows intensification by *mu*y. We consider coercion in §4.

#### 4. Sin-(bare)PPs and gradability

We take gradable predicates  $g$  to denote measure functions ( $\langle e,d \rangle$ ) from the domain of individuals to positive degrees (Kennedy 2007). Measure functions become properties of individuals when combined with degree morphology. The positive (null) degree morpheme, (18), acts as a type

shifter, from  $\langle e, d \rangle$  into  $\langle e, t \rangle$ . *Pos* bears on the notion of standard  $\mathbf{s}$ , which is a context-sensitive function that “chooses a standard of comparison in such a way as to ensure that the objects that the positive form is true of ‘stand out’ in the context of utterance, relative to the kind of measurement that the adjective encodes” (Kennedy 2007).

$$(18) [[ [\text{Deg } pos] ] ] = \lambda g_{\langle e, d \rangle} \lambda x_{\langle e \rangle}. g(x) \geq \mathbf{s}(g)$$

Along the same lines, we assume that *muy* in Spanish takes as input a gradable predicate  $g$  and returns a property of individuals only if the measure function applied to the individual returns a degree that exceeds  $\mathbf{s}(g)$  to a large extent, (19).

$$(19) [[ [\text{Deg } muy] ] ] = \lambda g_{\langle e, d \rangle} \lambda x_{\langle e \rangle}. g(x) > !! \mathbf{s}(g)$$

Where  $> !!$  is a context-dependent relation that means ‘greater than by a large amount’ (from Kennedy & McNally 2005)

In *una habitación sin luz* “a room without light”, as mentioned above, *sin luz* is a property of individuals. Nevertheless, under specific circumstances, it can undergo type shifting into a measure function. Just like *pos* may be viewed as a type shifter of a measure function into a property of individuals ( $\langle \langle e, d \rangle, \langle e, t \rangle \rangle$ ), we assume another type shifter, say  $\Delta$ , as being responsible for the opposite shifting operation ( $\langle \langle e, t \rangle, \langle e, d \rangle \rangle$ ). The coerced version of *sin luz* is then a measure function that applies to an individual (e.g. the room) and returns the positive degree to which the room lacks light. (20) shows the result of combining *muy* with the coerced *sin luz*. This is a function from individuals  $x$  to truth values such that the degree to which  $x$

lacks light exceeds to a large extent a contextual standard for light lacking.

(21) provides the fully worked out semantics for *una habitación muy sin luz* “a room very without light”.

$$(20) [[\text{muy sin luz}]] = \lambda x_{\langle e \rangle}. (\Delta(\neg[\text{light-HAVE}])(x) > !! \mathbf{s}(\Delta(\neg[\text{light-HAVE}])))$$

$$(21) [[\text{una habitación muy sin luz}]] = \lambda Q_{\langle e, t \rangle}. \exists x[\text{room}(x) \wedge (\Delta(\neg[\text{light-HAVE}])(x) > !! \mathbf{s}(\Delta(\neg[\text{light-HAVE}]))) \wedge Q(x)]$$

There are two necessary conditions for coercion to be able to apply: *a)* *N* must be cumulative and homogeneous (Krifka 1986, a.o.), and *b)* *sin N* must have a non-strict reading.

Condition *a)* makes reference to OP’s insight that only mass nouns and plurals are allowed in the context of *muy sin N* (recall (2)). What these two have in common is the fact that they are cumulative and homogeneous (or *divisive*), as defined in (22) and (23). On the one hand, light + light forms an entity that is *light* itself, and likewise for stones (plural). On the other hand, quantities of light split into two result in two quantities of stuff that are also *light*, and the same applies for stones (plural).

(22) Cumulativity:

$$\text{P is cumulative iff: } \forall x \forall y [x \in \text{P} \wedge y \in \text{P} \rightarrow x \sqcup y \in \text{P}]$$

“P is a cumulative predicate if when *x* and *y* are in P, then the sum of *x* and *y* is also in P.”

(23) Homogeneity (divisiveness):

P is homogeneous iff  $\forall x \in P: \exists y \exists z [y \sqsubseteq x \wedge z \sqsubseteq x \wedge \neg O(y,z) \wedge y \in P \wedge z \in P]$

“P is a divisive (homogeneous) predicate if for every  $x$  in P, there is a way of splitting  $x$  into two non-overlapping parts, both of which are also in P.”

(Adapted from Krifka 1998 by Rothstein 2010: 350, 351)

Note that in *sin*-PPs the mereological properties of the BN correlate with the possible interpretation of the PP as a measure function. The measure function *sin luz* may apply to an individual and return the degree to which this individual, e.g. a room, lacks light. Degrees of N-lacking correspond to portions of N that we can remove from N while still having N. That is, we can count portions of light that we can remove from the concept *light* without exhausting it. If the amount of portions removed is large, then we can truthfully apply *muy sin luz* “very without light” to *una habitación* “a room”. Observe that if we use a singular count noun instead, such as *corbata* “tie”, coercing *sin corbata* “without tie” into a measure function would involve removing portions of tie from the denotation of *tie* and these portions would not be ties themselves. Tie-lacking makes a property that can be either true or false, but considering a set of degrees of this property is not possible.

Condition *b*) refers to the fact that we can use *sin N* “without N” — and to this effect, *not have* — in a relaxed way to convey not that there are zero instances of N, but that there may be some instances of N that the speaker considers to be few. For example, *a man without money* need not refer to a man that has exactly zero money (strict reading), but it may mean that he

does not have *much* money (non-strict reading). The measure function *sin N* derives from the non-strict reading.

This restriction allows us to explain the contrast in (24)-(25) noted in OP (2011). *Sin volumen* “without volume” can be graded when the external argument is *melena* “hair” but not when it is *esfera* “sphere”. Our claim is that the non-strict reading is not available for the volume of a sphere. Similarly, *sin color* allows a non-strict reading (25)a, and a strict reading, (25)b. Only the former is gradable.

- (24)a. \**una esfera muy sin volumen*  
lit. “a sphere very without volume”
- b. *una melena muy sin volumen*  
lit. “a hair very without volume”
- (25)a. *una foto muy sin color (= descolorida)*  
lit. “a photo very without color (= faded)”
- b. *líquido para obtener [fotos sin color]*  
(= *en blanco y negro*) → \**muy sin color*  
lit. “liquid to obtain photos without color  
(= black and white) → \*very without color”

To conclude this section we would like to address the question of why *muy sin N* “very without N” is possible while *muy con N* “very with N” is clearly ill-formed, independently of the kind of noun complement of the preposition. Our tentative answer is that this has to do with an economy principle. Specifically, whereas — as will be shown in §5 — *muy sin N* “very without N” is truth-conditionally different from *sin mucho N* “without much N”, *muy con N* “very with N” would yield the same interpretation as

*con mucho N* “with much N”. Since the former involves coercing a property of individuals into a measure function, it is rejected in favor of the latter.<sup>6</sup>

### 5. ‘muy sin N’ vs. ‘sin mucho N’

Consider the contrast in (26) (cf. (3)).

- (26)a. *una habitación muy sin luz*  
lit. “a room very without light  $\approx$  a very lightless room”
- b. *una habitación sin mucha luz*  
lit. “a room without much light”

In (26)b there is no coercion of a PP denotation  $\langle e, t \rangle$  into a gradable predicate  $\langle e, d \rangle$ . Instead, we have quantification over amounts of portions in the denotation of a mass noun. We assume that *mucho/a* (“a lot of”) introduces the function  $\mu$ , which maps (dense) individuals to measures (Rett 2008), and a  $>!!$  *super-greater-than*-relation with a standard.  $\mathbf{m}_N$  represents the measure function of a nominal with cumulative and homogeneous reference N. *Mucha luz* is not a bare noun, but a QP, so we do not have pseudo-incorporation here, but regular Functional Application. We treat *mucho/a* as a generalized quantifier, so *mucha luz* is of type  $\langle et, t \rangle$  and has the denotation in (27).<sup>7</sup>

- (27)a.  $[[\text{mucho/a}]] = \lambda N_{\langle e, t \rangle} \lambda Q_{\langle e, t \rangle} \exists x [N(x) \wedge \mu(x) > !! \mathbf{s}(\mathbf{m}_N) \wedge Q(x)]$
- b.  $[[\text{mucha luz}]] = \lambda Q_{\langle e, t \rangle} \exists x [\text{light}(x) \wedge \mu(x) > !! \mathbf{s}(\mathbf{m}_{\text{light}}) \wedge Q(x)]$

As a QP, *mucha luz* moves at LF (cf. (29)) to avoid a type mismatch since the object of *sin* has to be of type  $\langle e \rangle$ . The interaction between negation and QP should yield two possible interpretations depending on their scopes, as formulated in (28).

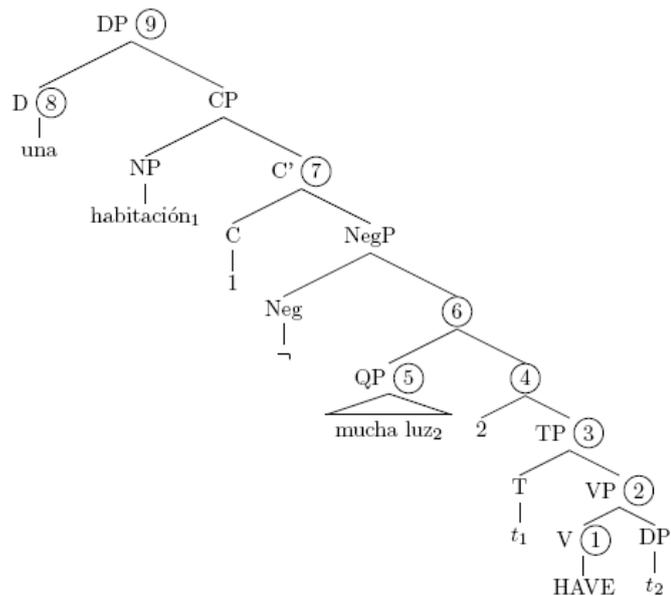
(28) [[ [PP *sin mucha luz* ] ]

- a.  $\lambda y_{\langle e \rangle}. \neg \exists x[\text{light}(x) \wedge \mu(x) > !! \mathbf{s}(\mathbf{m}_{\text{light}}) \wedge \text{HAVE}(x)(y)]$
- b.  $\lambda y_{\langle e \rangle}. \exists x[\text{light}(x) \wedge \mu(x) > !! \mathbf{s}(\mathbf{m}_{\text{light}}) \wedge \neg \text{HAVE}(x)(y)]$

In (28)a, the PP denotes a function from individuals to truth values such that there is not any  $x$  that is a large amount of light that  $y$  has. In (28)b, the function is true if we apply it to an individual  $y$  and there is a large amount of light  $x$  that  $y$  does not have.

Despite being predicted, the reading where QP has wide scope over negation strikes us as extremely weird. The default reading is the one where *mucha* has narrow scope. Interestingly, the Catalan translation would be *gaire*, a Negative Polarity Item licensed by negation in this context. The tree in (29) shows that QP has moved to a position between negation and HAVE, which can be interpreted as additional evidence for the proposed decomposition.

(29)



- |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ① $\lambda x \lambda y. \text{HAVE}(x)(y)$<br>② $\lambda y. \text{HAVE}(g(2))(y)$<br>③ $\text{HAVE}(g(2))(g(1))$<br>④ $\lambda x. \text{HAVE}(x)(g(1))$<br>⑤ $\lambda Q. \exists y [\text{light}(y) \wedge \mu(y) \succ \text{!s}(\mathbf{m}_{\text{light}}) \wedge Q(y)]$ | ⑥ $\exists x [\text{light}(x) \wedge \mu(x) \succ \text{!s}(\mathbf{m}_{\text{light}}) \wedge \text{HAVE}(x)(g(1))]$<br>⑦ $\lambda y. \neg \exists x [\text{light}(x) \wedge \mu(x) \succ \text{!s}(\text{light}) \wedge \text{HAVE}(x)(y)]$<br>⑧ $\lambda P \lambda Q. \exists x [P(x) \wedge Q(x)]$<br>⑨ $\lambda Q. \exists y \neg \exists x [\text{light}(x) \wedge \mu(x) \succ \text{!s}(\mathbf{m}_{\text{light}}) \wedge \text{room}(y) \wedge \text{HAVE}(x)(y) \wedge Q(y)]$ |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

In (29), the entire DP denotes a set of properties  $Q$  such that there is a room  $y$  that does not have a great amount of light, and  $y$  has the property  $Q$ . Crucially, although both *sin mucho N* and *muy sin N* denote in  $\langle e, t \rangle$ , they exhibit a number of differences, (30).

- (30)a. *muy sin N* is a DegP and *sin mucho N* is a PP.
- b. *muy sin N* involves turning the PP into a measure function via coercion. *Sin mucho N* involves quantification over amounts/portions of  $N$  (which are  $N$  themselves).
- c. the standard that is exceeded in *muy sin N* is a standard of  $N$ -lacking, while the standard that is not exceeded in *sin mucho N* concerns amounts of  $N$ .

Consider now the contrast in (31). In (31)a, the coffee has a high degree of sugar-lack (assuming that lack of sugar can be measured), i.e. it is very bitter. In (31)b, the coffee does not contain a large amount of sugar: it has some, but not a lot of it; it need not be bitter.

- (31)a. *un café muy sin azúcar.*
- b. *un café sin mucho azúcar.*

Thus, even though it is difficult to find examples where there is a clear divide in meaning between the two constructions, (31) illustrates it and our semantic composition provides the expected outcome.

## **6. Conclusions and prospects**

We have provided a full account of adnominal *sin*-(bare)-PPs that builds on two key elements: (i) the decomposition of *sin* into two layers of functional elements, negation and a HAVE relation, for which we have provided syntactic-semantic evidence; (ii) EM's pseudo-incorporation account of V+N structures, whereby we have established a relation between our *sin*-PPs and their bare N-selecting constructions. Besides, the analysis of degree intensified *sin*-PPs that contrast with *sin*-PPs selecting a QP as complement has contributed interesting insights for a restricted theory of coercion (Lawers & Willems 2011). There are many open issues, and other questions remain still unexplored. Among the former, the restrictions imposed by the external argument and their effect on the acceptability of *sin*-PPs; whether *mucho*/a “much” means the same under the scope of negation and without negation; or, whether coercion with *muy* “very” is user-based coercion or systemic coercion. As for the latter, whether and how this proposal can be extended to parallel structures in other languages (French: *un cycliste sans lumière* “a cyclist without light”; English: *a ship without captain, Minister without portfolio*; Dutch: *zonder hoed* “without hat”; see Grønn et al. 2010, Le Bruyn et al. 2011) and applied to the remaining contexts where *sin*-PPs occur (cf. footnote 2).

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<sup>1</sup> *Sin* can also take DP complements when the PP is an adnominal modifier: *Una madre sin su hijo llora en el rincón* (lit. “A mother without her son cries in the corner”). However, it seems that the PP has to refer to a characteristic property of the noun it is predicated of, hence *Una mujer sin el periódico llora en el rincón* “lit. A woman without the newspaper cries in the corner” sounds odd out of context. Moreover, *sin*-(bare)PPs also occur as predicates in different contexts, e.g., as secondary predicates, (i). Infinitival clauses can also be complement of *sin* in these cases. We leave them aside in this paper.

(i) *Juan volvió sin {corbata/arrugas/comer}* (lit. “Juan came without tie/wrinkles/to-sleep”).

<sup>2</sup> The sentences can be assigned a plausible meaning to the extent that they do not have a strict existential reading. See Gutiérrez-Rexach (2003: 204) for details.

<sup>3</sup> Contra Grønn *et al.*'s (2010) analysis of bare PPs headed by *sin/without*, where the bare noun selected by P is existentially bound.

<sup>4</sup> We will not address the question of number-neutrality in our structures. Dayal claims that pseudo-incorporated nominals are not necessarily number neutral in Hindi. Be they bare count nouns or bare plurals, the former are interpreted as singular; the latter as plural.

<sup>5</sup> Due to space limitations we cannot discuss alternative composition modes, e.g. Chung & Ladusaw's (2004) Restrict or van Geenhoven's (1996) semantic incorporation. We thus endorse EM's arguments according to which these composition modes cannot account for the Catalan and Spanish V+N data.

<sup>6</sup> Thanks to M. Romero (p.c.) for this suggestion.

<sup>7</sup> For simplicity, we do not discuss whether *mucho/a* should be rather treated as a modifier (cf. Landman 2003, Etxeberria 2005, a.o.). Nothing in our argument hinges on this decision.