

### A non-coercion account of minimizers in Spanish

**Goal.** Our goal is to account for the combination of minimizers with gradable adjectives (As) in Spanish, focusing on *ligeramente* (slightly), developing a non-coercion approach for cases of unexpected semantic combinations.

**1. Setting the scene.** From Kennedy & McNally's work (2005), it is claimed that 1) minimizers are degree elements generated as heads of the DegreeP (*pos*) or as MeasurePs in the functional structure of adjectives; 2) they are semantically sensitive to some lexical property of adjectives related to the presence of a minimum degree point on their scalar structure or to their character as absolute adjectives with minimum standards; 3) they operate on that minimum degree/standard and return the meaning that the individual possesses the property in question in a degree that is slightly higher than that minimum point. Consequently, also in K&M's terms, minimizers combine with absolute As with minimal standards, as *ligeramente sucio, húmedo, abierto / slightly dirty, wet, open*. They cannot combine with absolute As with maximal standards (*\*ligeramente limpio/lleño*), nor with relative adjectives with arbitrary standards (*\*ligeramente alto*). In approaches assuming 1), 2) and 3), unexpected combinations like *Esos tacones son ligeramente altos para mí*. (*These heels are<sub>SER</sub> slightly tall for me*) are considered as cases of scalar coercion or standard coercion of As (Bogal-Albritten, 2012, Kagan & Alexeyenko, 2011).

**2. Proposal.** Our point of view is that coercion is a way of resolving semantic mismatches that applies only as a last resort device. We claim that unexpected combinations between minimizers and As of the "wrong semantic type" can be explained without resorting to coercion if an alternative semantics for minimizers is developed. Specifically, we argue that minimizers are degree expressions (type  $\langle e, d \rangle$ ) (1) that combine with gradable As of any scalar type, (2), and build derived gradable As with a more fine-grained set of degrees, (3).

(1)  $[[\text{ligeramente}]] = \lambda x \lambda g \lambda y. g_{g(x)}(y)$

(2) a.  $[[\text{tall}]] = \lambda x. \text{tall}(x)$

b.  $[[\text{wet}]] = \lambda x. \text{wet}(x)$

(3) a.  $[[\text{ligeramente tall}]] \lambda y. \text{tall}_{\text{tall}(x)}(y)$       b.  $[[\text{ligeramente wet}]] \lambda y. \text{wet}_{\text{wet}(x)}(y)$

This derived gradable A, is a function from individuals ( $y$ ) to "minimized degrees",  $\langle e, d \rangle$ , of the original A. The degrees in the denotation of the derived A are more fine-grained than those in the initial denotation of the gradable A, even to the point of make them discrete; this is on the line of the granularity shifting analysis of minimizers by Sassoon and Zevakhina (2014). This allows the possibility of reasoning about (very) small degree differences, a meaning component associated to *slightly* in different proposals like Kagan & Alexeyenko (2011), Solt (2012), Bylinina (2012).

Derived As are of type  $\langle e, d \rangle$ , and need to combine with degree morphology (e.g. *pos*), (4), in order to be converted into predicates of individuals (Kennedy's et al. works). As assumed in Gumiel-Molina, Moreno-Quibén and Pérez-Jiménez (2015) every gradable A is evaluated with respect to a standard value (set by the function M) established with respect to a comparison class (C). The comparison class defines the set out of which the standard degree is calculated.

(4)  $[[\text{Deg } pos \text{ tall}]] = \lambda C \lambda x. \text{tall}(x) \geq M(\text{tall})(C)$

"tall to a degree that is greater to the significant standard degree of tallness of the members of C"

Two semantic types of comparison classes can be established: On the one hand, relative adjectives are evaluated with respect to a *between-individuals* comparison class comprised of distinct individuals, which determines an arbitrary standard value. So, the sentence *Mi hijo de 8 años es alto* will be true if my son's height exceeds the arbitrary midpoint degree of height for the 8-year old individuals comprising the comparison class. On the other hand, absolute adjectives are evaluated with respect to a *within-individual* comparison class. A class of comparison comprised of *counterparts* of the adjective's subject (stages) manifesting different degrees of the property in question in different indices of evaluation (typical/normal alternative worlds); one of these degrees is considered the standard value. Consider *El restaurante está lleno, La toalla está húmeda*. In the case of *lleno* 'full', *húmedo* 'wet', the comparison class is comprised of different counterparts of the predicate argument, *the restaurant/the towel*, as it is instantiated in different stages in every contextually salient typical world. The function M applies to this class and returns as its value one of the degrees of the gradable property. The fact that the degrees in question are manifested through stages of a single individual has the consequence that the standard degree

selected by M will count as maximal or minimal for this individual; that is, the standard is a class-maximal or class-minimal standard value, not defined in absolute scalar terms.

Having this background proposal in mind, our claim is that the combination of *pos* with derived As will be well-formed if reasoning about small differences is allowed by the nature of the comparison class. The finer granularity introduced by *ligeramente* allows reasoning about small degree differences but this reasoning is only possible (=informative) when the comparison class introduced by *pos* makes the selected standard non-arbitrary (Solt 2011, 2012). If the standard of comparison does not allow reasoning about small differences to be informative, then the combination of *ligeramente* + A will be unfelicitous. This accounts for the paradigm in (5) without claiming that there is a change in the scalar structure of the adjective, or in its relative/absolute character. Consider absolute adjective with minimum standards (5a). (5b) says that the degree in which something can be slightly wet is greater than the minimum standard provided by the function M but it can be a minimal difference from the minimum standard of *wet*. The fact that there are more degrees than can be selected as arguments of M(g)(C) makes it possible that things that didn't count as wet, now count as slightly wet. When *ligeramente* combines with absolute adjectives with maximum-standards, ill-formed sentences are obtained, (5c). We claim that small distances are not informative with maximum standards: small distances cannot be felicitously measured from an origin point whose location is maximum. Relative As (5d) have arbitrary standards chosen from a between-individuals Comparison Class. They don't combine with *ligeramente*, since the arbitrary nature of the distributional standard associated with them makes impossible (=uninformative) referring to small degree differences.

- (5) a. La toalla está ligeramente húmeda. (absolute adjective, class minima standard).  
 The towel <sub>i<sub>ESTAR</sub></sub> slightly wet
- b.  $[[\text{Deg } pos \text{ ligeramente húmedo}]] = \lambda C \lambda x. \text{ húmedo}_{\text{húmedo}(x)}(x) \geq M(\text{húmedo}_{\text{húmedo}(x)})(C)$
- c. \*La jeringuilla/botella está ligeramente llena. (absolute A, class-maxima stnd)  
 The syringe/bottle <sub>i<sub>ESTAR</sub></sub> slightly full
- d. \*Juan es ligeramente alto/gordo. (relative A, distributional arbitrary stnd)  
 Juan <sub>i<sub>SER</sub></sub> slightly tall/fat

In this proposal, bad-behaved cases in (6) are accounted for if the notion of “functional standard” is taken into account. Consider (5d) vs. (6).

- (6) a. Juan es ligeramente gordo para entrar por ese agujero.  
 Juan <sub>i<sub>SER</sub></sub> slightly fat to fit into that hole  
 ‘Juan is slightly fat to fit into the hole.’

The for-phrase eliminates the arbitrariness of the standard due to the choice of a comparison class based on the requirements of the situation (in this particular case, a goal: The goal of trying to fit into the hole); this allows, once *pos* is introduced, the reasoning about small degrees denoted by *ligeramente* in an informative way. However, there is no coercion. The adjective has an open scale; similarly, the adjective is relative, the property is evaluated with respect to a between individuals comparison class (relative A), and this is shown by the fact that the copula is *ser* (see Gumiel-Molina et al. 2015 on this particular point).

#### 4. Conclusions and further investigations

In this talk, we argue that minimizers like *ligeramente* builds derived gradable As from gradable As, with a more fine-grained set of degrees. The finer granularity introduced by *ligeramente* allows reasoning about small differences once the derived adjective is combined with *pos*. This reasoning is only possible when the standard provided by the comparison class introduced by the *pos* morpheme is non-arbitrary and informative (this is the case when the adjectives is a class-minimal absolute adjective). Unexpected combinations of *ligeramente* with As (relative As, class maximal absolute As) are possible when the comparison class associated with the gradable A introduces a functional standard. Crucially, no coercion process takes place.

#### References

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