The syntax and semantics of Spanish comparatives: a uniform account

Introduction. Much of the debate surrounding comparative structures has revolved around whether languages allow phrasal or clausal comparatives, or both. The case of Spanish is particularly relevant if we consider that Spanish has the property of expressing comparative constructions in two different ways: the standard of comparison can be introduced by *que* (‘that’) or *de* (‘of’):

1. Pedro ha leído más poemas *que* revistas ha leído su padre.
   ‘Pedro has read more poems than magazines his father’
2. Pedro ha leído más poemas *de* dos
   ‘Pedro has read more poems than two’

The descriptive literature claims that *que*-comparatives are concerned with “individuals” and combine with CP-like elements whereas *de*-comparatives introduce “degrees” and only combine with DP-like elements (Brucart 2003). Based on these claims, Mendia (2019) argues that only the latter express overt comparison to a degree. and places the distinction between *que* and *de* comparatives not in the standard morphemes but in the comparative marker más. Thus, Mendia (2019) provides two lexical entries for más: (3) for *que* and (4) for *de*:

3. 
\[ \text{[más, clausal]} = \lambda P_{(dt)}. \lambda Q_{(dt)}. [\text{MAX}(Q) > \text{MAX}(P)] \]

4. 
\[ \text{[más, degrees]} = \lambda R_{(d, et)}. \lambda d_{(d)}. \lambda x_{(e)}. \text{MAX}(\lambda d'.R(d')(x)) > d \]

(3) is a generalized quantifier over degrees (i.e. Heim 2001) of type \(<\ dt, <\ dt, t\>) that takes two arguments: [que + CP] of type \(<\ dt>\) and \(\lambda d.TP\), also of type \(<\ dt>\). This second argument is originated via QR of the DegP to a node of type \(t\). However, (4) is not a quantifier and must be interpreted in-situ. Since the motivation for the QR analysis follows from extraposition, *de*-comparatives are expected to show the opposite behavior.

The problem. Given that there is no QR in *de*-comparatives, extraposition should not be allowed. However, this prediction is not completely borne out:

5. Las zapatillas están más baratas [en la tienda ahora] de lo que costaban en amazon antes.
   ‘The sneakers are cheaper in the store now than what they were in amazon before’

Another challenge is concerned with the resolution of ellipsis sites in the standard of comparison. The example in (6) resemble Antecedent Contained Deletion (ACD). Thus, the only way to resolve the ellipsis and avoid infinite regress is to assume that the quantifier QRs to a position from which it c-commands its antecedent and thus satisfies the Ellipsis-Scope Generalization (Williams 1977, Bhatt and Pancheva 2004): “The scope of a DegP containing elided material must contain the antecedent of the ellipsis”.

6. Pedro quiere ser más alto [de lo que pensamos {que quiere ser d-alto / ser d-altos}].
   ‘Pedro wants be more tall of DET that think.we. that wants.he be d-tall / be d-tall.pl
   ‘Pedro wants to be taller than what we all believe {he wants /to be}’

A third issue with Mendia’s (2019) analysis is constituency. If [más, degrees] forms a constituent with the gradable predicate, they should behave as a unit in the syntax. However, (7) shows that *de* can intervene.
Compré más de dos libros.

‘I bought more than two books’

**Proposal & analysis.** To solve these issues, we propose that there is a single lexical entry for *más* as in (3): *más* takes two arguments of type *<dt>*. This already solves the extraposition challenge in (5). But, to accommodate the fact that *de*-comparatives introduce degrees of type *d*, we also propose that the preposition *de* is not semantically vacuous but has the denotation in (8). These are not stipulations: (3) provides a uniform treatment of all comparatives and (8) enables it and is reasonable: expressions should not be semantically vacuous.

(8) \[ \text{[de]} = \lambda d' \cdot \lambda d(d') \cdot \{d' \geq d\} \] ‘the set of degrees smaller than or equal to d’

The lexical entry for the preposition *de* in (8) denotes a function from degrees *<d>* to sets of degrees *<dt>*. Therefore, *de* can directly combine with the DP complement denoting a degree and return an output which will serve as input for *más* to take as its first argument. An example is provided below for the sentence *La camisa es más vieja de eso* (‘the shirt is older than that’):

As the tree illustrates, the comparative morpheme generated in the specifier of the AP must QR due to type mismatch to TP. After QR, the PP introducing the standard of comparison is late merged into the structure. Semantic composition takes place appropriately. That said, the proposal presented here deals with the constituency challenge.

This approach is also suitable for free relatives headed by *lo que* or *cuanto* (‘how-many’) that contain an ellipsis site as in (6). The lexical entry in (9) indicates that the type of the relative pronoun is *<dt, <d>>*. Thus, when the wh-operator moves from the position where it is generated, it leaves a trace of type *d*; and then as a result of movement it creates a \( \lambda d \) that it will take as its argument. This will create an element of type *d* that *de* will take as its argument.

(9) \[ \text{[Cuanto / lo que]} = \lambda P(\langle dt, t\rangle) \cdot \text{MAX}[\lambda d(d) \cdot P(d)] \]

Since *más* is a generalized quantifier over degrees that has to raise to a node of type *t* to resolve a type mismatch, the phrasal standard can late merge in this position from which it can contain the antecedent of the ellipsis. For instance if we look at (6), which is ambiguous, we would predict that there are two possible positions for the quantifier: narrow ellipsis is obtained by QRing to the non-finite TP; wide ellipsis can be obtained by QRing to the matrix TP above *querer*. Therefore, the Ellipsis-Scope Generalization is satisfied.

**Conclusion.** We have proposed a more parsimonious analysis of Spanish comparatives than others before by arguing that only one lexical entry for the morpheme *más* is required. Treating *más* as a generalized quantifier over degrees is appropriate and follows from the fact that items such as *de* must have a lexical entry in the semantics: *de* denotes a function from degrees to sets of degrees. Furthermore, this analysis ensures that *más* and the PP form a constituent, resolves ellipses inside the standard of comparison (when the latter is a free relative) and allows for extraposition.
References


