Unconcealed Questions & Exclamations
Emphatic Relative Constructions

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October 2019

Abstract

DPs that superficially resemble definite descriptions modified by a relative clause show the syntactic and semantic behavior of interrogatives and exclamatives in certain contexts. Drawing evidence from Spanish, I argue that unlike other nominal constructions that show similar semantic behavior, most notably concealed questions, these constructions may sometimes possess not nominal but full clausal syntax. I propose a syntactic and semantic analysis of these constructions on which they are garden-variety *wh*-constructions that are selected by a D-head that is an overt exponent of an answerhood operator.

1 Introduction

Subordinate questions have been noted to come in two shapes: as run-of-the-mill *wh*-constructions headed by a *wh*-phrase and as ordinary DPs interpreted as concealed questions.

(1) a. *Embedded wh-construction*
Liz knows what books Susan read.

b. *Concealed question*
Liz knows the books that Susan read. ⇝ Liz knows *what* books she read

The embedded question in (1a) is fully interrogative in its syntax and semantics, and can serve as complement to any *wh*-embedding predicate. The concealed question in (1b) is a nominal complement, whose interpretation seems nonetheless to be equivalent to the question in (1a); these can only appear with a subset of (1a)-embedding predicates. At least since Baker (1968) and Grimshaw (1979), the compositional and distributional puzzles raised by question-embedding in cases like (1) have kept linguists busy (for recent overviews see Frana 2017, Dayal 2017 and Uegaki 2019).

Although lesser known and not so well studied, subordinate exclamatives seem to share a similar distribution (Elliott 1971, 1974 and Grimshaw 1979). In (2), the same exclamation about the number of people that one encounters at conferences may be expressed both by a *wh*-construction headed by a *wh*-phrase and an ordinary DP interpreted as a concealed exclamation.[1]

1 Note that (2b) also admits a kind interpretation. I will not consider those readings here.

(2) a. *Embedded wh-exclamative* [Schwager 2009]
It is amazing how many people you meet in these conferences.

b. *Concealed exclamative*
It is amazing the people you meet in these conferences.

The duality of these constructions has lead to suggestions that in fact they share much of their semantic import (e.g. Sæbø 2010), a view in line with theories where the semantics of exclamatives follows closely that of interrogatives (D'avis 2002, Zanuttini and Portner 2003, Castroviejo 2008, a.o.). It seems then that there are two main type of constructions, full-fledged *wh*-constructions and ordinary DPs, that can express questions and exclamations in embedded contexts.

This paper is centered on a third class of subordinate questions/exclamations, exemplified by a construction found in Spanish called Emphatic Relative Constructions (Bosque 1983; Plann 1984; Torrego 1984; Bosque and Moreno 1990; Brucart 1999; Suñer 1999; Leonetti 2004 a.o.). Emphatic Relative Constructions, ERCs for short, are constructions that superficially resemble definite DPs modified by a restrictive relative clause, and come in two distinct varieties: nominal ERCs, where they are seemingly headed by an ordinary nominal, and degree ERCs, where the putative head is a gradable predicate of any syntactic category. ERCs have a number of puzzling properties, explicated in detail below, including the fact that they look like ordinary DPs but have the syntactic distribution and semantic interpretation of (embedded) ordinary interrogatives and exclamatives.

In this paper, I argue that despite their tight links with DPs and questions, ERCs cannot be fully subsumed under the umbrella of either. Rather, ERCs are of "mixed" nature: up until a certain point in the syntactic derivation, they are bona-fide clausal interrogatives, but after a certain point they are merged with a nominalizing head that turns them into DPs. Semantically, I argue that ERCs contain a Karttunen (1977) style question nucleus in C°, which serves as the base for their interrogative and exclamative interpretations. The DP-layer in ERCs is then derived by merging a special variant of the definite article, which I call D_{ANS}, that combines with a set of propositions and returns the maximally informative one. The semantic contribution of D_{ANS} is therefore identical to Dayal's (1996) answerhood operator. I show that a number of properties of ERCs, including their interpretive flexibility (nominal vs. degree) and distributional constraints follow from this mixed nature. Moreover, it also offers insight into why other well- studies languages do not seem to have analogous constructions.

The rest of the paper is organized as follows. I start below by describing some basic properties of the constructions in their two varieties, nominal and degree. Then in §2, I present a series of arguments demonstrating that ERCs pattern unlike ordinary nominals, including concealed questions, which bear an otherwise strong family resemblance to ERCs. My syntactic analysis is given in §3, which treats them as having an underlyingly propositional core, like interrogatives and exclamatives. In §4, I build on the proposed syntax and present a semantic compositional analysis of ERCs that derives the available interpretations. Section §5 draws an explicit comparison with concealed questions and provides corroborating arguments against a concealed question analysis. Finally, §6 points out and discusses some remaining issues.

1.1 Two kinds of ERCs

Nominal ERCs Nominal ERCs differ from garden-variety restrictive relative clause constructions in two important respects: (*i*) they can be embedded under a great variety of attitude predicates, and (*ii*) they are not interpreted as definite descriptions, but as OBJECT ("what") or AMOUNT ("how many") questions and exclamations. As an illustration, compare (3a) and (3b), both involving responsive predicates (in the sense of Lahiri 2002).

(3) **Subordinate question & responsive predicate**

a. *OBJECT question*
Yo sé qué manzanas trajo Pedro.
I know what apples brought Pedro
'I know what apples Pedro brought'

b. *AMOUNT question*
Yo sé cuántas manzanas trajo Pedro.
I know how many apples brought Pedro
'I know how many apples Pedro brought'

(4) **Emphatic Relative Construction & responsive predicate**
Yo sé las manzanas que trajo Pedro.
I know the apples that brought Pedro
'I know {what/how many} apples Pedro brought'

In (3a) we have two ordinary subordinate questions, headed by the relative pronouns *qué* ("what") and *cuántas* ("how many"), respectively. The variant with the pronoun *qué* in (3a) is asking about the identity of some objects, hence the characterization as an OBJECT interpretation. The *cuántas* variant in (3b) is asking instead about the amount of apples that Pedro brought, and so I refer to it as an AMOUNT interpretation. The ERC in (4) is ambiguous between the two interrogative meanings in (3), despite there being no overt indicators of interrogative structure, nor degree morphology, in the case of the AMOUNT interpretation. ERCs can also be arguments of rogative predicates like *wonder*, where once again, the structure is ambiguous between an OBJECT and AMOUNT reading.[2]

(5) **Rogative predicates**

a. *Subordinate question*
Me pregunto { qué / cuántas } manzanas trajo.
I.DAT ask what how many apples brought
'I wonder {what/how many} apples Pedro brought'

b. *Emphatic Relative Construction*
Me pregunto las manzanas que trajo Pedro.
I.DAT ask the apples that brought Pedro
'I wonder {what/how many} apples Pedro brought'

2 In Spanish the verb *wonder* translates as *preguntarse* ("ask oneself"), while "ask" corresponds to *preguntar*.

All else equal, both OBJECT and AMOUNT interpretations are accessible for ERCs. Nevertheless, certain lexical choices and pragmatic factors may promote one interpretation over the other.[3] We can show that the AMOUNT interpretation is an independently available reading of these constructions. As shown in (6), adapted from Bosque (1983), even when an OBJECT interpretation is ruled out on pragmatic grounds, the AMOUNT interpretation remains, showing that it is not parasitic on the OBJECT interpretation.

(6) a. Yo sé los libros que lee María al cabo del año.
I know the books that María reads at end of year
'I know how many books María reads in a year'

b. Yo sé las veces que María ha suspendido matemáticas.
I know the times that María AUX failed mathematics
'I know how many times María has failed mathematics'

Finally, AMOUNT interpretations are also naturally available with exclamative-embedding predicates, such as *be amazing/surprising*, which typically embed exclamations (although not just exclamations; see Lahiri 2002):

(7) **Subordinate exclamations**

a. Es sorprendente { qué / cuántas } manzanas trajo Pedro.
is surprising what how many apples brought Pedro
'It is surprising {what/how many} apples Pedro brought'

b. Es sorprendente las manzanas que trajo Pedro.
is surprising the.F.PL apples that brought Pedro
'It is surprising {what/how many} apples Pedro brought'

Degree ERCs Spanish has a certain type of complex constructions involving a modified gradable predicate (of any syntactic category) and the neuter definite determiner *lo*, often referred to as Degree

3 For instance, AMOUNT interpretations are only accessible to mass and plural count nouns, and in some cases to abstract nouns with straightforward extent interpretations (such as *money*, *courage*, *energy*, etc.). By the same token, OBJECT interpretations of abstract nouns without obvious token-level referents (like the above mentioned *energy*, *courage*, etc.) are usually inaccessible, sometimes even nonsensical. Lexical choices may also affect the grammaticality of the whole construction. As an anonymous reviewer notes, the contrast between the simple DP and ERC variants below is not very marked:

(i) a. Paco { averiguó / *se pregunta } el ganador del festival.
Paco find out REFL ask the winner of the
'Paco {found out / *wonders} the winner of the Eurovision Festival'

b. Paco { averiguó / ?se pregunta } el cantante que ganó el festival.
Paco find out REFL ask the singer that won the festival
'Paco {found out / *wonders} the singer who won the Eurovision Festival'

This variability might be due to a number of factors, including the choice of lexical nouns. There is an important question here about which of these factors are relevant to the theoretical issues discussed here and which are orthogonal. Due to limited time and space, I must leave this task for future work.

Neuter Relatives, after Rivero (1981) and Ojeda (1982). In matrix contexts they may only appear in predicative position, since due to their gradable nature they cannot behave as ordinary arguments.

(8) a. Pedro es lo alto que era su padre
Pedro is the.N tall.M.SG that was his father.M.SG
'Pedro is as tall as his father was'

b. La película no fue lo exitosa que fue la novela
the movie not be the.N successful.F.SG that was the the.F.SG
'The movie wasn't as successful as the novel'

These degree relatives uniformly give rise to a degree-oriented interpretation: (8a) conveys that Pedro is tall to the same degree/extent that his father was; (8b) conveys that the movie was not successful to the same extent that the novel was successful, which has lead to the consensus that they must be quantity denoting in "some capacity" (see Plann 1980, Torrego 1988, Bosque and Moreno 1990). In particular, drawing parallels with other constructions, such as comparatives and equatives, degree relatives like (8) have later been modeled in formal semantic analyses as being degree referring, of type *d* (Gutiérrez-Rexach 1999, 2014). What is more interesting for us is that, despite their particular make-up, we observe the same *wh*-construction/DP parallelism with degree ERCs as well: they are felicitous with responsive, rogative and exclamative embedding predicates, exactly in those contexts where their counterparts with *wh*-phrases are.

(9) **Responsive predicates**

a. *Subordinate questions*
Yo { sé / te dije } cuán alto es el edificio.
I know you.DAT told how tall is the building
'I {know/told you} how tall the building is'

b. *Degree ERC*
Yo { sé / te dije } lo alto que es el edificio.
I know you.DAT tell the.N tall that is the building

(10) **Rogative predicates**

a. *Subordinate questions*
Me pregunto cuán alto es el edificio.
I.DAT ask how tall is the building
'I wonder how tall the building is'

b. *Degree ERC*
Me pregunto lo alto que es el edificio.
I.DAT ask the.N tall that is the building

(11) **Exclamative embedding predicates**
Me sorprendió { cuán alto / lo alto que } es el edificio.
I.DAT surprised how tall the.N tall that is the building

'It surprised me how tall the building is'

For the sake of concreteness, let us call the interpretations in the (b) examples above DEGREE interpretations, so as to tell them apart from AMOUNT interpretations of nominal ERCs. Thus, despite the superficial differences between nominal and degree ERCs, the two constructions share the same broad syntactic distribution in embedding contexts. Note moreover that in the case of degree ERCs we can no longer entertain the possibility that the *que*-clause is in fact a restrictive relative clause: in (8) there is no nominal to modify, and gradable predicates like *tall* cannot be modified intersectively, not at least without further assumptions.

1.2 Two general syntactic constraints

Nominal and degree ERCs are both subject to two broad syntactic constraints. The first is that both types of ERCs are acceptable only with the definite article; all others yield ungrammaticality.[4]

(12) a. *{ Me pregunto / sé } { éstas / algunas / muchas / dos } manzanas que
I.DAT ask know these some many two apples that
trajo.
brought
Lit.: 'I {wonder / know} {these / some / many / two} apples that he brought'

b. *{ Me pregunto / sé } { *esto / *mucho / *algo } alto que es el edificio.
I.DAT ask know this much some tall that is the building
'I wonder how tall the building is'

This is true even of cases like (13), where the definite article is present, but further modified by the universal quantifier *all*.

(13) a. *{ Me pregunto / sé } todas las manzanas que trajo Pedro.
I.DAT ask know all the apples that brought Pedro
Lit.: 'I {wonder/know} all the apples that Juan brought'

b. *{ Me pregunto / sé } todo lo alto que es el edificio.
I.DAT ask know all the.N tall that is the building
Lit.: 'I {wonder/know} all the tall the building is'

The second general syntactic restriction is ERCs require a *que*-clause. The corresponding unmodified definite DPs cannot appear as complements of rogative predicates in the way ERCs can:

(14) a. *Yo { me pregunto / sé } las manzanas.
I I.DAT ask know the apples

4 This sets them apart from the Amount Relatives first discussed by Carlson (1977, 528), which are possible with universal quantifiers:

(i) Marv put everything he could in his pocket. ⇝*he took as many things...*

Int.: I {wonder/know} which are the (relevant) apples.'

b. *Yo { me pregunto / sé } lo alto
I I.DAT ask know the tall
Int.: 'I {wonder/know} the tall thing.'

This requirement is not just about having a modified NP, as other types of NP modification will not do. This is the case of PPs, participial phrases and, more surprisingly perhaps, reduced relatives clauses.

(15) **Nominal ERCs without *que*-clause**

a. *Yo { me pregunto / sé } las manzanas de la bolsa.
I I.DAT ask know the apples of the bag

b. *Yo { me pregunto / sé } las manzanas traídas por Juan.
I I.DAT ask know the apples brought by Juan

c. *Yo { me pregunto / sé } las personas jugando a poker.
I I.DAT ask know the people playing to poker

(16) **Degree ERCs without *que*-clause**

*{ Sé / Me pregunto } lo alto (del edificio).
know I.DAT ask the.N tall of.the building
Int.: I {know/wonder} how tall the building is.'

Together, these constraints give first indication that ERCs are not just ordinary DPs. In the next section, I present a series of further arguments for the claim that ERCs are not nominals in the usual sense.

2 Syntactic properties of nominal ERCs

The goal of this section is to show that ERCs have syntactic properties different from those of ordinary DPs. Part of the task then involves showing that ERCs cannot be subsumed under concealed questions (or concealed exclamations), or under the class of nominals that appear in syntactic positions identified as allowing concealed questions/exclamations. This is not much of a chore for degree ERCS, since nominalized gradable predicates do not make good concealed questions to begin with (see (100) in §5). Nevertheless, showing that nominal ERCs are not in fact ordinary DPs is not a trivial task, the reason being the well-known fact that restrictive relative clauses also improve otherwise unacceptable concealed questions (Caponigro and Heller 2007, Barker 2016) and concealed exclamatives (Castroviejo and Schwager 2008, Schwager 2009). Since Spanish also has concealed questions/exclamatives that follow this pattern, nominal ERCs carry an extra burden if we are to be convinced that they do not constitute ordinary DPs. This is the task I take upon in this section.[5] In

5 There are also practical reasons: some tests rely on the φ-morphology of ERCs, which in the case of ERCs is always neutral. Thus, there are more tests available for nominal ERCs than degree ERCs.

what follows, I will present evidence that sets nominal ERCs apart from ordinary DPs. Using surface-identical DPs that receive a nominal interpretation–i.e. NPs modified by restrictive relative clauses referring to an individual–and other definite DPs like free relatives as contrast points, I make the argument that nominal ERCs should be treated on par with *wh*-constructions.

2.1 Subject-Verb inversion

In Spanish, the canonical word order is SVO. However, Subject-Verb inversion is a common, optional process, and in many environments subjects may vary freely between preverbal and postverbal positions.

(17) **Declarative sentences**

a. Hoy Juan ha traído las manzanas.
today Juan AUX brought the apples
'Today Juan brought the apples'

b. Hoy ha traído Juan las manzanas.

However, in many constructions involving A-bar movement of a *wh*-operator, SV inversion is obligatory, as shown by (18) through (21) (see Torrego 1984, Suñer 1994, Barbosa 2001 a.o.).[6] This difference therefore provides a useful diagnostic to identify the underlying nature of ERCs.

(18) **Matrix *wh*-questions**

a. { Qué / Cuántas manzanas } ha traído Juan?
what / how many apples AUX brought Juan
'{What / How many} apples did Juan bring?'

b. *{ Qué / Cuántas } manzanas Juan ha traído?

(19) **Matrix exclamatives**

a. { Qué / Cuántas } manzanas que ha traído Juan!
what how many apples that AUX brought Juan
'{What / How many} apples Juan has brought!'

b. *{ Qué / Cuántas } manzanas que Juan ha traído!

(20) **Embedded *wh*-questions**

a. Me pregunto { qué / cuántas manzanas } ha traído Juan.
I.DAT ask what how many apples AUX brought Juan
'I wonder {what / how many apples} Juan brought.'

b. *I.DAT ask { qué / cuántas manzanas } Juan ha traído?

6 A-bar movement itself is not a sufficient condition. As Rizzi (1997) points out, what is required is that there be an operator-variable chain, which is argued to be present in *wh*-constructions, but not in other A-bar movement constructions like restrictive relative clauses, free relative and topicalization.

(21) **Embedded exclamatives**

a. Es sorprendente { qué / cuántas } manzanas ha traído Juan.
is surprising what how many apples AUX brought Juan
'It is surprising how many apples Juan has brought.'

b. *Es sorprendente { qué / cuántas } manzanas Juan ha traído.

As shown in (22) below with a number of embedding predicates, nominal ERCs require inversion, a pattern that is unexpected if they involved ordinary DPs (Plann 1984, Torrego 1988, a.o.).[7]

(22) a. Me pregunto las manzanas que { comió Juan / *Juan comió }.
I.DAT ask the apples that ate Juan
'I wonder {what/how many} apples Juan ate'

b. Me dijo las manzanas que { comió Juan / *Juan comió }.
I.DAT say the apples that ate Juan
'She told me {what/how many} apples Juan ate'

c. Me sorprendió las manzanas que { comió Juan / *Juan comió}.
I.DAT surprised the apples that ate Juan
'It surprised me the (amount of) apples that Juan ate'

ERCs and their subordinate question variants with overt *wh*-phrases pattern alike also in more complicated cases where inversion does not seem to be enforced too strictly.[8] For instance, the examples in (23a) contrasts with those in (20) in that inversion is not obligatorily required. Correspondingly, (23b) is a minimal ERC variant not requiring inversion either. For instance:

(23) a. Yo sé { qué / cuántas } manzanas Pedro le dió a Juan el día de su
I know what how many apples Pedro CL gave to Juan the day of his
santo
saint

7 Incidentally, this is the only test that can apply to degree ERCs, which pattern with nominal ERCs.

(i) a. Me pregunto lo alto que { es el edificio / *el edificio es }.
I.DAT ask the.N tall that be the building the building be
'I wonder how tall the building is.'

b. Me dijo lo alto que { era el edificio / *el edificio era }.
I.DAT say the.N tall that was the building the building was
'She told me how tall the building was.'

c. Me sorprendió lo alto que { era el edificio / *el edificio era }.
I.DAT surprised the.N tall that was the building the building was
'It surprised me the (amount of) apples that Juan ate'

8 There may be a number of reasons for this lax behavior. The ability of a *wh*-dependency to tolerate intervening material is known to be subject to a number of factors, such as the type of *wh*-phrase (whether it is an argument or adjunct, whether it is D-linked or not) and (*ii*) the type of intervening subject (whether it is a pronoun, a lexical item or a complex phrase); see e.g. Goodall (2010) for discussion.

I know {what/how many} apples Pedro gave Juan on his name day

b. Yo sé las manzanas Pedro le dió a Juan el día de su santo
I know the apples Pedro CL gave to Juan the day of his saint

Thus, regardless the complicating factors behind Subject-Verb inversion in Spanish, what should be noted is the common hand-in-hand behavior that both subordinate *wh*-constructions and nominal ERCs share in the same environments.

2.2 *Agreement*

In Spanish nominative subjects must agree with the verb in person and number, whether pre- or post-verbal, as shown by the contrasts in (24). Instead, with clausal subjects, the verb bears default agreement, presumably because clauses are not φ-feature bearers in Spanish (cf. Halpert 2015; (25)). This results in a reversed agreement pattern that tracks the nominal/clausal difference.

(24) **Agreement pattern with DPs**

a. Me { sorprendi**eron** / *sorprendi**ó** } mis amigos.
I.DAT surprised.3PL surprised.3SG I.POSS.PL friend.M.PL
'My friends surprised me'

b. Se me { han / *ha } olvidado los libros
REFL I.DAT AUX.3PL AUX.3SG forgotten the.M.PL book.M.PL
'I forgot the books'

(25) **Agreement pattern with clauses**

a. Me { *sorprendi**eron** / sorprendi**ó** } cuántos amigos vinieron.
I.DAT surprised.3PL surprised.3SG how many.M.PL friend.M.PL came
'It surprised me how many friends came'

b. Se me { *han / ha } olvidado cuántos libros leyó
REFL me AUX.3PL AUX.3SG forgotten how many.M.PL book.M.PL read
'I forgot how many books she read'

In this respect, notice that concealed questions behave like nominals and trigger φ-agreement with the verb:

(26) **Agreement pattern with concealed questions**

a. Me { sorprendi**eron** / *sorprendi**ó** } los horarios de salida.
I.DAT surprised.3PL surprised.3SG the.M.PL schedule.M.PL of departure
'It surprised me what the departure times were'

b. Se me { han / *ha } olvidado las capitales de Europa.
REFL I.DAT AUX.3PL AUX.3SG forgotten the.F.PL capital.F.PL of Europe
'I forgot what the capitals of Europe are'

If nominal ERCs were truly nominal, we would expect them to pattern with the examples in (24) and restrictive relative clauses. This is not what we find. As the contrast between the examples in (27) and (28) indicate, the φ-agreeing variants are interpreted as ordinary restrictive relative clauses (RRCs for short throughout). This interpretation is unavailable for the non-agreeing variants in (28), which are instead interpreted as embedded interrogatives with OBJECT and AMOUNT interpretations (Torrego 1988, Campos 1993, Brucart 2003).[9]

(27) **φ-agreement: ✓RRC, ✘ERC**

a. Me sorprendi**eron** los amigos que invitó Pedro.
I.DAT surprised.3PL the.M.PL friend.M.PL that invited Pedro
'The friends that invited Pedro surprised me'

b. Se me han olvidado los libros que me prestó Pedro
REFL I.DAT AUX.3PL forgotten the.M.PL book.M.PL that I.DAT lend Pedro
'I forgot the books that Pedro lend me'

(28) **No φ-agreement: ✘RRC, ✓ERC**

a. Me sorprendi**ó** los amigos que invitó Pedro.
I.DAT surprised.3SG the.M.PL friend.M.PL that invited Pedro
'It surprised me {what/how many} friends Pedro invited'

b. Se me ha olvidado los libros que me prestó Pedro
REFL I.DAT AUX.3SG forgotten the.M.PL book.M.PL that I.DAT lend Pedro
'I forgot {what/how many} books Pedro lend me'

Using the semantic availability of an AMOUNT-question interpretation can be useful to further tease apart ERCs from ordinary DPs in cases of nominals with special φ-agreement requirements. *Plurale tantum* nouns, which always trigger plural agreement irrespective of their number interpretation, are one such case. ERCs can also be constructed with *plurale tantum*, in which case lack of φ-agreement and the OBJECT- and AMOUNT-question interpretations go hand in hand once again.

(29) a. Me sorprendi**ó** los víveres que trajo Pedro.
I.DAT surprised.3SG the.M.PL supply.M.PL that brought Pedro
'It surprised me {what/how many} supplies Pedro brought'

b. Me sorprendi**éron** los víveres que trajo Pedro.
I.DAT surprised.3PL the.M.PL supply.M.PL that brought Pedro
'The supplies that Pedro brought surprised me'

Notice that the two properties of nominal ERCs we have seen so far hang together. In (28) above, the two examples–the agreeing and the non-agreeing variants–were introduced with SV inversion. Thus, given the distribution of ERCs reported in §2.1, we would expect that the ordinary SV word order is compatible only with the agreeing variant. This is exactly what we find:

9 Notice that, even if an OBJECT-question interpretation may be available as a concealed question in agreeing variants, the AMOUNT-question interpretation is nevertheless impossible and requires default agreement instead.

(30) **No φ-agreement, no SV inversion** [cf. (29)]

a. *Me sorprendi**ó** los amigos que Pedro invitó.
I.DAT surprised.3SG the.M.PL friend.M.PL that Pedro invited

b. *Se me ha olvidado los libros que Pedro me prestó
REFL I.DAT AUX.3SG forgotten the.M.PL book.M.PL that Pedro I.DAT lend

2.3 *Anaphora*

DPs in Spanish require the same gender and number features on anaphors that refer back to them. Anaphors referring to non-nominal referents, like clauses, measure phrases etc., use neuter pronouns like *lo* and *ello* instead. Thus, if nominal ERCs are ordinary DPs modified by relative clauses, anaphoric reference should only be available through the use of pronominal forms that agree in φ-features–i.e. non-neuter features–with the nominal head. To show whether this is the case, we will once again rely on the dual nature of *wh*-pronouns to set a baseline against which we compare the behavior of nominal ERCs. Because strong *wh*-pronouns can only occur in clauses, anaphors referring back to those clauses can only take neuter forms. Free relatives with weak pronouns, on the other hand, will require anaphors that agree with the DPs containing the *wh*-pronoun in gender/number. First we check the case of subordinate questions in (31) (from Plann 1984).[10]

(31) **Anaphora with strong *wh*-pronoun; subordinate question**

a. *φ-agreeing anaphor*
Me sorprendió [cuántos artículos$_i$ escribió Raquel]$_j$, uno tiene
I.DAT surprised.SG how many.STR.M.PL paper.M.PL wrote Raquel one must
que admirarse de ellos$_{i/*j}$.
that admire-REFL of PR.M.PL
'It surprised me how many papers Raquel wrote, one must admire (her) for them'

b. *Neuter anaphor*
Me sorprendió [cuántos artículos$_i$ escribió Raquel]$_j$, uno tiene
I.DAT surprised.SG how many.STR.M.PL paper.M.PL wrote Raquel one must
que admirarse de ello$_{*i/j}$.
that admire-REFL of PR.N
'It surprised me how many papers Raquel wrote, one must admire (her) for it'

Only (31a), with a plural anaphor, has an interpretation where the reason for admiring Raquel is the particular articles that she wrote. On the other hand, (31b), with the neuter anaphor *ello*, conveys that the reason for admiration is the number of papers that Raquel wrote (and so *it* in the glosses stands for *the amount of papers*). In contrast, we see a different pattern with the weak relative pronoun. Only

10 The index *i* on the nominal indicates whether the anaphor is referring back to a nominal, and the index *j* indicates whether it is instead referring back to a clausal constituent. Since this difference does not play a role with DPs modified by relative clauses, I represent both only when reference to a clause is plausible.

the plural anaphor *ellos* in (32a) is felicitous. The neuter anaphor *ello* in (32b) does not have a suitable antecedent and the sentence is therefore illicit (excluding potential cases of deep anaphora).

(32) **Anaphora with weak relative pronoun; free relative**

a. *φ-agreeing anaphor*
Me sorprendieron [cuantos artículos$_i$ escribió Raquel], uno tiene
I.DAT surprised.PL how many.WK.M.PL paper.M.PL wrote Raquel one must
que admirarse de ellos$_i$.
that admire-REFL of PR.M.PL
'All the papers that Raquel wrote surprised me, one must admire (her) for them'

b. *Neuter anaphor*
*Me sorprendieron [cuantos artículos$_i$ escribió Raquel], uno tiene
I.DAT surprised.PL how many.WK.M.PL paper.M.PL wrote Raquel one must
que admirarse de ello$_i$.
that admire-REFL of PR.NT
'The papers that Raquel wrote surprised me, one must admire (her) for it'

Thus, unlike embedded questions, which permit anaphoric reference by neuter anaphors, free relatives are DPs that require their anaphors to match with them in *φ*-features.

Nominal ERCs pattern with the *wh*-constructions that make use of strong *wh*-pronouns. Example (33a) shows that the use of the plural anaphor *ellos* forces a non-interrogative interpretation where the referent of the anaphor is some plural individual. The use of the neuter form *ello* in (33b), on the other hand, is both grammatical and its has an AMOUNT-question interpretation, the signature of nominal ERC constructions.

(33) **Anaphora with ERCs**

a. *φ-agreeing anaphor*
Me sorprendió [los artículos$_i$ que escribió Raquel]$_j$, uno tiene que
I.DAT surprised.SG the.M.PL paper.M.PL that wrote Raquel one must that
admirarse de ellos$_{i/*j}$.
admire-REFL of PR.M.PL
'The papers that Raquel wrote surprised me, one must admire (her) for them'

b. *Neuter naphor*
Me sorprendió [los artículos$_i$ que escribió Raquel]$_j$, uno tiene que
I.DAT surprised.SG the.M.PL paper.M.PL that wrote Raquel one must that
admirarse de ello$_{*i/j}$.
admire-REFL of PR.N
'It surprised me how many papers Raquel wrote, one must admire (her) for it'

For good measure, notice that with surface identical DPs modified by restrictive relative clauses, i.e. those showing *φ*-agreement with the verbal predicate, ungrammaticality ensues only with the neuter anaphor *ello*, but not with the agreeing *ellos*.

(34) a. *Me sorprendieron [los artículos que escribió Raquel], uno tiene que
I.DAT surprised.PL the.M.PL paper.M.PL that wrote Raquel one must that
admirarse de ello.
admire-REFL of PR.N
'It surprised me how many many papers Raquel wrote, one must admire (her) for it'

b. Me sorprendieron [los artículos$_i$ que escribió Raquel], uno tiene que
I.DAT surprised.PL the.M.PL paper.M.PL that wrote Raquel one must that
admirarse de ellos$_i$.
admire-REFL of PR.M.PL
'The papers that Raquel wrote surprised me, one must admire (her) for them'

Similarly, anaphors referring to concealed questions must match the φ-features of the head of the DP, but ERCs do not have to (cf. (33)):[11]

(35) a. Juan adivinó la respuesta antes de que yo { la / *lo } adivinara.
Juan guessed the.F.SG answer.F.SG before of that I PR.F.SG PR.N guessed
'Juan guessed the answer before I could guess it'

b. Juan adivinó la respuesta que debía dar antes de que yo { la / lo } adivinara.
Juan guessed the.F.SG answer.F.SG that must give before of that I PR.F.SG PR.N guessed

Thus, I take it that the data concerning the agreement and anaphoric properties both point towards ERCs being truly clausal constructions. As pointed out by an anonymous reviewer, however, there could be an alternative explanation for this behavior. Suppose that in AMOUNT interpretations of nominal ERCs, the subconstituent of the DP responsible for the AMOUNT interpretation, say of the form "many NP", *mandatorily* reconstructs within the relative clause and thus plural agreement with the matrix verb is impossible. In turn, in OBJECT interpretations, the reconstruction of the NP would be *optional* (e.g. Bhatt 2002, Hulsey and Sauerland 2006), in which case singular agreement with the verb would obtain; if the head of the relative clause is left on its in surface position, then plural agreement with the main verb would ensue. With ordinary (simple) DPs, including those interpreted as concealed questions, there is no relative clause to reconstruct the nominal head into, so plural agreement is mandatory.

There are two main objections to this line of reasoning, regarding the obligatoriness of the "MANY NP" cluster reconstruction in AMOUNT interpretations of nominal ERCs. The evidence comes from two of the main tests for reconstruction, Condition C violations and scope wrt. to modal verbs. Condition C blocks co-reference of an R-expression with a pronoun that it is in the scope of, a fact

11 This contrasts with other languages such as English, where concealed questions have been argued to require neuter anaphors:

(i) Juan guessed the female winner before I guessed {it/*her}.

oftentimes used to argue for the obligatory syntactic reconstruction of some *wh*-phrases like (36b) below:

(36) a. Which of her$_i$ friends did Sue$_i$ visit?

b. *Which of Sue's$_i$ friends did she$_i$ visit?

In contrast with (36), nominal ERCs with AMOUNT interpretations are not subject to the same restriction, suggesting that reconstruction is at best optional.

(37) a. Yo sé los soldados de Juan$_i$ que él$_i$ ha perdido en la batalla.
I know the soldier of Juan that he AUX lost in the battle
'I know {what/how many} soldiers of Juan$_i$ he$_i$ lost in the battle'

b. Yo sé los soldados suyos$_i$ que Juan$_i$ ha perdido en la batalla.
I know the soldier him$_i$ that Juan AUX lost in the battle
'I know {what/how many} soldiers of his$_i$ Juan$_i$ lost in the battle'

Similarly, reconstruction has been claimed to be the reason why certain *wh*-constructions are ambiguous in contexts like the following:

(38) [How many books]$_i$ should Alex read _____$_i$ this summer?

a. No reconstruction: *how many* >> *should*
For what number *n*: there are *n*-many (particular) books *x* such that Alex should read *x* this summer.

b. Reconstruction: *should* >> *how many*
For what number *n*: It is necessary for there to be *n*-many books *x* such that Alex reads *x* this summer.

Now, if reconstruction in nominal ERCs was obligatory, they should never give rise to ambiguities such as those above, and only the reconstructed interpretation should be available. This is not so, however, suggesting, once again, that reconstruction is only optional.

(39) Yo sé los libros que tiene que leer Juan en verano.
I know the books that must that read Juan in summer

a. 'I know for what number *n* there are *n*-many books *x* such that Juan must read *x* this summer.

b. 'I know for what number *n* it is necessary for Juan to read *n*-many books this summer.

These two data-points provide evidence for the availability of non-reconstructed LFs in nominal ERCs, suggesting that reconstruction is not obligatory, but only an option. I take it, then, that an explanation of the agreement and anaphora patterns of nominal ERCs in terms of obligatory reconstruction is unlikely, while they fall out of clausal nature of ERCs.

2.4 Pre- vs. post-verbal clausal subjects

Nominal ERCs pattern with interrogatives and unlike ordinary DPs with restrictive relative clauses in certain positional constraints they are subject to. In Spanish, only certain types of clauses can appear in the preverbal subject position. Subject interrogatives, for instance, uniformly appear in the post-verbal position. On the other hand, DPs, including concealed questions, are not subject to this restriction and can occur in both pre and post-verbal subject positions. Examples (40a) and (40b) illustrate the contrast.

(40) a. *Preverbal interrogative*
*Qué hora era me sorprendió.
what time is me surprised
'What the time was surprised me'

b. *Preverbal concealed question*
La hora me sorprendió.
the time me surprised
'The time surprised me'

We can distinguish otherwise surface identical interrogatives and free relatives on the basis of the type of *wh*-pronoun they select. Spanish has two variants of *wh*-pronouns, one prosodically strong and one prosodically weak, a distinction reflected in the orthography as well (we write *quien* for the weak variant of "who" and *quién* for the strong one, *cuanto* and *cuánto* for "how many", etc.). Crucially, depending on the construction, only one or the other variant is permitted: strong *wh*-pronouns occur in propositional environments, i.e. true questions and exclamatives, whereas the weak variant is used in nominal environments, i.e. free relatives. Below, (41a) claims that what is surprising is the fact that a certain person came to the party. By contrast, (41b) claims that whoever came to the party, that person was surprising.

(41) a. *Embedded interrogative*
Es sorprendente [$_{CP}$ quién vino a la fiesta].
is surprising who.STR came to the party
'It is surprising who came to the party'

b. *Free relative*
Es sorprendente [$_{DP}$ quien vino a la fiesta].
is surprising who.WK came to the party
'The person who came to the party is surprising'

Using *wh*-pronoun selection as a diagnostic, we can show that only free relatives–which are DPs requiring the weak variant–are allowed in the preverbal subject position. By contrast, *wh*-complements with the strong variant, are never allowed in pre-verbal position, in line with the pattern we observed in (40).[12]

12 Recall the agreement facts reported above in §2.2: subordinate questions do not agree with matrix predicates, whereas nominals, including free relatives, do.

(42) **Strong Relative Pronoun *quién***

a. ✓*Post-verbal*
Me sorprendi**ó** quiénes vinieron a la fiesta.
I.DAT surprised.3SG who.STR.PL came to the party
'It surprised me who came to the party'

b. ✘*Pre-verbal*
*Quiénes vinieron a la fiesta me sorprendi**ó**.
who.STR.PL came to the party I.DAT surprised.3SG

(43) **Weak Relative Pronoun *quien***

a. ✓*Post-verbal*
Me sorprendi**eron** quienes vinieron a la fiesta.
I.DAT surprised.3SG who.WK.PL came to the party
'Those who came to the party surprised me'

b. ✓*Pre-verbal*
Quienes vinieron a la fiesta me sorprendi**eron**.
who.WK.PL came to the party I.DAT surprised.3SG
'Those who came to the party surprised me'

Now, using the agreement patterns in §2.2 and the availability of the AMOUNT interpretation as a signature of ERCs, we can poke into their availability to appear in pre- and post-verbal positions. What we observe is that ERCs are permitted only when the phrase in question occurs post-verbally; the pre-verbal variant is ungrammatical.

(44) a. ✓*Post-verbal*
Me sorprendi**ó** los estudiantes que vinieron a la fiesta.
I.DAT surprised.3SG the.M.PL student.M.PL that came to the party
'It surprised me how many students came to the party'

b. ✘*Pre-verbal*
*Los estudiantes que vinieron a la fiesta me sorprendi**ó**.
the.M.PL student.M.PL that came to the party I.DAT surprised.3SG

Again, the fact that the distribution of ERCs follows that of strong *wh*-pronouns, which are invariably associated with clausal/propositional environments, is unexpected if they were ordinary DPs modified by a relative clause.[13]

13 As an anonymous reviewer noted, there is a systematic exception to this pattern: that of nouns that inherently denote extents (e.g. *energy*, *time*, *money*, *effort*, etc.). Consider:

(i) { La energía / El esfuerzo / El dinero / El tiempo } que invertía Ana en estudiar danés
the energy the effort the money the time that invested Ana in study.INF Danish
me sorprendió.
I.DAT surprised.3SG
'How much {energy/effort/money/time} Ana invested in learning Danish surprised me.'

2.5 *Differential Object Marking*

The last argument that ERCs pattern like interrogative constructions comes from their distribution in object position. Spanish is a language where direct objects that are both specific and human must be preceded by the preposition *a* ("to"). This is an instance of Differential Object Marking (DOM; see Torrego 1998, Leonetti 2004, López 2012 a.o.).

(45) a. María besó *(a) Raquel.
María kissed to Raquel

b. María besó (*a) el retrato.
María kissed to the portrait

Unlike this subset of nominals, clausal arguments never show DOM. We can again construct minimal pairs using the by now familiar strong/weak distinction of *wh*-pronouns. The strong pronoun forms subordinate interrogatives, which, being clausal, do not trigger DOM; weak pronouns, on the other hand, form free relatives, which, if animate and specific, trigger DOM.

(46) a. *Strong wh-pronoun; ✘DOM*
María vió (*a) quién vino a la fiesta
María saw to who.STR came to the party
'María saw who came to the party'

b. *Weak wh-pronoun; ✓DOM*
María vió *(a) quien vino a la fiesta
María saw to who.WK came to the party
'María saw the person who came to the party'

Thus, if the animacy/specificity of the superficial head noun in ERCs were sufficient to trigger DOM, this would suggest that despite the variability in interpretation, ERCs are syntactically garden-variety DPs. However, this is not what happens; ERCs do not trigger DOM, as shown in (47). Not only is the variant without DOM in (47a) grammatical and has an AMOUNT reading, the sentence in (47b) with DOM cannot receive such an interpretation (examples adapted from Bosque 1983).

(47) a. *No DOM ⇒ ERC*
Estudian los delegados que enviarán
evaluate.3PL the representative that send
'They are evaluating {what/how many} representatives they will send'

All of the above variants could as well be paraphrased as *the amount of energy/effort/money/time*… suggesting that we are dealing with nouns denoting amounts of things, rather than (token-level) entities. In fact, with such nouns, even simple DPs–e.g. modified by a PP–may also obtain the same type of extent interpretations:

(ii) { La energía / El esfuerzo } de Ana para estudiar danés me sorprendió.
the energy the effort of Ana to study.INF Danish I.DAT surprised.3SG
'How much {energy/effort/money/time} Ana invested in learning Danish surprised me.'

b. *DOM ⇒ RRC*
Estudian a los delegados que enviarán
evaluate.3PL to the representative that send
'They are evaluating the (individual) representatives they will send'

Notice, moreover, that the *que*-clause is obligatory, as expected:[14]

2.6 Interim conclusion

To sum up, despite their superficial resemblance to ordinary DPs, nominal ERCs have the external distribution and share with embedded *wh*-constructions all the syntactic traits that set them apart from DPs, including those modified by Restrictive Relative Clauses. ERCs can (*i*) complement verbs that otherwise do not take nominal complements; (*ii*) they do so with semantic interpretations unavailable to ordinary DPs; (*iii*) they show syntactic constraints that do not apply to ordinary DPs (i.e. obligatoriness of an ostensible relative clause and a restriction to appear with the definite article); and (*iv*) they behave like subordinate questions and unlike DPs in five grammatical contexts, summarized in the table below.

	RRCs	CQs	ERCs	Subordinate Q/Es
Obligatory SV inversion	✘	N/A	✓	✓
Pre- *vs.* Post-verbal	✓	✓	✘	✘
Differential Object Marking	✓	?	✘	✘
Agreement	*φ*	*φ*	3SG	3SG
Anaphora	*φ*	3SG	3SG	3SG

Table 1: Summary of syntactic properties across constructions.

These patterns point towards ERCs being genuinely clausal: they wear all the signature grammatical properties of embedded *wh*-interrogatives. They cannot thus be treated as a form of concealed

14 The results of this test have to be taken with a grain of salt. If we are trying to elucidate whether nominal ERCs truly are interpreted as concealed questions, then the relevant comparison should be established against concealed questions. Unfortunately, here too, judgments are not clear. The following are two examples, the first provided by an anonymous reviewer, the second retrieved from the internet (https://as.com/epik/2018/03/15/portada/1521105251_717376.html), where the exact opposite pattern is reported:

(i) a. *Eva ha descubierto a la ganadora del concurso.
Eva AUX discovered a the winner of.the contest
'Eva has discovered the winner of the contest.'
b. Los seguidores ya han descubierto a los ganadores.
the fans already AUX discovered a the winners
'The fans have already discovered the winners.'

In the absence of a better understanding of such opposition, I will leave the matter as undecided. What is important for us is that ERCs clearly do not pattern with ordinary nominals, as they can be DOM-marked, thus setting one more difference between the two types of constructions.

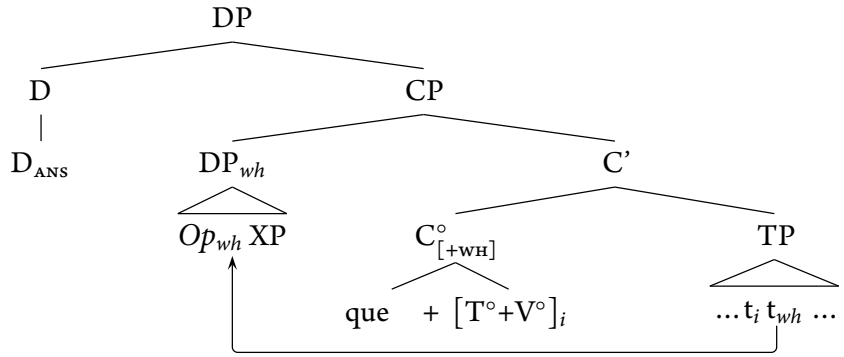
questions/exclamations, which are syntactically nominal. What we have here, instead, are true, unconcealed questions and exclamations.

Despite the differences between ERCs and ordinary DPs, the obligatoriness of the definite article still suggests that there is a DP layer involved. Thus, among our key desiderata in the remainder of this paper is to account for the "hybrid" nature of ERCs. In the following two sections, I propose a structure for ERCs that takes seriously their syntactic and semantic parallels with subordinate clausal *wh*-interrogatives and *wh*-exclamatives with overt *wh*-pronouns and their differences with ordinary DPs. In a nutshell, I propose that ERCs start their lives out, both syntactically and semantically, as involving a clausal (not relative) complement core C°[+WH], all they way up to the CP, in line with current analyses of interrogatives and exclamatives. The nominal aspect of their nature is derived by merging a variant of the definite article, which I call D_{ANS}. Semantically, D_{ANS} applies to the set of propositions denoted by the CP and returns the maximally informative proposition from this set, effectively behaving like an "answerhood" operator (Heim 1994, Dayal 1996).

3 The propositional syntax of ERCs

ERCs are not born as DPs, but as full clauses. The syntactic make-up of ERCs is akin to interrogative clauses, which involve a [+WH] specified C° head with an interrogative core. The resulting construction is a DP with an embedded CP providing question semantics, which also serves as the basis for its exclamative interpretations. In other words, the surface-identity of ERCs and NPs modified by a relative clause is only superficial. The general syntactic structure that I propose for all ERCs follows the schema below:[15]

(48) **General syntactic structure of ERCs**



Consider the example in (49) with a nominal ERCs as a working case.

(49) … las manzanas que trajo Pedro.
the.F.PL apples.F.PL that brought Pedro

15 I am abstracting away from the correct characterization of SV inversion in Spanish. I will represent the verb as moving to C° and the subject to [Spect, TP], only because I believe it is the most widely adopted derivation, but nothing of consequence hinges on this decision–i.e. an alternative analysis where the verb moves to [Spec,TP] and the subject remains in *v*P is also possible. From a semantic standpoint, none of these movements affects the interpretation of the ERC, and only the movement of the complex *wh*-phrase [Op_{wh} XP] will be relevant at LF.

This example looks like a restrictive relative clause, but, as I hope has been shown throughout the paper, there are a number of reasons to believe that it cannot just be an ordinary DP modified by a relative clause. The structure of a DP like (49) *qua* ERCs has three key aspects: (*i*) a [+WH] feature on C°, (*ii*) the presence of a null *wh*-operator generated in VP internal position, and (*iii*) the ability of the definite article to combine with a non-relative CP. The resulting structure is represented below.

(50) $[_{DP}$ las $[_{CP}$ $[_{DP_{wh}}$ Op_{wh} manzanas$]_j$ $[_{C}$ $C^{\circ}_{[+WH]}$ que trajo$_i$ $[_{TP}$ Juan t_i $t_j]]]]$

For good measure, compare (50) with a traditional raising analysis of (49) as a RRC (Åfarli 1994, Kayne 1994, Bianchi 1999, de Vries 2002, a.o.).

(51) $[_{DP}$ las $[_{NP}$ manzanas$_j$ $[_{CP}$ $[Op_{wh}$ t_j $]_i$ $[_{C}$ $C^{\circ}_{[+REL]}$ que $[_{TP}$ Juan trajo t_i $]]]$

Syntactically, nominal ERCs differ from RRCs in that the [+WH] feature on C° triggers SV inversion, the NP *manzanas* is never a target of movement alone, and the NP [Op_{wh} *manzanas*] does not project beyond CP and thus the determiner D directly takes a CP as its complement. The structure in (50) is however reminiscent of the raising analysis discussed in Borsley (1997) and endorsed by Bianchi (1999, 2000). In these variants, D directly takes a CP as its complement (as in Kayne 1994), and the constituent targeted for movement is not an NP, but a DP headed by a null determiner.[16]

(52) $[_{DP}$ the $[_{CP}$ $[_{DP}$ *e* books$]_i$ $[_{C}$ that $[_{TP}$ you read $t_i]]]$

There are nevertheless two main differences between their structures and mine: (*i*) the presence of a C° head with a [+WH] feature in (50) and (*ii*) that the null determiner in (50) is a *wh*-operator.

With the structure in (50), the crucial aspects of the derivation of ERCs proceed as follows. The [+WH] C° head probes for an element in its domain with a matching [WH] specification, either a question or an exclamative, and agrees with that element. Spanish is a *wh*-movement language, and this Agree relation triggers movement of the *wh*-goal to the specifier of CP. In the variant that I adopt here finite verbs in Spanish overtly move to T (Rizzi 1982) and when there is *wh*-movement, there is also accompanying T-to-C movement, such that the verb is pronounced to the immediate right of the moved *wh*-expression (e.g. Torrego 1984, Gallego 2007 a.o.).

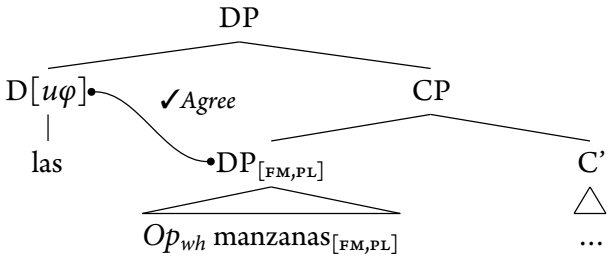
Finally, the D introducing the definite article enters in the derivation with an unvalued φ-feature, D[$u\varphi$]. In the current structure, unlike with restrictive relative clauses, the sister of D lacks these features, but the DP in [Spec,CP], which is equidistant to CP and also in the c-command of D[$u\varphi$] can serve as a suitable goal for agreement.

16 From a c-selectional point of view, the behavior of the definite article is quite flexible in Spanish in this respect. For instance, unlike in Germanic languages, it can appear with tensed clauses (see e.g. Picallo (2002)).

(i) a. No me gusta el $[_{CP}$ que tu actúes así].
not me like the that you behave.SBJV so
'I don't like your behaving like that'

b. El $[_{CP}$ que Juan llegue tarde] no me importa
the that Juan arrive.SBJV late not me care
'I don't care if Juan arrives late'

(53)



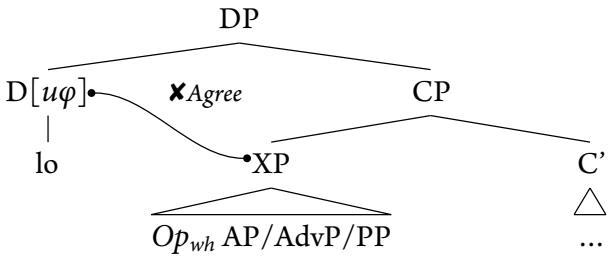
The structure proposed for degree ERCs is fully parallel, only differing in that a gradable predicate raises from its embedded position (as suggested by Gutiérrez-Rexach 1999).

(54) … lo alto que es el edificio.
the.N tall.M.SG that is the.M.SG building.M.SG

(55) $[_{DP}$ lo $[_{CP}$ $[_{DP_{wh}}$ Op_{wh} alto$]_j$ $[_{C}$ $C^{\circ}_{[+WH]}$ que es$_i$ $[_{TP}$ el edificio t_i $t_j]]]]$

The lack of agreement between the definite determiner and the gradable predicate is accounted for by the fact that, unlike nouns, adjectives, prepositional phrases and adverbs do not have φ-morphology of their own.[17] What is required for the definite determiner to agree with material in [Spec, CP] is that the putative goal have φ-features of its own. NPs usually provide such suitable goals, as illustrated in (53), but not APs, AdvPs or PPs (cf. fn. (17)). As a consequence, D is not expected to agree with material in [Spec, CP] in the case of degree ERCs, which are formed by raising categories other than NP.[18]

(56)



17 Notice that the single requirement of degree ERCs is that the raising predicate be gradable, and thus degree ERCs are possible with gradable predicates other than adjectives. For instance:

(i) a. *Adverbial*
Juan admiró lo rápidamente que llegó María.
Juan admired the.N rapidly that arrived María
'Juan admired how fast María arrived'

b. *Prepositional*
Me molestó lo en punto que llegó Juan.
I.DAT annoyed the.N on point that arrived Juan
'It annoyed me how punctually Juan arrived'

18 This behavior is reflected in D+A pairs, like *lo bonito* (the$_{NT}$ beautiful$_{NT}$) and *el bonito* (the$_{MS,SG}$ bonito$_{MS,SG}$): while the former is a case of a nominalized adjective (i.e. "what it beautiful"), the latter is a case of NP ellipsis ("the beautiful ~~thing~~"), where both determiner and adjective take their marked φ-features from the elided NP.

Thus, from a syntactic standpoint, ERCs have aspects in common both with nominal constructions (RRCs) and clausal constructions, such as questions and exclamatives. They share with RRCs the presence of a null *wh*-operator and a definite determiner, but nevertheless they pattern with interrogative/exclamative clauses in a number of respects, as extensively discussed in §1 and §2. In order to capture all these facts, I proposed in (50)/(55) a structure for ERCs with three key ingredients: a [+WH] feature on *C*°, a null *wh*-operator, and a definite article with the ability to combine with a non-relative CP. Since these are the three fundamental aspects of the syntax of ERCs, below I discuss them and elaborate in turn.

3.1 The nature of the [WH] feature

From a syntactic standpoint, interrogatives, exclamatives and ERCs of both types all behave alike with respect to the tests in §2 (when they apply). Following this similitude, the structure in (50)/55 takes ERCs to involve a type of C° that so far has been referred to as interrogative/exclamative. There are good reasons to believe that we can further narrow down the characterization of ERCs by scrutinizing their behavior wrt. to ordinary interrogatives and exclamatives, while still maintaining their common properties.

ERCs pattern unlike ordinary interrogatives in three ways. For one, ERCs (of the two types) can never form matrix interrogatives.

(57) a. *Las manzanas que trajo Pedro?
the apples that brought Pedro
Int.: '{What/How many} apples brought Pedro?'

b. *Lo alto que es Pedro?
the tall that is Pedro
Int.: 'How tall is Pedro?'

Moreover, genuine embedded interrogatives are incompatible with the complementizer *que*, which is obligatory in ERCs (here shown only for a nominal ERC, but the same holds of degree ERCs).

(58) a. *Embedded interrogative*
Me pregunto cuántas manzanas (*que) trajo Pedro.
I.DAT ask how many apples that brought Pedro
'I wonder how many apples Pedro brought'

b. *Nominal ERC*
Me pregunto las manzanas *(que) trajo Pedro.
I.DAT ask the apples that brought Pedro

Finally, interrogatives famously allow multiple *wh*-phrases, a property that both types of ERCs lack altogether.[19]

19 I thank an anonymous reviewer for pointing this out to me; example (59a) is theirs.

(59) a. * Yo sé la niña que se comió qué manzana.
I know the girl that REFL ate what apple

b. *Me sorprendió quién trajo cuántas manzanas.
me surprised who.STR brought how many.STR apples

Given these differences, I would like to suggest that the C° in ERCs is the same one as in *wh*-exclamatives. The parallels between the two constructions are various. For instance, ERCs, which, as we saw before, do not form good matrix interrogatives, do nevertheless form grammatical and felicitous matrix exclamatives.

(60) a. Las manzanas que trajo Pedro!
what apples that brought Pedro
'The apples that Pedro brought!

b. Lo alto que es Pedro!
the.N tall that is Pedro
'How tall is Pedro!

Second, unlike interrogatives, exclamatives are compatible with the complementizer *que*.

(61) a. Cuántas manzanas (que) trajo Pedro!
how many apples that brought Pedro
'How many apples Pedro brought!

b. Qué alto (que) es Pedro!
what tall that is Pedro
'How tall is Pedro!

And third, exclamatives pattern like ERCs and differ from interrogatives in that they do not allow multiple occurrences of *wh*-operator, either in matrix or embedded positions (again, only nominal ERCs are shown here).

(62) a. *Cuántas manzanas que trajo cuánta gente!
how many apples that brought how many people

b. *Me sorprendió quién trajo cuántas manzanas.
me surprised who.STR brought how many.STR apples

From a semantic point of view there is a long tradition of analyzing exclamatives as building on question semantics; see Lahiri (2002), D'avis (2002), Abels (2007) and, for Spanish, the essays in the two collections Gutiérrez-Rexach (2014) and Bosque (2017). Thus, by relying on an exclamative C°, we are able to keep those aspects that exclamatives and interrogatives have in common and transfer them to ERCs, without making ERCs behave like interrogatives across the board. The study of all the subtleties of exclamative constructions is nevertheless too big a task for us to embark here, although §6.2 provides a sketch of how to achieve exclamative semantics.

3.2 *The null wh-operator*

Recall that nominal ERCs are generally ambiguous between OBJECT and AMOUNT interpretations. I contend that this is because the phonologically null operator Op_{wh} comes in two forms, as covert variants of the overt *wh*-words *qué* ("what" or "how") and *cuánto* ("how many"). That is, the only differences between Op_{wh} and *qué* and *cuánto* are simply their overtness *vs.* covertness; otherwise, Op_{wh} is identical to the *wh*-words we see overtly on interrogatives and exclamatives. The evidence for such covert operators comes, once again, from exclamative constructions. As Hernanz (2006) and Hernanz and Rigau (2006) show, *wh*-words in exclamatives like (63) are optional, and so they can be dropped without any observable semantic difference.

(63) a. (Qué) listo que es Pedro!
what.STR intelligent that is Pedro!
'How intelligent Pedro is!

b. (Cuántas) ganas le pone el tío!
how many.STR effort him put the dude
'How much effort the dude is putting in!'

3.3 *The determiner and agreement mismatches*

The proposed structure in (50) for nominal ERCs involves the definite article selecting a CP, raising questions about the nature of this D head. As explained in this section, the definite article involved in nominal ERCs is a variant of the answerhood operators proposed in Heim (1994) and Dayal (1996). I will refer to it as D_{ANS} throughout, so as to set it apart from the run-of-the-mill "nominal" definite article, D_{NOM}. Crucially, the syntactic properties of D_{ANS} help explain some of the puzzling agreement patterns we find with nominal ERCs.[20] Consider the ERC in (64) *vs.* an ordinary DP modified by a RRC in (64).

(27) *Subject DPs must agree in number with the matrix predicate; ERCs do not.*

a. Me sorprendi**ó** los amigos que invitó Pedro.
me surprised.3SG the.M.PL friend.M.PL that invited Pedro
'It surprised me {what/how many} friends that Pedro invited'

b. Me sorprendi**eron** los amigos que invitó Pedro.
me surprised.3PL the.M.PL friend.M.PL that invited Pedro
'The friends that invited Pedro surprised me'

In both cases, the definite article agrees with the plural NP *amigos*. In (53) I showed that in the case of ERCs the definite article gets its φ-features valued by the *wh*-DP in [Spec, CP]. This cannot be the full story, however. Whereas in (64) agreement on the verb and the head of the subject DP–i.e. the definite article–match, in ERCs they do not. This suggests that the φ-features visible on the D

20 As explained above, it is the agreement mismatch in nominal ERCs that is surprising, not the lack of agreement in degree ERCs. Thus, I only elaborate on the former case.

heading the ERC are nevertheless not visible to the agreeing V. I argue that this is in part due to the fact that D_{ANS} is "impoverished" in crucial ways compared to its ordinary cousin D_{NOM}, which affects the ways in which they can enter into Agree relations.

It is well-known that Agreement, as a grammatical operation, is sometimes sensitive to syntactic features and some other times to semantic features. But, as Corbett (2006) has shown, occasionally it appears that Agreement is sensitive to both types of features *simultaneously*, within the same utterance. The consequence is that controllers of agreement must carry two sets of φ-features. Recent examples of papers exploring and corroborating these implications can be found in Danon (2013) and Landau (2016).

According to Corbett (2006, 155–157), "semantic agreement" is consistent with the meaning of the controller, whereas "syntactic agreement" is consistent with its form. This divergent distribution of φ-features within the DP is very well attested across languages. The cases that interest us are those where a mismatch occurs between the DP internal φ-features and the φ-features that it controls outside the DP. The following are some such examples in English (from Danon 2013, Landau 2016, and Rullman 2010).

(64) **Syntactic agreement**

a. $[_{DP[SG]}$ Part of the residents] has.SG opposed the plan.

b. $[_{DP[SG]}$ The committee] has.SG decided on the issue.

c. $[_{DP[SG]}$ Each of us] thinks.SG that we can win the nomination.

(65) **Semantic agreement**

a. $[_{DP[SG]}$ Part of the residents] have.PL opposed the plan.

b. $[_{DP[SG]}$ The committee] have.PL decided on the issue.

c. $[_{DP[SG]}$ Each of us] think.PL that we can win the nomination.

The agreement patterns in (65) are the flip-image of Spanish ERCs. In (65), a morphologically singular DP controls plural agreement on the verb, whereas in Spanish ERCs a morphologically plural DP controls singular agreement on the verb. Of course, this state of affairs raises questions about Agree. In the particular cases at hand, (65) and ERCs in Spanish, are there multiple Agree operations, each targeting a different set of φ-features bore by potentially different heads? Moreover, in addition to making the relevant Agree relationship available, we need to understand as well where the difference between D_{ANS} and D_{NOM} exactly lies.

The solution that I advance here is couched in terms of Wechsler and Zlatić's (2003) original distinction between CONCORD and INDEX features, (partially) following Landau's (2016) configurational adaption. The gist of the idea is that morphologically-rooted features (CONCORD features) are hosted on the noun stem while semantically-rooted features (INDEX features) are hosted on higher functional heads. Following Danon (2013), I will assume that the only φ-features that are accessible to agreement from outside of the DP are those in the highest nominal projection, D in the case of DPs (this is in accordance with phase-based conceptions of agreement, but largely independent of it). As a consequence, D must somehow mediate between the DP-internal and DP-external φ-agreement. Graphically, this can be represented as follows (cf. Landau 2016):

(66) $\underbrace{[_{\text{TP}}\ \text{T}^{\circ}\ [_{\text{VP}}\text{V}^{\circ}}_{\textit{External Agree Zone}}\ \underbrace{[_{\text{DP}}\ \text{D}\ [_{\text{XP}}\ \ldots\ ]]}_{\textit{Internal Agree Zone}}\ ]]$

The low boundary of the External Zone is determined by D, which in turns determines the high boundary of the Internal Zone. Here DP-external agreement takes place after D has carried out all the Agree operations DP-internally. In Landau's (2016) terms, D is the "contact point" between external probes like *v* and T, and any nominal *φ*-features there may be inside the DP.

Both Wechsler and Zlatić (2003) and Landau (2016) show convincingly that Agree in the External Zone almost exclusively targets INDEX features.[21] This means that inherently INDEX (semantic or, in this case, "interpretable") features, such as [PERSON], will always be specified as valued features on D, since N is not specified for [PERSON]. In turn, D must have unvalued CONCORD (morphological) features that it will inherit from N. Thus, by the time that V is merged and is probing for agreement, D has already probed into its Internal Agree Zone and valued all the unvalued features it had.

We are now ready to look into the featural specifications of D_{NOM} and D_{ANS} in Spanish. I will begin with the more familiar D_{NOM}.[22]

(67) **Feature array of D_{NOM}**

$$\begin{bmatrix} \text{INDEX} & \begin{bmatrix} u\text{GENDER:} & \_\_ \\ u\text{NUMBER:} & \_\_ \end{bmatrix} \\ \\ \text{CONCORD} & \begin{bmatrix} u\text{GENDER:} & \_\_ \\ u\text{NUMBER:} & \_\_ \end{bmatrix} \end{bmatrix}$$

According to (67), all its features, INDEX and CONCORD are unvalued. This means that D will have to value them all in the Internal Agree Zone from some goal, N in this case, which only contains valued CONCORD features.

(68) **Feature array of N**

$$\begin{bmatrix} \text{CONCORD} & \begin{bmatrix} \text{GENDER} \\ \text{NUMBER} \end{bmatrix} \end{bmatrix}$$

This is the most common situation, one where INDEX and CONCORD features on D have the same specifications. Schematically:

(69) $[_{\text{VP}}\ \text{V}\ [_{\text{DP}}\ \begin{matrix}\text{INDEX}\ [\cancel{u\varphi}] \\ \text{D}_{\text{NOM}} \\ \text{CONCORD}\ [\cancel{u\varphi}]\end{matrix}\ [_{\text{NP}}\ \text{N}_{[\text{NUM,GEN}]}\ \ldots\ ]]]$

21 Landau (2016) comments on two possible answers for why this must be the case, giving a locality-based answer and a type-based answer. I refer the interested reader to the original paper.

22 Only the nominal NUMBER and GENDER features are represented. (Un)valuation is marked with the privative feature *u*, so that unvalued features are represented as [*u*F] and valued ones simply as [F].

The [$u\varphi$] features of D, both INDEX and CONCORD, are valued by the [φ] features on N. With its valued INDEX [φ] features, D can serve as goal for a probing V. Thus, for (70) we have (71).

(70) Me sorpredieron las manzanas que trajo Pedro.
me surprised.3PL the.F.PL apple.F.PL that brought Pedro

(71) [$_{VP}$ sorprendieron$_{3PL}$ [$_{DP}$ las.F.PL INDEX [~~*u*NUM, *u*GEN~~] CONCORD [~~*u*NUM, *u*GEN~~]] [$_{NP}$ manzana$_{[FM,PL]}$ …]]]

Let us look at D_{ANS} now. I mentioned earlier the intuition that D_{ANS} seemed to be "defective", in the sense that it rendered opaque the φ-features of the nominal in [Spec,CP] for DP-external probes. We can now formulate this intuition in a concrete way: D_{ANS} enters in the computation with valued φ INDEX features and unvalued CONCORD φ-features. In this respect, it differs from D_{NOM} precisely in that, although it can Agree with the nominal in [Spec,CP], it is not able to "pass on" its features further up in the tree. Its feature specification looks as in (72).

(72) **Feature array of D_{ANS}**

$$\begin{bmatrix} \text{INDEX} & \begin{bmatrix} \text{GENDER:} & n \\ \text{NUMBER:} & sg \end{bmatrix} \\ \text{CONCORD} & \begin{bmatrix} u\text{GENDER:} & \_\_ \\ u\text{NUMBER:} & \_\_ \end{bmatrix} \end{bmatrix}$$

Given its feature configuration, whenever D_{ANS} is involved, only NEUTER and SINGULAR φ-features will be visible from any DP-external position. In a case with SV agreement mismatch like (73) the agreement relationships are established as in (74).

(73) Me sorprendió las manzanas que trajo Pedro.
me surprised.3SG the.F.PL apple.F.PL that brought Pedro

(74) [$_{VP}$ sorprendió$_{3SG}$ [$_{DP}$ las.F.PL INDEX [NUM$_{sg}$, GEN$_{n}$] CONCORD [~~*u*NUM, *u*GEN~~]] [$_{NP}$ manzana$_{[FM,PL]}$ …]]]

This configuration correctly captures the behavior of nominal ERCs with respect to three phenomena mentioned earlier: SV agreement, anaphora and DOM. In the ideal case, one would also be able to tie in the valued INDEX features of D_{ANS} with the presence of a [+WH] C° in its complement position. This would provide the first step towards an explanation for why D_{ANS} but not D_{NOM} must come with

valued INDEX features. I will leave this question open for future study.[23]

4 Semantic analysis

As I hope has emerged throughout the paper, there is a lot to gain by attributing to ERCs the syntactic structure of full-fledged clausal *wh*-constructions. In this section, I show how we can also capture their semantic properties by interpreting them as having a question nucleus, a semantic core shared both interrogative as well as exclamative constructions. We need to capture the two types of interpretations that nominal ERCs may give rise to, OBJECT and AMOUNT interpretations, as well as the degree interpretations of degree ERCs.

4.1 Background assumptions

The baseline theory of questions that I am assuming is a fairly standard blend of Hamblin (1973) and Karttunen (1977), with the incorporation of Dayal's (1996) answerhood operator. The syntax-semantic mapping I assume follows a simplified version of the LF-oriented renditions of Karttunen's (1977) semantics in von Stechow (1996) and Bittner (1998). First, I assume that *wh*-words denote existential quantifiers.

(75) a. $[\![who]\!] = \lambda P\,.\,\exists x[person(w)(x) \wedge P(x)]$

b. $[\![what]\!] = \lambda P\,.\,\lambda Q\,.\,\exists x[P(w)(x) \wedge Q(w)(x)]$

I define the denotation of an operator Q hosted in C° responsible for the propositional interpretation of interrogatives/exclamatives as an identity relation between propositions (cf. von Stechow 1996). In the spirit of Karttunen (1977), I assume that the syntactic locus of Q on C°.

(76) $[\![Q]\!] = \lambda p\,.\,[p = q]$

For a simple question like *what books did Liz read*, the *wh*-phrase *what books*, a generalized quantifier, undergoes QR to [Spec, CP] leaving an individual trace internal to TP. (The type of a trace left by a moved element corresponds to the type this moved element quantifies over.)

(77) $[_{\text{CP}}\ \lambda p\ [_{\text{DP}_{wh}}\ \text{what books}]_i\ \lambda x\ [_{\text{C'}}\ \text{C}^{\circ}_{[+\text{WH}]}\ [_{\text{TP}}\ \text{Liz read}\ \text{t}_i]]]$

The CP level is the level at which "intensionalization" happens: C° hosts the question nucleus that combines with the TP by an operation such as Intensional Function Application (Heim and Kratzer 1998), and returns an identity statement between two propositions, a truth value. The role of this identity statement is to introduce the propositional variable p, similar to Karttunen's (1977) proto-question rule. After abstraction of and individual variable, the *wh*-phrase may take its second argument, delivering a truth value statement with the free propositional variable p, which is finally bound

23 One may also wonder whether it is a coincidence that the INDEX features on D_{ANS} are neuter and singular, raising the question of whether this is some form of "default" in Spanish. But notice that, since we still need the relevant φ-features to agree inside the DP, it is not clear how D_{ANS} could show default agreement in this sense.

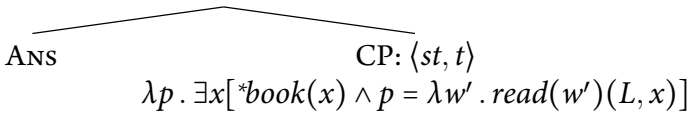
by a lambda operator, as in Karttunen's (1977) WH-Quantification Rule. The resulting interpretation of this LF is the set of propositions of the form "Liz read *x*", where *x* is any book, as represented in (78).

(78) $\lambda p \,.\, \exists x[{}^{*}book(x) \wedge p = \lambda w' \,.\, read(w')(L, x)]$

Unlike in Karttunen (1977), this is not the set of true propositions, and so the last step is to filter out the false ones. Here I follow Dayal (1996), who defines an operator Ans that essentially mimics the functions of a definite determiner: it applies to a set of propositions and picks the maximum of the true answers (here simplified; see also Heim 1994 and Rullmann 1995).

(79) $[\![\textsc{Ans}]\!] = \lambda Q_{\langle st,t\rangle} \,.\, \lambda w \,.\, \iota p[p(w) \wedge Q(p) \wedge \forall q[q(w) \wedge Q(q) \rightarrow p \subseteq q]]$

(80) $\lambda w \,.\, \iota p[p(w) \wedge \exists x[{}^{*}book(x) \wedge p = \lambda w' \,.\, read(w')(L, x)]]$



With respect to *how many* questions, the derivation proceeds in a similar fashion. The strategy I adopt is along the lines of Higginbotham (1993), Cresti (1995), Romero (1998) and others. The idea is to decompose *how many NP* phrases a *wh*-operator part and a *many NP* part. Thus, while the *wh*-operator takes scope, the nominal can be interpreted at different parts in the clause.[24] This keeps the semantics of *how many NP* maximally similar to the scope splitting structures usually assumed in the semantics of comparative quantifiers (e.g. Hackl 2000 a.o.). I define the two moving parts of *how many NP* as follows:

(81) a. $[\![how]\!] = \lambda D_{\langle dt\rangle} \,.\, \exists d[D(d)]$

b. $[\![\textsc{many}]\!] = \lambda P_{\langle et\rangle} \,.\, \lambda d \,.\, \lambda Q_{\langle et\rangle} \,.\, \exists x\,[P(x) \wedge Q(x) \wedge |x| = d]$

In this way, a question like *how many books did Liz read?*, has a corresponding LF-structure and interpretation as below.

(82) $[_{\text{CP}}\ \lambda p\ [_{\text{DP}_{wh}}\ \text{how}]_i\ \lambda d\ [_{\text{C'}}\ \text{C}^{\circ}_{[+\text{WH}]}\ [_{\text{TP}}\ [\text{t}_i\ \textsc{many}\ \text{books}]_j\ \lambda x\ \text{Liz read}\ \text{t}_j]]]$

(83) $\lambda p \,.\, \exists d[p = \lambda w' \,.\, \exists x[{}^{*}book(x) \wedge |x| = d \wedge read(w')(L, x)]]$

In this case, the denotation of the CP is a set of propositions equivalent to "Liz read *n* books", where *n* is any number. From here on, Ans applies all the same and the derivation continues as in (80), returning the maximally informative answer from the set, as represented below.

24 This is required for ambiguities like the following (Kroch 1989, Cinque 1990):

(i) How many books does Chris want to buy?

a. What is the number *n* such that there are *n* books that Chris wants to buy?

b. What is the number *n* such that Chris wants it to be the case that there are *n* books that he wants to buy?

(84) $\lambda w \,.\, \iota p[p(w) \wedge \exists x, d[{}^*book(x) \wedge |x| = d \wedge p = \lambda w' \,.\, read(w')(L, x)]]]$

4.2 The semantics of D_{ANS}

As I argued in the previous section, ERCs are syntactically interrogative CPs selected for by a subtype of the definite article, D_{ANS}. Semantically, D_{ANS} applies to a question meaning, and its function is similar to the answerhood operators proposed in Heim (1994) and, more specifically, Dayal (1996). The full lexical entry of D_{ANS} is below.[25]

(85) $$[\![D_{ANS}]\!] = \lambda Q_{\langle st,t\rangle} \,.\, \lambda w : \exists p[Q(p) \wedge p(w) \wedge \forall q[[q(w) \wedge Q(q)] \rightarrow p \subseteq q]] \\ .\, \iota p[Q(p) \wedge p(w) \wedge \forall q[[q(w) \wedge Q(q)] \rightarrow p \subseteq q]]$$

The semantic task of D_{ANS} is the same as that of ANS1 in Heim (1994) and ANS-D_w in Dayal (1996): it applies to a question denotation, the Hamblin-set Q, it presupposes the existence of a true proposition p in Q that entails all other true propositions, and returns that p. Here I follow more closely Dayal (1996), whose ANS-D_w essentially functions as a definite determiner defined over properties of propositions.

The similarities of (85) with the ordinary definite article are hard to miss, but Dayal (1996) departs from the traditional conception of the definite article as an ι-operator in a crucial way. Under the traditional Sharvy/Link approach, *the* is interpreted as a maximality operator defined in terms of logical entailment: it picks the maximal element from a domain of individuals.[26] With (85), however, the entailment relation is one of "maximal informativity": entailment does not hold between individuals but between propositions in the complement of ι. The shift is important because the entailment relations between propositions may vary depending on the internal make-up of the propositions themselves, as originally noted by Beck and Rullmann (1999) for examples like (86):

(86) a. Mary knows how many eggs are sufficient to make a cake.

b. Mary knows how much money you can live on.

The maximality based interpretation of the embedded question in e.g. (86a) returns *the largest amount of eggs that are sufficient to bake a cake*. But, of course, there is no such largest amount, for if five eggs are sufficient, then so are six eggs, and seven, and so on. Instead, our intuitions tell us that we interpret (86a) as referring to the smallest number of eggs, i.e. the *minimum* number of eggs. Traditional maximality cannot capture this fact, but the issue does not arise with maximal informativity because propositions of the form *d-much x is sufficient to P* become more informative the smaller *d* is. Therefore, when it comes to interpreting subordinate questions, the switch from maximality to maximal informativity is well justified.

25 I follow the convention of introducing presuppositions with a colon after the lambda terms.

26 The domain of individuals is assumed to be closed by the sum formation operation "$\oplus$" and ordered by a part/whole relation over those individuals. Thus, for instance, assuming that Fido, Barky and Pooch are the only dogs, *the dogs* refers to the maximal individual *Fido* $\oplus$ *Barky* $\oplus$ *Pooch*. Similarly, if Fido and Pooch were barking and *Mary knows what dogs barked* is true, she knows for every x in {Fido, Pooch} that x was barking, and that no other dog was barking (assuming that knowing p entails knowing every proposition entailed by p; Groenendijk and Stokhof 1982). This is the traditional conception of maximality as at work.

4.3 *Putting the pieces together*

We are now well equipped to dive into how to map structures like ERCs to their semantic interpretation. Our desiderata is to account for the range of interpretations that the two types of ERCs are capable of delivering. Given the syntactic analysis presented in §3, the constitutive pieces involved in ERCs permit a straightforward application of the semantic analysis sketched above.

Nominal ERCs As a working example, consider the two interpretations of a nominal ERC like (87) below.

(87) las manzanas que trajo Pedro
the apples that brought Pedro
a. OBJECT interrogative: *what apples Pedro brought*
b. AMOUNT interrogative: *how may apples Pedro brought*

The parsing responsible for the OBJECT-question interpretation in (87a) is the LF in below.

(88) $[_{\text{DP1}}$ las $[_{\text{CP}}$ $[_{\text{DP2}}$ Op_{wh} manzanas $]_i$ $[_{\text{C'}}$ que$_{[+\text{WH}]}$ [trajo $]_j$ $[_{\text{TP}}$ Pedro t_j t_i]]]]

As explained in §3, the composing analytical pieces of (88) below are identical to any identity question using the relative pronoun *qué* ("what"); the only differences between nominal ERCs and constituent questions are phonological. Thus, up to CP nothing of interest happens, and semantic composition proceeds as with ordinary interrogatives:

(89) $[\![\text{CP}_{(88)}]\!] = \lambda p\,.\,\exists x[{}^{*}manzana(x) \wedge p = \lambda w'\,.\,trajo(w')(P,x)]$

The same is true of the derivation the AMOUNT interpretation in (87b). The LF is analogous to that of a *how many* question, and with a *wh*-operator that quantifies over degrees and a null gradable predicate *many*.

(90) $[_{\text{DP1}}$ las $[_{\text{CP}}$ $[_{\text{DP2}}$ Op_{wh} MANY manzanas $]_i$ $[_{\text{C'}}$ que$_{[+\text{WH}]}$ [trajo $]_j$ $[_{\text{TP}}$ Pedro t_j t_i]]]]

(91) $[\![\text{CP}_{(90)}]\!] = \lambda p\,.\,\exists d[p = \lambda w'\,.\,\exists x[{}^{*}manzana(x) \wedge |x| = d \wedge trajo(w')(P,x)]]$

We now have to interpret the definite article in (85) above. As discussed earlier, the definite article D_{ANS} is defined following the semantics of an answerhood operator. With this, we can finally give a full denotation to the two types of nominal ERCs (simplified).

(92) a. *Final interpretation of OBJECT ERC*
$[\![(88)]\!] = \lambda w\,.\,\iota p[p(w) \wedge \exists x[{}^{*}manzana(x) \wedge p = \lambda w'\,.\,trajo(w')(P,x)]]$
b. *Final interpretation of AMOUNT ERC*
$[\![(90)]\!] = \lambda w\,.\,\iota p[p(w) \wedge \exists d[p = \lambda w'\,.\,\exists x[{}^{*}manzana(x) \wedge |x| = d \wedge trajo(w')(P,x)]]]$

In each case, the result is a function from world indices to propositions, a propositional concept. The definite article D_{ANS} takes a CP denoting a set of propositions–either one of (89)/(91) above–and returns the intension of the maximally informative proposition from that set, if there is one. This is in accordance with current standard theories of questions and so it can be adapted to any variant of question semantics that delivers a weak exhaustive interpretation.

Degree ERCs Degree ERCs may be analyzed fully in the same terms. From a semantic standpoint, I take it that gradable predicates denote relations between degrees and entities, of type $\langle d, et\rangle$ (see Morzycki 2016 for an extensive overview and alternatives). The meaning of *tall* can be represented as in (93) below.

(93) $[\![tall]\!] = \lambda d\,.\,\lambda x\,.\,tall(d, x)$

Thus, for a degree ERC such as (94) with parsing (95), we get the interpretations in (96) for the CP and the whole degree ERC.

(94) lo alto que es Pedro
the.N tall that is Pedro

(95) $[_{\text{DP1}}$ lo $[_{\text{CP}}$ $[_{\text{DP2}}$ Op_{wh} alto $]_i$ $[_{\text{C'}}$ que$_{[+\text{WH}]}$ [es $]_j$ $[_{\text{TP}}$ Pedro t_j t_i $]]]]$

(96) a. $[\![\text{CP}_{(95)}]\!] = \lambda p\,.\,\exists d[p = \lambda w'\,.\,alto(w')(P, d)]$

b. $[\![(95)]\!] = \lambda w\,.\,\iota p[p(w) \wedge \exists d[p = \lambda w'\,.\,alto(w')(P, d)]]]$

As with nominal ERCs, the result is a weak exhaustive interpretation. From here, stronger interpretations can be derived by applying additional operators (cf. Heim 1994, Beck and Rullmann 1999, a.o.). The take-away is that ERCs, both nominal and degree, are not semantically special in any way; their particularities lie in the relationship between the overtness and covertness of their constitutive morphological pieces. Once this is acknowledged, there is no significant difference with ordinary interrogative and exclamative constructions.[27]

5 Concealed or Unconcealed?

The analysis of ERCs presented above is both conservative and unconventional at the same time. It is conservative in the sense that the technical machinery used to derive the syntactic/semantic properties of ERCs is not new, as it is directly taken from the syntax/semantics of interrogative and exclamative constructions (with the possible exception of the definite determiner; see §6.3). It is however unconventional in that it resolves the tension between the surface form of ERCs and their grammatical properties in an unexpected direction. Rather than treating ERCs as ordinary DPs that undergo some semantic adjustment–the most common strategy since Grimshaw (1979)–, the route taken in this paper is in the vein of Baker's (1968) accounts of English concealed questions as "questions in disguise", to borrow Frana's (2017) expression. Baker (1968) suggested that concealed questions are base generated as embedded *wh*-interrogatives, pretty much the same way we suggested that ERCs are born as full-fledged questions/exclamations "in disguise". This strategy not only allows us to account for their syntactic similarities, but also permits a natural unification of nominal and degree ERCs.

Relation to "questions in disguise" analysis The account of concealed questions as questions in disguise was criticized on various grounds (see the discussion in Frana 2017), and thus we may won-

27 An open question that remains is the availability of mention some and mention intermediate questions with ERCs. My initial investigations have not been conclusive, and so I leave the task for a future occasion.

der whether those criticisms do apply here as well. We expect them not to, since ERCS, as argued extensively above, are not concealed questions/exclamatives.[28] Perhaps the most important drawback of Baker's (1968) account pertains matters of selection: concealed questions in English cannot be complements of question embedding predicates. In the case of ERCs, we saw throughout the paper they are in fact compatible with rogative predicates (e.g. §1), and thus this is not problematic for us.

A second criticism involves the limitation of English concealed questions to denoting identity questions, an unexpected behavior if they were truly ordinary questions in disguise, given the multitude of English *wh*-pronouns of different sign. So, one may wonder, why are there no ERCs corresponding to *where, when*, etc. questions and exclamations? It seems that the reason is tied to the ability of *wh*-operators (overt or covert) to pied-pipe overt material to [Spec,CP] when forming matrix questions/exclamatives: only if an overt *wh*-pronoun is able to pied-pipe material to [Spec,CP] may a covert variant of such operator form an ERC. We have already seen multiple grammatical examples with *what, how many* and *how many* throughout the paper, here are the relevant ungrammatical variants with *where, when* and *who*.[29]

(97) a. Dónde (*lugar) has encontrado eso?
where place AUX find.PTP that
Lit.: 'Where place did you find that?'

b. Cuándo (*año) te graduaste?
when year you.ACC graduate-CL
Lit.: 'When year did you graduate?'

c. Quién (*estudiante) ha suspendido?
who student AUX failed
Lit.: 'Who student has failed?'

Given this state of affairs, one could speculate that the problem with such ERCs is the lack of a grammatical counterpart with overt *wh*-pronouns. In other words, ERCs cannot overcome the restrictions that apply to ordinary questions and exclamatives, whatever those may be. While this looks like a promising line of inquiry, I must leave a detailed discussion of why this is the case for another occasion. I take it, however, that the general criticisms that applied to the questions in disguise approach to English concealed questions do not straightforwardly apply here, a state of affairs that should not come as a surprise if ERCs are not in fact concealed questions or exclamations.

28 Baker's (1968) was also criticized on the grounds that it was difficult to define a transformational rule that would derive a concealed question from the underlying syntactic structure of an indirect *wh*-question. Such criticisms obviously do not apply to the LF-based account provided here.

29 The Spanish variant of *why* ("por qué", literally *for what*) presents a more complicated case and I will not discuss it here. It can pied-pipe only nouns that refer to motives and reasons, behaving just like the English counterparts *for what reason*, rather than *why*, and thus belongs to the class of *wh*-pronouns that appear together with a preposition. It is therefore an open questions whether *por qué* is truly a morphological exponent of a *why*-like *wh*-pronoun by itself or whether it forms a prepositional phrase possibly necessitating a null noun complement that anchors the meaning of *what*.

Relation to concealed questions Section 2 presents a number of syntactic reasons that set ERCs apart from DPs, including those that can be interpreted as concealed questions (see esp. Table 1). The clearest divergences are provided by differences in agreement (see §2.2) and their ability to appear in pre- and post-verbal subject positions (see §2.4). Here I discuss some further differences between ERCs and concealed question, so as to set the record straight: ERCs are not concealed questions.

The first observation concerns the distribution of ERCs. Simple DPs with ordinary concealed question interpretations are not usually compatible with rogative predicates like *wonder*, a fact often been attributed to their c-selectional restrictions (Grimshaw 1979). In this way, *wonder* contrasts with *know* and *ask*, which do admit concealed questions.

(98) { *Me pregunto / Le he preguntado } las capitales de Europa.
I.DAT ask he.DAT AUX asked the capitals of Europe
'I {wonder / asked him } the capital cities of Europe'

Similar observations hold of exclamation-embedding predicates, which do not easily admit simple DPs (Castroviejo and Schwager 2008, Schwager 2009):

(99) a. Es sorprendente las capitales { *de / que hay en } Europa.
is surprising the.F.PL capitals of that are in Europe
'It is surprising {what/how many} capital cities there are in Europe'

b. * Es sorprendente la hora *(que es).
is surprising the.F.SG time that is
'It is surprising the time that it is'

As it has been observed throughout the paper, the ERC variants of the ungrammatical versions in (98) and (99) are all grammatical. Moreover, notice that degree ERCs, which share the same exact syntactic distribution as nominal ERCs, do not have grammatical concealed question counterparts:

(100) a. *Yo sé lo viejo de la tortuga Jonathan
I know the.N old the turtle Jonathan
Int.: 'I know how old Jonathan the turtle is'

b. *Yo sé lo rápido del coche fantático
I known the.N fast of-the car fantastic
Int.: 'I know how fast KITT the car is'

In sum, the compatibility of nominal ERCs with rogative predicates and the imposibility of constructing "degree concealed questions" like those in (100) provide reasons to believe that ERCs and concealed questions are different types of constructions altogether.

The second point is syntactic. Earlier in §1 it was pointed out that RRCs have long been known to improve the distribution of concealed questions. Much of §2 was devoted to show that this cannot be what is behind the distribution of Spanish ERCs. The following contrasts provide some final cross-linguistic support against conflating ERCs with concealed questions. As noted by Caponigro and Heller (2007), not all concealed questions may be improved by RRC modification (their examples, pp. 258).

(101) a.*/?? Tell me the boy who ran over my pet snake

b. * Tell me the money that was stolen.

The Spanish counterparts of such variants are perfectly grammatical; moreover, if the noun heading the ERC bears plural morphology, an AMOUNT interpretation is also available, as expected:

(102) a. Dime los chicos que atropellaron a mi serpiente
tell I.DAT the boys that ran over to my snake
'Tell me {what/how many} boys run over my snake'

b. Dime el dinero que robaron
tell I.DAT the money stole.3PL
'Tell me how much money they stole'

The general point to be taken is that ERCs should not be explicated simply by appealing to the improving factor of RRCs. Of course, it is possible that the ungrammaticality of the English examples in (101) follows from independent motives, and that the distribution of concealed questions itself is different between the two languages. While this remains a possible explanation, in view of the rest of the arguments provided here it seems more natural that the culprit of the contrast between (101) and (102) is the fact that ERCs are not concealed questions.

The last point is semantic. It is known that concealed questions and embedded identity questions are not semantically equivalent: while (embedded) identity questions are ambiguous between two interpretations, concealed questions are not. This is known as Greenberg's observation (from Greenberg 1977), as pointed out by Heim (1979). The contrast is the following:

(103) a. John discovered the murderer of Smith.

b. John discovered who the murderer of Smith was.

The two examples in (103) may be used to express that John solved the question *who murdered Smith*. But, in addition, (103b) may be used to express that John only learned some "essential fact" about Smith's murderer (e.g. that it was his brother, that it was a tramp, etc.) which is entirely compatible with John being ignorant about the actual identity of Smith's murderer.

Turning now to ERCs, the predictions are clear: ERCs should be semantically ambiguous, while concealed questions are not.[30]

(104) a. Juan descubrió el libro de María
Juan discover the book of María
'Juan discovered the book of María'

b. Juan descubrió el libro que escribió María
Juan discover the book that wrote María
'Juan discovered what book María wrote'

30 Notice that in order to avoid DOM-related confounds, we must switch to inanimate nouns that can nevertheless said to be individually dentifiable.

As expressed by the English translations, the concealed question in (104a) can only be interpreted as an identity question: what Juan discovered is the answer to the question *what is Marías book*, thereby learning about the actual identity of such book.[31] The ERC in (104b) is nevertheless ambiguous: in addition to the identity question interpretation, (104b) is compatible with Juan discovering *something* about the books that María wrote without learning exactly what those books exactly are; for instance, he could have discovered that she wrote some book that inspired a movie adaptation, a book that was a prequel to some other book by another author, etc.

The contrast is also clear with degree ERCs. For instance, one may know that the size of Uranus amounts to having a diameter of 50,724km, and this is what Juan must have discovered in (105a), and nothing else. In contrast, (105b) is compatible as well with Juan discovering the fact that Uranus' size is almost identical to Saturn's size.

(105) a. Juan descubrió el tamaño de Urano
Juan discovered the size of Uranus

b. Juan descubrió lo grande que es Urano
Juan discovered the.N big that is Urano

These contrasts come with two obvious consequences: the first one is that the semantics of the ERCs in (104b)/(105b) in terms of embedded questions makes the correct predictions wrt. their ambiguity. More generally, the second consequence is that Spanish requires *both* an analysis of concealed questions *and* an analysis of ERCs. But, to reiterate, there is no need for a proliferation of closely related constructions; ERCs are best analyzed by appealing to the semantic operations that are familiar from question and exclamative semantics.

6 Discussion and remaining issues

6.1 The selection problem

Nominal and degree ERCs denote propositional concepts, intensions of propositions. From a compositional perspective, there are two issues with this in the framework that I adopted. First, in frameworks where questions are taken to denote sets of propositions, predicates that typically embed questions are assumed to take complements that denote sets of propositions (e.g. see general discussions in Lahiri 2002 and Dayal 2017). This has been argued to be the case for rogative predicates like *wonder* and *ask*, but it is also commonly assumed for responsive predicates. For instance, a lexical entry for question embedding *know* may look like this:

(106) $[\![know]\!] = \lambda Q_{\langle st,t\rangle} . \lambda x_e . \forall p[Q(p) \wedge p(w_0) \rightarrow \forall w' \in Dox_x(w_0)[p(w')]]$

Second, ERCs are not compatible with anti-rogative predicates like *think* and *believe*, which only take propositional (declarative) complements.

31 Note that the preposition maybe be ambiguous itself between a possessive (the book that belongs to María) and an agentive reading (the book that María) wrote. In both cases, however, what Juan discovered is the referent of the expression *the book of María*, however it may be interpreted.

(107) a. *Juan piensa las manzanas que trajo Pedro el año pasado
Juan thinks the apples that brought Pedro the last year

b. *Juan piensa lo alto que es el edificio
Juan thinks the.N tall that is the building

In general, the problem is that in providing ERCs a propositional semantics we seem to wrongly predict that they should not embed like questions, and that they should embed with anti-rogative predicates.

For the sake of the argument, we could entertain the simple minded solution of lifting the type of ERCs to a set of propositions. For example, by adapting Partee's (1987) IDENT operator to operate over propositions, we can obtain a singleton set (Uegaki 2015).[32]

(108) $[\![\text{ID}]\!] = \lambda p \,.\, \lambda q \,.\, [q = p]$

Employing an identity operator has the advantage of immediately accounting for the fact that rogative predicates can also successfully combine with ERCs, but anti-rogative predicates cannot. This type of solution can be enforced either by incorporating ID into D_{ANS} or by giving D_{ANS} a different semantics altogether. Both these options however would take the meaning of D_{ANS} away from its ordinary nominal counterpart D_{NOM}.[33]

The derivation of the differences between the three types of predicates (rogative, responsive and anti-rogative) has occupied semanticists at least since Karttunen's (1977) work, and I will not be able to address the issue here with the level of detail that it deserves.[34] Different assumptions about the semantics of interrogatives will face different aspects of this issue. Thus, the hope is that solutions designed to solve problems of question embedding will as well solve the problem of embedding ERCs.

6.2 *Exclamatives*

As it was pointed out throughout the paper, ERCs may be interpreted as embedded exclamatives. In fact, in the case of nominal ERCs, the availability of both interrogative and exclamative interpretations gives rise to a full paradigm where a sentence like (109) may have the four interpretations in (110).

(109) No sabes las manzanas que trajo Pedro el año pasado
not know.2SG the apples that brought Pedro the last year

32 It may seem that generating a set after having closed it by an ι operator is a Duke of York style operation. In this implementation this is not so, since D_{ANS} filters out the true propositions in the Hamblin-set denoted by the CP.

33 Another option, suggested to me by Seth Cable (pc.) is to shift the burden of explaining the restriction of ERCs to anti-rogative predicates on the [+Q] feature of the complementizer head. On this view, D_{ANS} would no longer be a syntactic head in the same way as other determiners are, and so it would not block subcategorization into its sister node. I will leave the task of finding a better solution than the one presented here for a future occasion.

34 For recent discussions, see Uegaki (2015), Spector and Egré (2015), Xiang (2016), Theiler et al. (2016), Dayal (2017) and Uegaki (2019).

(110) a. *Object interrogative*
You don't know what are the apples that Pedro brought last year.

b. *Amount interrogative*
You don't know what is the amount of apples that Pedro brought last year.

c. *Object exclamative*
The amount of apples that Pedro brought last year exceeded the expectations of the speaker with respect to some property of apples.

d. *Amount exclamative*
The amount of apples that Pedro brought last year exceeded the expectations of the speaker.

Degree ERCs pattern alike in allowing exclamative and question interpretations, as the paraphrases in (112) suggest.

(111) No sabes lo alto que es el edificio
not know.2SG the.N tall that is the building

(112) a. *Interrogative*
You don't know the height of the building.

b. *Exclamative*
The building is tall and its height exceeded the expectations of the speaker.

As Bosque (1983) extensively argues, it is hard to pin down exactly when a predicate allows a subordinate exclamative interpretation. This is in part related to the fact that it is sometimes difficult to tell whether the construction in question is a truly exclamative construction or whether it is instead a subordinate question *used* as an exclamation (for discussion, see papers in Bosque 2017). Thus, what follows should be taken as a promissory demonstration that, the analysis of ERCs presented here can conciliate the semantics of ERCs with exclamative predicates. The price to pay is the assumption that exclamative predicates can at least optionally c-select for propositions. As a case study, take factive emotive predicates with expletives like *it is surprising/amazing*, that can take both question and declarative embedding complements, but not ordinary DPs.

(113) a. It is amazing {who came to the party / that Liz came to the party / *the dog}.

b. It is surprising {who came to the party / that Liz came to the party / *the dog}.

With our current assumptions, we can make emotive predicates like these directly take ERCs. Assume for instance a general entry for this type of predicates (where $Exp_{Sp,x}$ stands for the set of worlds where the course of events proceeds as expected by speaker *Sp* in the evaluation world).

(114) $[\![EMO]\!] = \lambda p_{\langle st \rangle} . \lambda w . [p(w) \wedge \neg \exists w' \in Exp_{w,Sp}[p(w')]]$

The derivations of the OBJECT and AMOUNT interpretations of (110) as well as the exclamative variant of the degree ERC in (112b) are straightforward (here simplified).

(115) a. Object exclamative interpretation of (110)
$\lambda w . \iota p[p(w) \wedge \exists x[{}^{*}manzana(x) \wedge p = \lambda w' . trajo(w')(P, x)] \wedge$

$$\neg\exists w'' \in Exp_{w,Sp}[\iota p[p(w'') \wedge \exists x[{}^{*}manzana(x) \wedge p = \lambda w' . trajo(w')(P,x)]]$$

b. AMOUNT exclamative interpretation of (110)

$$\lambda w . \iota p[p(w) \wedge \exists d[p = \lambda w' . \exists x[{}^{*}manzana(x) \wedge |x| = d \wedge trajo(w')(P,x)]]] \wedge \neg\exists w'' \in Exp_{w,Sp}[\iota p[p(w'') \wedge \exists d[p = \lambda w' . \exists x[{}^{*}manzana(x) \wedge |x| = d \wedge trajo(w')(P,x)]]]]$$

c. DEGREE exclamative interpretation of (112b)

$$\lambda w . \iota p[p(w) \wedge p = \lambda w' . alto(w')(P,d)] \wedge \neg\exists w'' \in Exp_{w,Sp}[\iota p[p(w'') \wedge p = \lambda w' . alto(w')(P,d)]]$$

The targeted truth-conditions state that the proposition denoted by the ERCs are true in the evaluation world, but not in the "expectation" worlds of the speaker. This serves well as a basis for a subordinate exclamative, and is accordance with propositional accounts of exclamatives (Zanuttini and Portner 2003, Portner and Zanuttini 2005, Gutiérrez-Rexach 2014). On top of this, we may want to add the emotive component of exclamations (cf. Castroviejo 2006, Chernilovskaya 2014 a.o.) and also a reference to the degree to which the predicate in the embedded position exceeds the speakers' expectations (Castroviejo 2006, Rett 2008).

The main takeaway is that we can directly extend our semantics of ERCs to exclamative predicates by, (*i*) following the tradition that exclamations may be built up from question semantics (see Lahiri 2002, D'avis 2002, Abels 2007), and (*ii*) assuming that exclamative predicates c-select for propositions (see also the discussion in §3.1).

6.3 D_{ANS} and D_{NOM}

In §4.2 I explained how, as first argued by Beck and Rullmann (1999), interpreting subordinate questions requires a notion of maximality that relies on entailment relations between propositions–i.e. maximal informativity–as opposed to logical entailment between individuals ordered by a part/whole relation–as originally proposed by Sharvy (1980) and Link (1983). The connection between *the* and maximal informativity that this paper brings to light is not new, however, and it has been previously noted in the literature in relation with the definite article in English. Von Fintel et al. (2014) used the same logic as Beck and Rullmann (1999) to argue that the traditional definition of the definite article in English is inadequate to deal with certain predicates. The authors provide the following examples:

(116) a. the amount of walnuts sufficient to make a pan of baklava.

b. the number of soldiers who together can destroy the Trojan army.

c. the money John can live on.

All these are examples that require a minimality reading. The logic is the same as before: the definite description in, say (116a), does not refer to the unique/maximal amount of walnuts sufficient to make baklava: if *d-many* walnuts are sufficient to make baklava, then $d + d'$*-many* also are. Thus, the traditional definition of *the* faces the same issues as the maximality-based theory of questions above: it either results in a presupposition failure (because there is no such maximal amount of walnuts), or

simply returns the wrong object (the maximal amount instead of the minimal amount). To fix the issue, this is the meaning that von Fintel et al. (2014) suggest for *the*.

(117) a. $[\![the(\varphi)]\!]$ is defined in w only if there is a uniquely maximal object x based on the ordering $\geq_\varphi$ st. $\varphi(w)(x)$ is true. When defined, the reference of $[the\ \varphi]$ is this maximal element.

b. For all x, y of type α and property φ of type $\langle s, \langle \alpha, t \rangle \rangle$, $x \geq_\varphi y$ iff $\lambda w\,.\,\varphi(w)(x)$ entails $\lambda w\,.\,\varphi(w)(y)$.

As with D_{ANS} and Dayal's (1996) answerhood operator, what makes different the entry in (117) from the more traditional definitions is that the ordering is not established according to part/whole relations anymore, but the criterion now is entailment between propositions (of the form $\lambda w\,.\,\varphi(x)(w)$).

It would seem that we have come full circle. Von Fintel et al. (2014) show that the same pressures that prompted Dayal (1996) and Beck and Rullmann (1999) to deviate from maximality in the definition of answerhood operators, apply to the definite article as well. From a semantic standpoint, answerhood operators and the definite article are fulfilling the exact same task, albeit in different domains (compare the definitions of both D_{ANS} in (85) above and D_{NOM} in are (117)). For one, they are both looking at uniquely maximally informative elements that are true in the evaluation world, with respect to some predicate, in the case of *the*/D_{NOM}. Moreover, both D_{ANS} and D_{NOM} presuppose the existence of such unique, maximal and true element. These reasons have prompted arguments in favor of the domain generality of maximal informativity (Rett 2015), thereby providing hope for a unification of the definite article in Spanish. This full unification would need, of course, a full account of how the agreement differences come to be, but from a semantic perspective at least, the prospects seem favorable.

7 Conclusion

The goal of this paper was to provide an account of so-called Emphatic Relative constructions in Spanish. I argued that the types of interpretation ERCs receive–questions, exclamatives–follow from the fact that at their core, they are in fact questions or exclamatives, with some added features. Syntactically, ERCs are questions (or exclamatives), i.e. CPs with a [+WH] C, selected for by a D-head. Semantically, ERCs are interpreted as questions (or exclamatives), not because of additional operations or type-shifting procedures usually assumed for surface-similar constructions like concealed questions, but because they involve a propositional nucleus.

As pointed out in the previous section, a number of issues remain open. My hope is that the questions that I am leaving open in this paper are not questions about ERCs per se, but questions that have to do with general aspects of the semantics of interrogatives: selection problems, the role of answerhood operators, their relation to exclamatives, etc. Thus, whatever solutions we find to those general problems they should apply wholesale to ERCs as well.

On the other hand, there is a contribution to be made by ERCs to the general theory of questions, namely the morphological reality of answerhood operators and their relationship to definite descriptions. If the analysis presented here is on the right track, then ERCs serve as an empirical empirical demonstration that languages have overt variants of D_{ANS}, a flavor of the definite article that can apply to sets of propositions and return the maximally informative true one. This has broad the-

oretical consequences for the nature of answerhood operators. For one, it helps adjudicate among various possibilities about the precise status of such operators, e.g. whether they should be taken to be meaning postulates, lexically triggered type-shifts or syntactically projected operators (Dayal 2017, 55). The view of ERCs defended here speaks in favor of the third option below.

(118) a. $[\![know(x, Q)]\!] \leftrightarrow [\![know(x, \textsc{ans}(Q))]\!]$ *Meaning postulate*

b. $[\![know\ Q]\!] = \lambda Q\,.\,\lambda x\,.\,know(x, \textsc{ans}(Q))$ *Type-shift*

c. [know [$OP_{\textsc{ans}}$ [$_{\textsc{cp}}$ ...]]] *Syntactic operators*

Treating the D-head in ERCs as an overt variant of $D_{\textsc{ans}}$ allows for a natural treatment of ERCs as a third kind of embedded question, but one that is built up from the same core ingredients as other, more familiar constructions. This brings us to a second important contribution of the paper, which has been to show that a suspiciously unfilled slot in the logical paradigm of *wh*- and *wh*-related constructions in Spanish is filled by ERCs.

	C°	Op_{wh}	Complementizer	Definite article
Interrogatives/Exclamatives	[+WH]	overt	no	no
cuánto Free Relatives	[+REL]	overt	no	no
lo que Free Relatives	[+REL]	covert	yes	yes
ERCs	[+WH]	covert	yes	yes

Table 2: Relation of features in ERCs *vs. wh*-operator constructions.

This looks like a promising result, but its generality and robustness should be corroborated by further inquiries of *wh*-embedding contexts across languages.

Abbreviations

1 = first person, 2 = second person, 3 = third person, AUX = auxiliary, DAT = dative, F = feminine, INF = infinitive, M = masculine, N = neuter, POSS = possessive, PR = pronoun, PL = plural, REFL = reflexive, SG = singular, STR = strong, SBJV = subjunctive, WK = weak.

Acknowledgments

To be added.

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