

On resumptive prolepsis in Spanish

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1 Introduction

A number of languages exhibit constructions in which a constituent interpreted as part of an embedded clause surfaces as an argument of the matrix verb.

- (1) L-am mirosit **pe Victor** [CP că e fericit].
 him-have smelled DOM Victor that is happy
 ‘I figured out that Victor is happy.’ *Romanian* (Alboiu & Hill 2016)
- (2) Siti ngera **Hasan_i** [CP ja’ dokter juwa mareksa aba’-eng_i].
 Siti AV-think Hasan COMP doctor DEM AV-examine he
 ‘Siti thinks that the doctor examined Hasan.’ *Madurese* (Davies 2005)
- (3) ma-ladram+ku **kana walak_i** [CP dra tu_i=deru-aw na
 AV-know=1SG.PIVOT DEF.ACC child C 3.GEN=cook-PV DEF.PIVOT
 kujan adaman].
 shrimp yesterday
 ‘I know that the child cooked the shrimp yesterday.’ *Puyuma* (Chen 2018)
- (4) Ich glaube **von ihm** [CP dass er ein ganz guter Trainer ist].
 I believe.1SG of he.DAT that he a quite good coach be.3SG
 ‘I believe of him that he is a pretty good coach.’ *German* (Salzmann 2017)

The properties of these patterns vary significantly from one language to the other, so different analyses have been proposed crosslinguistically.

- (5) a. A-movement in Romanian (Alboiu & Hill 2016)
 ... V ... **DPⁱ** ... [CP ... *tⁱ* ...] cf. (1)

- b. Base-generation + anaphora in Madurese (Davies 2005)
 ... V ... **DP_i** ... [CP ... PRONOUN_i ...] cf. (2)
- c. Embedded hanging topic in Puyuma (Chen 2018)
 ... V ... [CP **DP_i** [CP ... (PRONOUN_i) ...]] cf. (3)
- d. Base-generation + operator + ellipsis in German (Salzmann 2017)
 ... V ... [PP P [DP **D NP_i**]] [CP [DP OP **NP_i**] ... [DP PRONOUN **NP_i**] ...] cf. (4)

Spanish displays a similar construction, in which a PP_{de} seemingly selected by a matrix verb is semantically interpreted with respect to the predicate in an embedded clause.

- (6) a. Yo pienso [PP **de Eliana_i**] [CP que *pro_i* es buena persona].
 I think of Eliana that is good person
 ‘I think Eliana is a good person.’
- b. El jefe se pregunta [PP **de Eliana_i**] [CP si *pro_i* llega tarde siempre].
 the boss SE wonders of Eliana if arrives late always
 ‘The boss wonders whether Eliana always arrives late.’
- c. Supe [PP **de Eliana_i**] [CP que la_i van a despedir].
 knew of Eliana that 3SG.FEM.ACC go to fire
 I learned that they are going to fire Eliana.’
- d. Me extraña [PP **de la fiesta de ayer**] [CP que viniera *Ø_{loc}* tan
 1SG.DAT surprises of the party of yesterday that came so
 poca gente].
 few people
 ‘I’m surprised that so few people came to yesterday’s party.’

As shown in these examples, the construction requires that the embedded CP contains an anaphoric (sometimes null) element referring to the matrix PP_{de}.

Following Salzmann’s (2017) terminology, we will refer to this phenomenon as *resumptive prolepsis*, and will call the PP_{de} constituent in the examples in (6) the *proleptic object*.

Proposal

→ The proleptic object in Spanish is generated as an *embedded hanging topic*.

We will arrive to this conclusion by showing that alternative analyses are unable to account for many characteristics of the construction.

2 Where is the proleptic object generated?

There are basically two main analytical possibilities:

- (7) a. ... V ... *proleptic objectⁱ* ... [CP ... [TP ... *tⁱ* ...]] *movement*
 b. ... V ... *proleptic object_i* ... [CP ... [TP ... RESUMPTIVE_i ...]] *base-generation*

→ Under the analysis in (7a), the resumptive element must be taken to be an overt manifestation of a trace (e.g., Pesetsky 1998), or merely a trace in case of a null resumptive (e.g., *pro*).

An immediate argument against (7a) is the fact that the proleptic object can be interpreted with respect to a predicate within a syntactic island.

- (8) Yo pienso **de Eliana** que el hombre ^{[island} con el que *pro*_i sale es un
I think of Eliana that the man with the that dates is a
idiota].
idiot
'I think the man that Eliana dates is an idiot.'
- (9) Me gusta **de Eliana**_i que nadie se aburre ^{[island} cuando habla con
1SG.DAT like of Eliana that nobody SE bores when talks with
ella_i].
her
'I like that no one gets bored when talking to Eliana.'
- (10) Supe **de Eliana** que se corre ^{[island} el rumor de que es cleptómana].
knew of Eliana that SE runs the rumour of that is kleptomaniac
'I learned that there is the rumour that Eliana is kleptomaniac.'

Salzmann (2017) observes that proleptic resumptives in German license reconstruction effects. This is not the case for Spanish.

- (11) NO RECONSTRUCTION FOR IDIOM INTERPRETATION
- a. Me habían tomado el pelo.
1SG.DAT had taken the hair
'They pulled my leg.'
- b. *Dije **del pelo** que me lo habían tomado.
said of.the hair that 1SG.DAT it had taken
Intended: 'I said they pulled my leg.'
- (12) NO RECONSTRUCTION FOR VARIABLE BINDING
- a. Todos_i los profesores critican a sus_i estudiantes
all the professors criticise DOM their students
'All professors criticise their students.'
- b. Ellos_j dicen **de sus**_{*i/j} **estudiantes** que todos_i los profesores los
they say of their students that all the professors them
critican.
criticise
Intended: 'They say that all professors criticise their own students.'
- (13) NO RECONSTRUCTION FOR CONDITION A
- a. Jorge detesta la foto de sí mismo.
Jorge hates the photo of SI self
'Jorge hates the photo of himself.'
- b. Él_j piensa **de la foto de sí mismo**_{*i/j} que Jorge_i la detesta.
he thinks of the photo of SI self that Jorge it hates
Intended: 'He thinks that Jorge hates the photo of himself.'

- ✓ The lack of both island and reconstruction effects strongly suggests that the proleptic object is not generated within the embedded clause.
- ✓ The proleptic object must be merged above the clausal layer of the embedded CP, as sketched in (7b).

3 The link between the proleptic object and the embedded clause

3.1 Part I: dismissing the simplest hypothesis

The simplest analysis for resumptive prolepsis involves positing that the proleptic object is an argument of the main verb that *happens to be* correferential with an element in the embedded clause.

- ✗ Such an account does not explain why the anaphoric relation is mandatory.

- (14) a. Pienso de Eliana_i que su_i hermano es buena persona.
Think of Eliana that her brother is good person
'I think that Eliana's brother is a good person.'
- b. *Pienso de Eliana que Jorge es buena persona.
think of Eliana that Jorge is good person
Intended: 'I think Jorge is a good person.'

- ✗ Salzmann (2017) notices that prolepsis is available in German with almost all verbs selecting a CP. The observation is valid for Spanish as well: *there seems to be no selection relation between the matrix verb and the proleptic object*.

- (15) a. *temo* (de X_i) [CP que ... RESUMPTIVE_i ...] 'I fear (of X) that...'
b. *digo* (de X_i) [CP que ... RESUMPTIVE_i ...] 'I say (of X) that...'
c. *opino* (de X_i) [CP que ... RESUMPTIVE_i ...] 'I opine (of X) that...'
d. *temo* (de X_i) [CP que ... RESUMPTIVE_i ...] 'I fear (of X) that...'
e. ...

- ✗ If the link between the proleptic object and its resumptive were merely anaphoric, we would expect attesting phenomena from the domain of anaphora in proleptic constructions, e.g., split antecedence.

- (16) a. Jorge_i le dijo a Eliana_j que irían *pro*_{i+j} a la fiesta.
Jorge 3SG.DAT to Eliana that would.go to the party
'Jorge told Eliana that they would go to the party.'
- b. *Jorge_i piensa de Eliana_j que *pro*_{i+j} deberían robar un banco.
Jorge thinks of Eliana that should rob a bank
Intended: 'Jorge thinks that Eliana and him should rob a bank'.

Two conclusions arise from these observations:

- ✓ The Spanish proleptic construction does not involve two independent constituents connected through anaphora.
- ✓ It is necessary to point out what is the exact relation holding between proleptic object and its resumptive counterpart.

3.2 Part II: Aboutness vs. Predication

Following the discussion in Landau (2011), we take that the relation between the Spanish proleptic object and its resumptive could be based either on *aboutness* or *predication*.

→ A PROMISING OBSERVATION

The link between the proleptic object and its resumptive seems to be analogous to that of a *hanging topic* (HT) and its resumptive.

As Zubizarreta (1999: 4221) points out, HTs in Spanish require a resumptive element within the clause, which may be a pronoun (17a), a clitic (18a), an epithet (19), or a nominal with an inalienable relation to the topic (20a).¹ The same resumptive elements are attested in proleptic constructions.

- (17) a. Con respecto a Eliana_i, Jorge habló con ella_i.
with respect to Eliana Jorge spoke with her
'As for Eliana, Jorge talked to her.'
- b. Supe **de Eliana**_i que Jorge habló con ella_i.
knew of Eliana that Jorge spoke with her
'I learned that Jorge talked to Eliana.'
- (18) a. Con respecto a Eliana_i, Jorge le_i compró un pulóver.
with respect to Eliana Jorge 3SG.DAT bought a pullover
'As for Eliana, Jorge bought her a pullover.'
- b. Supe **de Eliana**_i que Jorge le_i compró un pulóver.
knew of Eliana that Jorge 3SG.DAT bought a pullover
'I learned that Jorge bought Eliana a pullover.'
- (19) a. Con respecto a Eliana_i, la mina_i no acepta un "no" como respuesta.
with respect to Eliana the dude.FEM not accepts a no as answer
'As for Eliana, the dude doesn't take "no" for an answer.'

¹There is an unexpected asymmetry arising when the proleptic object is interpreted as a partitive-like element.

- i. Espero **de tus amigos** que al menos Cosmo llegue temprano.
expect of your friends that to.the less Cosmo arrives early
'I expect that, of your friends, at least Cosmo arrives early.'

In these cases, the proleptic object can appear within the embedded clause.

- ii. Espero que **de tus amigos** al menos Cosmo llegue temprano.
expect that of your friends to.the less Cosmo arrives early
'I expect that, of your friends, at least Cosmo arrives early.'

- b. Supe **de Eliana**_i que la mina_i no acepta un "no" como respuesta.
knew of Eliana that the dude.FEM not accepts a no as answer
'I learned that Eliana doesn't take a "no" for an answer.'
- (20) a. Con respecto a tu cara_i, me gusta que tenés la nariz_i respingada.
with respect to your face 1SG.DAT like that have the nose perky
'As for your face, I like it that you have a perky nose.'
- b. Me gusta **de tu cara**_i que tenés la nariz_i respingada.
1SG.DAT like of your face that have the nose perky
'I like that you have a perky nose.'

Based on this similarity, we advance the following proposal.

→ PROPOSAL

The Spanish proleptic object is a hanging topic of the embedded clause.

Following Chen (2018), we take that *proleptic objects are licensed through the same means as HTs*, i.e., via the *aboutness condition* (Chafe 1976, Reinhart 1981, Li & Thompson 1981, Lambrecht 1994).

- (21) A constituent is a topic expression if the proposition expressed by the clause with which it is associated is pragmatically construed as being about the referent of this constituent.

(Lambrecht 1994: 131)

Salzmann (2017) adapts Landau's (2011) operator-based analysis of *copy raising* to account for the relation between proleptic object and embedded CP in German proleptic constructions.

- (22) a. [CP ... PRONOUN ...] *proposition*
b. [CP OP_i ... PRONOUN_i ...] *predicate λx.P(x)*
- (23) a. Sé [CP que ...] *λx.λp.KNOW (x,p)*
b. Sé **de Eliana** [CP que ...] *λx.λy.λP.KNOW (x,P(y))*

Both the aboutness-based and operator-based analyses capture the need for a resumptive elements within the embedded CP.

- (24) a. *Pienso **de Eliana** que Jorge es buena persona.
think of Eliana that Jorge is good person
Intended: 'I think Jorge is a good person.'
- b. *Con respecto a Eliana, pienso que Jorge es buena persona.
with respect to Eliana think that Jorge is good person
'As for Eliana, I think that Jorge is a good person.' *aboutness failure*
- c. *¿Quién_i Eliana saludó a Jorge?
who Eliana saludó a Jorge
'Who Eliana saluted Jorge?' *vacuous quantification*

However, the Spanish proleptic construction exhibits a number of properties that make the *embedded HT analysis more tenable*.

- ✗ It is not obvious how the operator-based approach would account for resumptive epithets and lexically-related resumptives.

- (25) a. Supe **de Eliana_i** que la mina_i no acepta un “no” como respuesta.
knew of Eliana that the dude.FEM not accepts a no as answer
‘I learned that Eliana doesn’t take a “no” for an answer.’
b. Me gusta **de tu cara_i** que tenés la nariz_i respingada.
1SG.DAT like of your face that have the nose perky
‘I like about your face that you have a perky nose.’

- ✗ Forming wh-questions with interrogative proleptic objects is disallowed in Spanish; the same restriction holds for HTs. This constraint is not attested in German (29), and the operator-based analysis is not meant to account for it.

- (26) a. *¿**De quién** sabes que Jorge habló con ella?
of who know that Jorge spoke with her
‘Of whom you know that Jorge talked to her?’
b. *Con respecto a quien Jorge habló con ella?
with respect to who Jorge spoke with her
Lit: ‘As for whom did Jorge talked to her?’
- (27) a. ***De quién** sabes que Jorge le compró un pulóver?
Of who know that Jorge 3SG.DAT bought a pullover
‘Of whom you know that Jorge bought him/her a pullover.’
b. *Con respecto a quién Jorge le compró un pullover?
with respect to who Jorge 3SG.DAT bought a pullover
Lit: ‘As for whom did Jorge buy a pullover?’
- (28) a. ***De quien** sabes que la mina no acepta un “no” como respuesta?
of who know that the dude.FEM not accepts a no as answer
Lit: ‘Of whom do you know that the dude doesn’t take a “no” for an answer?’
b. *Con respecto a quién la mina no acepta un “no” como respuesta?
with respect to who the dude.FEM not accepts a no as answer
Lit: ‘As for whom does the dude not accept a “no” for an answer?’
- (29) **Von welchem Maler** glaubst du, dass Maria ihn mag?
of which.DAT painter think you that Mary him likes
‘Of which painter do you think that Mary likes him.’ Salzmann (2017)

- ✗ There is no obvious way to apply the operator-based analysis in cases when the embedded CP is replaced by some other constituent, e.g., clausal pronouns like *eso* ‘that’ (30B), or quantified expressions (31). In all these cases, the relevant interpretation can be paraphrased in terms of *aboutness*.

- (30) A: No podés andar diciendo [_{CP} que Eliana_i es una tramposa]_j.
not can go saying that Eliana is a cheater
‘You cannot go around saying that Eliana is a cheater.’
B: Bueno, pienso eso_j **de ella_i**.
well, think that of her
‘Well, that is what I think about her.’
- (31) a. Dijiste algunas cosas privadas **de Eliana**.
said some things private of Eliana
‘You said some private things about Eliana.’
b. No dijiste nada **de Eliana**.
not said nothing of Eliana
‘You didn’t say anything about Eliana.’

4 Is the proleptic object *in situ* or did it move?

Once again, there are basically two alternatives.

- (32) a. ... V ... *proleptic object*ⁱ ... [_{CP} *t*ⁱ [_{CP} que ...]]
- displaced HT*
- b. ... V ... [_{CP} *proleptic object* [_{CP} que ...]]
- HT in situ*

In other words, the choice is whether the sentence in (33) can be analysed as involving VP-coordination (with the proleptic object and the embedded clause being separate constituents within the VP) or CP-coordination (with both elements forming a single constituent).

- (33) Sé [_{VP/CP} **de Jorge** que está enfermo] y [_{VP/CP} **de Eliana** que está de vacaciones].
know of Jorge that is sick and of Eliana that is of vacations
‘I know that Jorge is sick and Eliana is on vacations.’

There are reasons to believe that after certain point in the derivation the proleptic object does not form a constituent any more with the embedded CP.

- ✓ It is possible to coordinate two CPs with a single proleptic object.

- (34) Pienso **de Jorge** [_{CP} que está muy cansado] y [_{CP} que necesita descansar].
think of Jorge that is very tired and that needs rest
‘I think that Jorge is very tired and that he needs to rest.’

- ✓ The proleptic object and the CP function as distinct constituents when they move to the left periphery.²

²In particular, the sentence in (35d) constitutes a violation of the *Müller-Takano Generalization* under the hypothesis in (32b).

i. MÜLLER-TAKANO GENERALIZATION
Remnant XPs cannot undergo Y-movement if the antecedent of the unbound trace has also undergone Y-movement, where Y stands for a movement-related feature (like [wh] for wh-movement, [top] for topicalization, [Σ] for scrambling, etc.).

- (35) a. **De Eliana**, sé que le dieron un premio.
of Eliana know that 3SG.DAT gave a prize
'I know they gave a prize to Eliana.'
- b. *_{[CP} **De Eliana** que le dieron un premio], sé.
of Eliana that 3SG.DAT gave a prize know
- c. [**De Eliana**], [_{CP} que le dieron un premio], sé.
of Eliana that 3SG.DAT gave a prize know
- d. [_{CP} Que le dieron un premio], [**De Eliana**], Sé.
that 3SG.DAT gave a prize of Eliana know

✓ Low matrix adverbials can appear between the proleptic object and the embedded CP.

- (36) a. Dijiste **de Eliana** en la fiesta que la iban a despedir.
said of Eliana in the party that her going to fire
'You said at the party that they were going to fire Eliana.'
- b. Me preguntaste **de Eliana** ayer si me prestó dinero.
1SG.DAT asked of Eliana if 1SG.DAT loaned money
'You asked me whether Eliana loaned me money.'

These patterns follow straightforwardly if the proleptic object is generated as a Caseless embedded hanging topic that moves to the domain of the matrix VP to receive Case; thus, the prepositional element *de* 'of' is taken to be a dummy oblique case marker.

- (37) a. ... [_{VP} V ... [_{CP} [_{DP} *proleptic object*] [_{CP} que ...]]]
b. ... [_{VP} [_{DP} *de_{obl} proleptic objectⁱ*] [_{V'} t_V ... [_{CP} tⁱ [_{CP} que ...]]]]

5 Island effects in the embedded CP

Salzmann observes that proleptic constructions in German trigger (weak) island effects, i.e., no adjunct constituent can be extracted from the embedded CP.

- (38) a. ??Wen glaubst du **von Hans**, dass er liebt?
whom believe you of John that he loves
'Who do you believe of John that he loves?'
- b. *Wie vorsichtig glaubst du **von Hans** dass er den Brief formulieren wird?
how carefully believe you of John that he the letter formulate will
Lit: 'How carefully do you believe of John that he will formulate the letter?'

✓ The operator analysis in (22) captures this behaviour as an instance of intervention.

Spanish, however, exhibits stronger island effects in these contexts: argument extraction is not even marginally acceptable.

- (39) a. *¿A quién pensás de Eliana que ama realmente?
DOM who think of Eliana that she loves really
Intended: 'Who do you think Eliana really loves?'

- b. *¿Quién pensás de Eliana que la ama realmente?
who think of Eliana that 3SG.FEM.ACC love really
'Who do you think really loves Eliana?'

This is a restriction on extraction and not on partial questions, which are fine if wh-movement is constrained to a single clause.

- (40) a. ¿Quién piensa **de Eliana** que Jorge la ama?
who thinks of Eliana that Jorge her loves
'Who thinks that Jorge loves Eliana?'
- b. ¿Por qué pensas **de Jorge** que murió?
by what think of Jorge that died
'Why do you think Jorge died?' *only wide scope interpretation*
- (41) a. Yo no sé de Eliana quien la soporta realmente.
I not know of Eliana who her stands really
'I don't know who stands her really.'
- b. Yo no sé de Eliana a quien soporta realmente.
I not know of Eliana DOM who stands really
'I don't know whom does Eliana stand really.'

✗ Neither the *aboutness-based* analysis nor the *operator-based* analysis predict the type of opacity attested in (39).

We take this restriction to be an effect of *shape conservation*; specifically, we capture the unacceptability (39) as violations of *order preservation* in the sense of Fox & Pesetsky (2005).

- (42) ORDER PRESERVATION
Information about linearization, once established at the end of a given Spell-out domain (i.e., a phase CP, vP/VP, DP), is never deleted in the course of a derivation.
- ⌚ *Successive cyclic movement* determines the ordering of constituents within a given spell-out domain.
- ⌚ There must be no ordering contradictions across spell-out domains.

The explanation for the restriction in (39) goes as follows.

- Spanish proleptic objects are embedded HTs.
- HTs are one of highest elements in the structure of the clause; they are more external than wh-phrases (e.g., Benincà 2001, Grohmann 2003).
- HTs are expected to precede all constituents within the embedded CP phase, even displaced wh-phrases generated through successive cyclic movement.

- (43) ... V [_{CP} [_{PP} **de Eliana**] [_{CP} wh-phrase [_{TP} ... [_{VP} ... ~~wh-phrase~~]]]]

- If the wh-phrase moves to Spec,vP, it is predicted to precede the HT.

- (44) [_{vP} wh-phrase ... V [_{CP} [_{PP} **de Eliana**] [_{CP} ~~wh-phrase~~ [_{TP} ... [_{VP} ... ~~wh-phrase~~]]]]]]

- According to (42), the system "remembers" previous orderings.

- A contradiction arises at this point (45), which makes the wh-extraction ungrammatical.

- (45) a. Domain of embedded CP: $PP < wh\text{-phrase}$
 b. Domain of vP : $wh\text{-phrase} < PP$

A prediction of Fox & Pesetsky's (2005) system is that extraction should be allowed if both constituents producing the contradiction move and manage to preserve their base order.

- (46) a. [_{VP} [_{PP} **de Eliana**] wh-phrase ... V [_{CP} [_{PP} **de Eliana**] [_{CP} ~~wh-phrase~~] [_{TP} ... [_{VP} ... ~~wh-phrase~~]]]]
- (47) a. Domain of embedded CP: $PP < wh\text{-phrase}$
 b. Domain of vP : $PP < wh\text{-phrase}$
 c. Domain of matrix CP: $PP < wh\text{-phrase}$

The prediction seems to be borne out: there is an amelioration effect if both the proleptic object and the wh-phrase move to the left.

- (48) a. ?De Eliana, ¿a quién pensás que ama realmente?
 of Eliana to who think that loves really
 Who do you think that Eliana really loves?
 b. ?De Eliana, ¿quién pensás que la ama realmente?
 of Eliana who think that her loves really
 'Who do you think really loves Eliana?'

This account is not available under the assumption that the proleptic object moves from within the embedded clause; *it relies on a HT type of analysis*.

6 Concluding remarks

- Spanish exhibits resumptive prolepsis, a construction in which an oblique constituent in the matrix clause is interpreted within an embedded clause.
- An analysis based on mere coreference cannot account for the need for a resumptive element within the embedded sentence.
- While either an aboutness-based or a predication-based analysis allow to explain this property, the former seems to be more adequate for the remaining Spanish patterns.
- The strong island characteristics of the embedded sentence in proleptic constructions can be explained as the result of a shape conversation constraint.

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