

UNVEILING TOPIC-REMNANT ELIDED POLAR QUESTIONS: A NEW ELLIPTICAL CONSTRUCTION IN SPANISH AND ITS CONSEQUENCES FOR THE IDENTITY CONDITION¹

Laura Stigliano

The Ohio State University

ABSTRACT. This paper offers an in-depth analysis of a novel elliptical construction in Spanish, dubbed *Topic-Remnant Elided Polar Questions* (or *polar TREQs* in short). A detailed examination of polar TREQs in Spanish will provide evidence for the claim that (a) they are a type of clausal ellipsis, triggered by the presence of an [E]-feature on C, and (b) the remnant is a topicalized XP that undergoes movement out of the ellipsis site. Furthermore, the analysis of polar TREQs in various contexts (in particular, with respect to the so-called connectivity effects) confirms the need of syntactic identity between the linguistic antecedent and the ellipsis site. Moreover, an examination of the patterns related to the presence or absence of an overt complementizer in this elliptical construction provides empirical support for Merchant's (2001) *Sluicing-COMP Generalization*. In summary, this paper not only provides a comprehensive account of the syntactic intricacies of a new elliptical construction in Spanish, but also provides valuable insights into the broader landscape of elliptical phenomena in this language.

Keywords. Spanish, ellipsis, TP-ellipsis, clausal ellipsis, topicalization, identity, Sluicing-COMP Generalization

RESUMEN Este artículo ofrece un análisis en profundidad de una nueva construcción elíptica en español, denominada *Preguntas Polares Elípticas de Tópico-Remanente* (TREQs polares). Un examen detallado de las TREQs polares en español proporciona evidencia a favor de la afirmación de que (a) son un tipo de elipsis clausal, desencadenada por la presencia de un rasgo [E] en C, y (b) el remanente es un XP topicalizado que experimenta un movimiento fuera del constituyente elidido. Además, el análisis de las TREQs polares en varios contextos (en particular, en relación con los llamados Efectos de Conectividad) confirma la necesidad de que exista identidad sintáctica entre el antecedente lingüístico y el material elidido. Adicionalmente, un examen de los patrones relacionados con la presencia o ausencia de un complementante explícito en esta construcción elíptica proporciona apoyo empírico para la *Generalización Sluicing-COMP* que propone Merchant (2001). En resumen, este artículo no solo ofrece un análisis integral de las complejidades sintácticas de una nueva construcción elíptica en español, sino que también aporta ideas sobre la naturaleza más general de los fenómenos elípticos en español.

Palabras clave. español, elipsis, elipsis de TP, elipsis clausal, topicalización, identidad, Generalización de Sluicing-COMP

¹ I'm indebted to Karlos Arregi, Vera Gribova, Jason Merchant, and Andrés Saab for discussing these ideas with me, and for providing invaluable comments and feedback on earlier drafts of this work. Special thanks go to the Editor in Chief, Antonio Fábregas, and the two anonymous reviewers, for their comments, questions, and suggestions. All mistakes and shortcomings are my own.



1. Introduction

Within the study of syntax, ellipsis emerges as a powerful tool that not only enhances our understanding of elliptical constructions themselves, but also offers invaluable insights into the syntax of non-elliptical sentences. In this paper, I aim to demonstrate the crucial role of ellipsis in advancing our comprehension of a language's syntax, in this case Spanish, by providing an in-depth analysis of a previously unexplored elliptical construction in this language, which I dubbed *Topic-Remnant Elided Polar Questions*, hereafter referred to as *polar TREQs*.² This analysis not only underscores the significance of polar TREQs in deepening our understanding of elliptical phenomena, but also highlights their potential to shed light on the grammatical intricacies of the grammar of Spanish.

Polar TREQs, exemplified in (1A) and (2A), are embedded elliptical polar questions that usually express uncertainty with respect to whether what has been conveyed previously in the antecedent also holds regarding the remnant. As the examples below show, the polar meaning is confirmed by B's subsequent response to A's polar TREQ:³

- (1)A: Sonia comió pizza, pero **Bruno, no sé.**
 Sonia ate.3SG pizza but Bruno not know.1SG
 Literal: 'Sonia ate pizza, but Bruno, I don't know.'
 Interpretation: 'Sonia ate pizza, but I don't know if Bruno ate pizza.'
- B: Yo sí sé. Bruno no comió pizza, comió pasta.
 I yes know.1SG Bruno not ate.3SG pizza ate.3SG pasta
 'I do know. Bruno didn't eat pizza, he ate pasta.'
- (2)A: Sonia comió pizza, pero **pasta, no sé.**
 Sonia ate.3SG pizza but pasta not know.1SG
 Literal: 'Sonia ate pizza, but pasta, I don't know.'
 Interpretation: 'Sonia ate pizza, but I don't know if she ate pasta.'
- B: Yo sí sé. No comió pasta, solo comió pizza.
 I yes know.1SG not ate.3SG pasta only ate.3SG pizza
 'I do know. She didn't eat pasta, she only ate pizza.'

To avoid making the examples unnecessarily long, I won't include B's response to A's polar TREQ in the examples that follow in this paper. Nonetheless, I will explicitly indicate the interpretation under examination in the glosses provided.⁴

² As far as I know, the only existing analysis of a somewhat similar construction can be found in Wei (2013, 2018) and Li (2016) for what they call *Fragment Questions* in Mandarin Chinese. Wei (2018) claims that Fragment Questions are derived via topic movement, and licensed under semantic identity. Crucially, Wei's and Li's works only analyze matrix fragments, not embedded ones as discussed in this paper.

³ Throughout this paper, I use the following standard terminology: the XP that survives ellipsis is called the *remnant*, and the gap that follows it is the *ellipsis site*. The *pre-elided* clause or *source* is the sentence formed by the remnant and the ellipsis site, before undergoing ellipsis. The linguistic *antecedent* is the sentence or clause that precedes the remnant, and that provides the meaning for the ellipsis site. The *remnant's correlate* (or *correlate*, in short) in the antecedent is an XP that occupies the same base position that the remnant occupies in the pre-elided sentence.

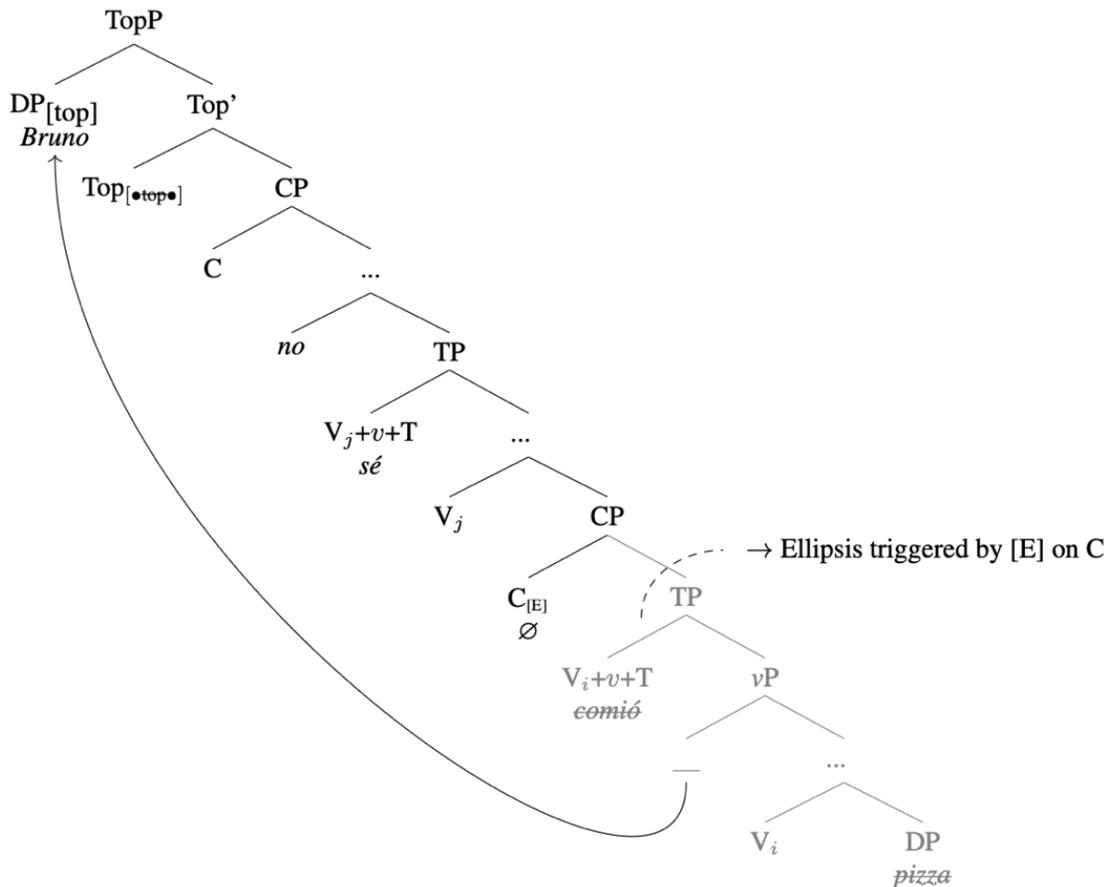
⁴ It's worth mentioning that, in general, Topic-Remnant Elided Questions could be ambiguous between a *wh*-question interpretation (which I dubbed *wh-TREQs*) and a polar question interpretation (which I dubbed *polar TREQs*). A *wh*-question interpretation would involve something like the following: *Sonia comió pizza, pero Bruno, no sé (qué comió)* ('Sonia ate pizza, but I don't know what Bruno ate.'). Usually, context is enough to disambiguate between the two interpretations. An analysis of *wh-TREQs* is out of the scope of this paper.

Based on their interpretation, I argue that polar TREQs require an embedded polar question to go unpronounced. To be more precise, I claim that polar TREQs are the result of ellipsis of an embedded polar question, from which a topicalized XP has moved out, surviving deletion (in this case, this XP is *Bruno*, the remnant). This is illustrated in (3) for the example in (1) (~~gray strikethrough text~~ represents elided material):

- (3) <antecedent *Sonia comió pizza*>, pero [*Bruno*_{top}], no sé <ellipsis site ~~si~~ ~~comió pizza~~>.
 Sonia ate.3SG pizza but Bruno not know.1SG if ate.3SG pizza

As a preview of my analysis, I propose that polar TREQs are a type of clausal ellipsis, akin to constructions like sluicing, fragment answers, stripping, and split questions (for more details on the various types of clausal ellipsis in Spanish, see Saab 2008, 2010, Arregi 2010, Villa-García 2016, Stigliano 2022, among many others). Furthermore, I analyze polar TREQs as the result of ellipsis triggered by an [E]-feature on the (embedded) C head. Crucially, I will demonstrate that the remnant—originated inside the embedded clause—is topicalized, undergoing movement to the specifier of a matrix Topic Phrase (TopP). I supplement this analysis with a post-syntactic rule that accounts for the lack of phonetic exponence of the embedded polar complementizer C in Spanish, according to which the embedded polar C head is phonetically null when followed by a constituent lacking phonetic exponence. This is illustrated in the tree in (4) for the sentence in (3):

- (4)



The structure of this paper is as follows: In Section 2, I delve into the empirical landscape of this construction. I explore the distribution of polar TREQs and show that there is a correlation between their availability and topicalization in this language. Additionally, by conducting an in-depth analysis of connectivity effects, this section contributes to the claim put forth here that some kind of syntactic identity is needed between the antecedent and the ellipsis site. Moving on to Section 3, I present an analysis for polar TREQs, grounded on their elliptical nature. Specifically, I claim that the remnant is a topicalized XP that undergoes movement to the matrix TopP. Within this section I also discuss how Merchant's (2001) *Shuicing-COMP Generalization* accounts for the specific patterns observed in contexts of polar TREQs with regards to the exponence of the complementizer. Finally, Section 4 summarizes the main points of this paper and concludes it.

2. The empirical landscape: the distribution of polar TREQs in Spanish

To provide support for the claim that polar TREQs arise as the result of ellipsis (and against potential non-elliptical approaches), I present evidence from their distribution. The data in this section also substantiates the argument put forth here that ellipsis requires some sort of syntactic identity/isomorphism between the antecedent and the ellipsis site to be licensed. This aligns with recent proposals regarding the identity condition needed to license clausal ellipsis in Spanish (see, e.g., Saab 2008, 2010, Arregi 2010, Ranero 2021, and Stigliano 2022, among others).

More specifically, in this section, I discuss evidence in favor of an ellipsis approach to polar TREQs that involves topicalization of the remnant outside of the ellipsis site, followed by deletion of the remaining material. Firstly, in Section 2.1, I show that there is a strict correlation between the contexts in which topicalization out of an embedded polar question in Spanish is allowed, and the contexts that allow polar TREQs. In essence, possible remnants for polar TREQs in Spanish are exactly those constituents that can otherwise be topicalized out of a polar question in this language. Conversely, those constituents that cannot be topicalized out of a polar question cannot be remnants for polar TREQs. These two patterns provide evidence for the claim that the remnant in polar TREQs is a topicalized XP, and that the ellipsis site contains a sentence that is isomorphic to its antecedent's. Importantly, this eliminates the need of resorting to 'exceptional movement' (see Fox & Pesetsky 2005, Yoshida et al. 2013, Weir 2014, among others) to account for why the remnant escapes the ellipsis site.⁵ Instead, I argue that the remnant undergoes topicalization, as found more generally in the language. In Section 2.2, I show that polar TREQs display connectivity effects and disallow structural mismatches between the antecedent and the ellipsis site. In particular, polar TREQs disallow voice and case mismatches, P-stranding under ellipsis, and *spray/load* alternations. These facts provide yet further evidence for the need for (at least some type of) syntactic identity/isomorphism to license this construction, in line with recent findings in the realms of clausal ellipsis in Spanish. Lastly, in Section 2.3, I provide evidence that shows that polar TREQs are a productive phenomenon in the language, rather than a crystalized construction.

2.1. Possible and impossible remnants

On the one hand, constituents that can be remnants for polar TREQs in Spanish are precisely those that can be topicalized from an embedded polar question in this language. Conversely, those constituents that cannot undergo topicalization from an embedded polar question cannot be remnants for polar TREQs. These two sets of facts establish a correlation between topicalization and polar TREQs, indicating that there is an inherent relation between these two phenomena. In other words, I take this correlation to mean that there is indeed structure inside the ellipsis site in

⁵ I thank an anonymous reviewer for raising this question.

polar TREQs, and that the remnant is topicalized out of it. As I motioned above, this also dispenses with the need of proposing the so-called ‘exceptional movement’ of the remnant, a last-resort PF strategy only present in elliptical contexts (see, e.g., Fox & Pesetsky 2005, Yoshida et al. 2013, Weir 2014).

In short, possible remnants include all the constituents that can be topicalized in Spanish, that is, DPs (both subjects and objects), prepositional phrases (indirect objects, and PPs both in the verbal and nominal domains), temporal and locative phrases, adverbs, predicative adjectives, infinitival verbs and phrases, as well as CPs. In contrast, impossible remnants are those constituents that cannot be topicalized in Spanish, such as attributive adjectives. In what follows I provide examples of each of these constituents.

2.1.1. Subjects

In Spanish, subjects can be topicalized out of embedded polar questions, as shown in (5):

- (5) [Bruno_{top}]_i, no sé si _i comió pizza.
 Bruno not know.1SG if ate.3SG pizza
 ‘As for Bruno, I don’t know if he ate pizza.’

Likewise, as the example in (1A), repeated here as (6), shows, they can occur as remnants for polar TREQs. This is predicted under the analysis proposed here according to which constituents that can be topicalized can also be remnants for polar TREQs:

- (6) Sonia comió pizza, pero Bruno, no sé.
 Sonia ate.3SG pizza but Bruno not know.1SG
 Literal: ‘Sonia ate pizza, but Bruno, I don’t know.’
 Interpretation: ‘Sonia ate pizza, but I don’t know if Bruno ate pizza.’

In other words, the proposed source for the polar TREQ in (6) would be (7) below, where the subject of the embedded polar question (i.e., *Bruno*) undergoes topicalization, and the embedded polar question is elided:

- (7) Sonia comió pizza, pero [Bruno]_i, no sé \langle ellipsis site ~~si~~ _i ~~comió pizza~~ \rangle .⁶
 Sonia ate.3SG pizza but Bruno not know.1SG if ate.1SG pizza.
 ‘Sonia ate pizza, but Bruno, I don’t know if he ate pizza.’

2.1.2. Direct and indirect objects

As I argued above for subjects, the example below shows that both direct (8) and indirect (9) objects can be topicalized out of an embedded polar question in Spanish:

- (8) [Pasta_{top}]_i, no sé si (Sonia) comió _i.
 pasta not know.1SG if Sonia ate.3SG
 ‘As for pasta, I don’t know if Sonia ate that.’

⁶ For the ease of exposition, I represent the ellipsis site as including the entire embedded polar question. As it will become evident soon, the complementizer *C* is outside the ellipsis. A detailed account of why it remains unpronounced despite being outside of the scope of ellipsis is provided in Section 3.1.

- (9) [A Bruno_{top}]_i, no sé si (Sonia) le dio una pizza _____i.
 to Bruno not know.1SG if Sonia DAT.3SG gave.3SG a pizza
 ‘As for Bruno, I don’t know if Sonia gave him a pizza.’

As predicted by the analysis proposed here, which assumes that polar TREQs are derived via topicalization of the remnant, both direct and indirect objects can occur as remnants. This is shown in (10) and (11) respectively:

- (10) Sonia comió pizza, pero pasta, no sé.
 Sonia ate.3SG pizza but pasta not know.1SG
 Literal: ‘Sonia ate pizza, but pasta, I don’t know.’
 Interpretation: ‘Sonia ate pizza, but I don’t if she ate pasta.’
- (11) Sonia le dio una pizza a Ana, pero a Bruno, no sé.
 Sonia DAT.3SG gave.3SG a pizza to Ana but to Bruno not know.1SG
 Literal: ‘Sonia gave a pizza to Ana, but to Bruno, I don’t know.’
 Interpretation: ‘Sonia gave a pizza to Ana, but I don’t know if she gave a pizza to Bruno.’

More specifically, I claim that the source of (10) would be the structure in (12), and that the source of (11) would be the structure in (13). In (12), the direct object (i.e., *pasta* ‘pasta’) undergoes topicalization, and ellipsis targets the entire embedded polar question (minus the topicalized object, which moves out of the ellipsis site). In a similar vein, in (13), the indirect object (i.e., *a Ana* ‘to Ana’) undergoes topicalization, and the ellipsis targets the embedded polar question:

- (12) Sonia comió pizza, pero [pasta]_i, no sé \langle ellipsis site ~~si (Sonia) comió~~ _____i \rangle .
 Sonia ate.3SG pizza but pasta not know.1SG if Sonia ate.3SG
 ‘Sonia ate pizza, but pasta, I don’t know if ~~Sonia ate.~~’
- (13) Sonia le dio una pizza [a Ana]_i, pero a Bruno, no sé \langle ellipsis site ~~si~~
 Sonia DAT.3SG gave.3SG a pizza to Ana but to Bruno not know.1SG if
 (Sonia) le ~~— dio — una pizza~~ _____i \rangle .
 Sonia DAT.3SG gave.3SG a pizza
 ‘Sonia gave a pizza to Ana, but to Bruno, I don’t know if ~~Sonia gave him a pizza.~~’

2.1.3. Prepositional Phrases

Prepositional Phrases (PPs) can also be topicalized out of embedded polar questions in Spanish. This holds for PPs in the verbal domain (14), and for PPs in the nominal domain (15):

- (14) [Con Ana_{top}]_i, no sé si (Sonia) habló _____i.
 with Ana not know.1SG if Sonia talked.3SG
 ‘As for Ana, I don’t know if Sonia talked with her.’
- (15) [De Ana_{top}]_i, no sé si (Sonia) vio una foto _____i.
 of Ana not know.1SG if Sonia saw.3SG a picture
 ‘As for Ana, I don’t know if Sonia saw a picture.’

As expected, both types of PPs can occur as remnants for polar TREQs, given that possible remnants are those constituents that can be independently topicalized in the language:

- (16) Sonia habló con Bruno, pero con Ana, no sé.
 Sonia talked.3SG with Bruno but with Ana not know.1SG
 Literal: ‘Sonia talked with Bruno but, with Ana, I don’t know.’
 Interpretation: ‘Sonia talked with Bruno but I don’t know if she talked with Ana.’
- (17) Sonia vio una foto de Bruno, pero de Ana, no sé.
 Sonia saw.3SG a picture of Bruno but of Ana not know.1SG
 Literal: ‘Sonia saw a picture of Bruno, but of Ana, I don’t know.’
 Interpretation: ‘Sonia saw a picture of Bruno, but I don’t know if she saw a picture of Ana.’

For the sake of explicitness, in (18) and (19) I provide the sources for (16) and (17) respectively. In both cases, the remnants (*con Bruno* ‘with Bruno’ and *de Bruno* ‘of Bruno’) are topicalized out of the ellipsis site, and the embedded polar questions undergo ellipsis:

- (18) Sonia habló con Bruno, pero [con Ana]_i, no sé \langle ellipsis site ~~si habló~~ _____i \rangle .
 Sonia talked.3SG with Bruno but with Ana not know.1SG if talked.3SG
 ‘Sonia talked with Bruno but, with Ana, I don’t know ~~if Sonia talked.~~’
- (19) Sonia vio una foto [de Bruno]_i, pero de Ana, no sé \langle ellipsis site ~~si vio~~ _____i \rangle .
 Sonia saw.3SG a picture of Bruno but of Ana not know.1SG if saw.3SG
~~una foto~~ _____i \rangle .
 a picture
 ‘Sonia saw a picture of Bruno, but of Ana, I don’t know ~~if she saw a picture~~’.

2.1.4. Temporal and locative phrases, and adverbs

As for temporal and locative phrases, the examples in (20) and (21) show that they can be topicalized out of embedded polar questions in Spanish:

- (20) [El viernes_{top}]_i, no sé si (Sonia) vino _____i.
 the Friday not know.1SG if Sonia came.3SG
 ‘As for Friday, I don’t know if Sonia came that day.’
- (21) [En la playa_{top}]_i, no sé si (Sonia) corrió _____i.
 in the beach not know.1SG if Sonia ran.3SG
 ‘As for the beach, I don’t know if Sonia ran there.’

As predicted by the analysis proposed here, they can also be remnants for polar TREQs:

- (22) Sonia vino el jueves, pero el viernes, no sé.
 Sonia came.3SG the Thursday but the Friday not know.1SG
 Literal: ‘Sonia came on Thursday, but on Friday, I don’t know.’
 Interpretation: ‘Sonia came on Thursday, but I don’t know if she came on Friday.’

- (23) Sonia corrió en el parque, pero en la playa, no sé.
 Sonia ran.3SG in the park but in the beach not know.1SG
 Literal: ‘Sonia ran in the park, but in the beach, I don’t know.’
 Interpretation: ‘Sonia ran in the park, but I don’t know if she ran on the beach.’

In other words, the proposed source for the polar TREQ in (22) would be (24) below, and the proposed source for the polar TREQ in (23) would be (25). In each case the temporal/locative phrase (i.e., *el jueves* ‘on Thursday’ and *en el parque* ‘in the park’) undergoes topicalization, and the embedded polar question is elided:

- (24) Sonia vino [el jueves]_i, pero el viernes, no sé \langle ellipsis site ~~si vino~~ _____i \rangle .
 Sonia came.3SG the Thursday but the Friday not know.1SG if came.3SG
 ‘Sonia came on Thursday, but on Friday, I don’t know if she came.’
- (25) Sonia corrió en el parque, pero [en la playa]_i, no sé \langle ellipsis site ~~si corrió~~ _____i \rangle .
 Sonia ran.3SG in the park but in the beach not know.1SG if ran.3SG
 ‘Sonia ran in the park, but in the beach, I don’t know if she ran.’

Similarly, manner (26) and temporal (27) adverbs can also be topicalized out of embedded polar questions in Spanish:

- (26) [Rápido_{top}]_i, no sé si escribe _____i.
 fast not know.1SG if write.3SG
 ‘As for fast, I don’t know if she writes fast.’
- (27) [Ayer_{top}]_i, no sé si comió _____i.
 yesterday not know.1SG if ate.3SG
 ‘As for yesterday, I don’t know if she ate then.’

The examples (28)-(29) below show that they can also occur as remnants for polar TREQs, as we would expect, given the analysis put forth here:

- (28) Sonia escribe cuidadosamente, pero rápido, no sé.
 Sonia write.3SG carefully but fast not know.1SG
 Literal: ‘Sonia writes carefully, but, fast, I don’t know.’
 Interpretation: ‘Sonia writes carefully, but I don’t know if she writes fast.’
- (29) Sonia comió ayer, pero hoy, no sé.
 Sonia ate.3SG yesterday but today not know.1SG
 Literal: ‘Sonia ate yesterday, but today, I don’t know.’
 Interpretation: ‘Sonia ate yesterday, but I don’t know if she also ate today.’

Once again, I provide below the sources for the elliptical sentences above:

- (30) Sonia escribe cuidadosamente, pero [rápido]_i, no sé \langle ellipsis site ~~si escribe~~ _____i \rangle .

Sonia write.3SG carefully but fast not know.1SG if write.3SG
 ‘Sonia writes carefully, but, fast, I don’t know ~~if she writes.~~’

- (31) Sonia comió ayer, pero [hoy]_i, no sé <ellipsis site ~~si comió~~ ___i>.
 Sonia ate.3SG yesterday but today not know.1SG if ate.3SG
 ‘Sonia ate yesterday, but today, I don’t know ~~if she ate.~~’

It’s worth noting that some adverbs, like frequency adverbs, can be topicalized out of polar questions, as in (32), but they can’t occur as remnants of polar TREQs, as in (33):

- (32) [Ocasionalmente_{top}]_i, no sé si corre ___i.
 occasionally not know.1SG if run.3SG
 ‘I don’t know if she runs occasionally.’

- (33) #Sonia corre siempre, pero ocasionalmente, no sé.
 Sonia run.3SG always but occasionally not know.1SG
 Literal: ‘Sonia always runs, but, occasionally, I don’t know.’
 Intended: ‘Sonia always runs, but I don’t know if she also runs occasionally.’

Crucially, the unacceptability of (33) is not due to ellipsis. Instead, the non-elliptical counterpart of (33) is also impossible in this context, as shown in (34):

- (34) #Sonia corre siempre, pero [ocasionalmente]_i, no sé si corre ___i.
 Sonia run.3SG always but occasionally not know.1SG if run.3SG
 Intended: ‘Sonia always runs, but I don’t know if she runs occasionally.’

I posit that this stems from a dialogue incongruence triggered by the polar question, which asks a something (i.e., whether Sonia *occasionally* runs) that has already been answered in the antecedent (i.e., the fact that she *always* runs). In this regard, I do not take this to be a true counterexample to the generalization I am proposing here concerning the interplay and correlation between polar TREQs and topicalization.

2.1.5. Predicative adjectives

Predicative adjectives can be topicalized out of polar questions in Spanish, as shown in (35):

- (35) [Azul_{top}]_i, no sé si pintó el auto ___i.
 blue not know.1SG if painted.3SG the car
 ‘As for blue, I don’t know if she painted the car that color.’

It’s worth noting that in Spanish, a sentence like (36) can have two interpretations:

- (36) Sonia pintó el auto azul.
 Sonia painted.3SG the car blue
 Interpretation #1: ‘Sonia painted the car that’s blue.’
 Interpretation #2: ‘Sonia painted the car using blue paint.’

In other words, the post-nominal adjective *azul* ‘blue’ can either be interpreted as an attributive adjective or as predicative adjective. In this subsection, I only focus on the latter. I discuss the former in Section 2.1.8.

With respect to polar TREQs, predicative adjectives can occur as remnants, as expected based on the analysis proposed in this paper:⁷

- (37) Sonia pintó el auto rojo, pero azul, no sé.
 Sonia painted.3SG the car red but blue not know.1SG
 Literal: ‘Sonia painted the car red, but blue, I don’t know.’
 Interpretation: ‘Sonia painted the car red, but I don’t know if she also painted the car blue.’

More specifically, the source of (37) would be the structure in (38), where the predicative adjective (i.e., *azul* ‘blue’) undergoes topicalization outside of the ellipsis site, and ellipsis targets the entire embedded polar question (minus the topicalized adjective):

- (38) Sonia pintó el auto rojo, pero [azul]_i, no sé <ellipsis site si pintó el auto ____>
 Sonia painted.3SG the car red but blue not know.1SG if painted.3SG the car
 car
 ‘Sonia painted the car red, but blue, I don’t know ~~if she painted the car.~~’

2.1.6. Infinitivals

As the examples in (39)-(40) show, bare infinitives and infinitival phrases can be topicalized out of polar questions in Spanish:

- (39) [Comer_{top}]_i, no sé si quiere _____i.
 to.eat not know.1SG if want.3SG
 ‘As for eating, I don’t know if she wants to do that.’
- (40) [Comprar un auto_{top}]_i, no sé si quiere _____i.
 to.buy a car not know.1SG if want.3SG
 ‘As for buying a car, I don’t know whether she wants to do that.’

Likewise, they can occur as remnants for polar TREQs, as expected:

- (41) Sonia quiere cocinar, pero comer, no sé.
 Sonia want.3SG to.cook but to.eat not know.1SG
 Literal: ‘Sonia wants to cook, but to eat, I don’t know.’
 Interpretation: ‘Sonia wants to cook, but I don’t know if she wants to eat.’
- (42) Sonia quiere viajar a Buenos Aires, pero comprar un auto, no sé.
 Sonia want.3SG to.travel to Buenos Aires but to.buy a car not know.1SG
 Literal: ‘Sonia wants to travel to Buenos Aires, but to buy a car, I don’t know.’
 Interpretation: ‘Sonia wants to travel to BA, but I don’t know if she wants to buy a car.’

⁷ These, of course, can only be accepted in a context in which she painted the car using multiple colors.

Below, I provide the source for each of the polar TREQs above. In (43), *cocinar* ‘to cook’ is topicalized out of the ellipsis site, followed by ellipsis of the embedded polar question. Likewise, in (44), *viajar a Buenos Aires* ‘to travel to Buenos Aires’ is topicalized, and the embedded polar question undergoes ellipsis:

(43) Sonia quiere cocinar, pero [comer]_i, no sé <ellipsis site ~~si quiere~~ _____i>.
 Sonia want.3SG to.cook but to.eat not know.1SG if want.3SG
 ‘Sonia wants to cook, but to eat, I don’t know ~~if she wants (to do that).~~’

(44) Sonia quiere viajar a BA, pero [comprar un auto]_i, no sé <ellipsis site ~~si quiere~~ _____i>.
 Sonia want.3SG to.travel to BA but to.buy a car not know.1SG if
 want.3SG
 ‘Sonia wants to travel to Buenos Aires, but to buy a car, I don’t know ~~if she wants (that).~~’

2.1.7. CPs

As the examples (45) and (46) show, both interrogative and declarative CPs can be topicalized out of embedded polar questions in Spanish:

(45) [Cuándo vio la película Bruno]_i, no sé si preguntó _____i.
 when saw.3SG the movie Bruno not know.1SG if asked.3SG
 ‘As for when Bruno saw the movie, I don’t know if she asked that.’

(46) [Que viste la película]_i, no sé si (lo) dijo _____i.
 that saw.2SG the movie not know.1SG if it said.3SG
 ‘That you saw the movie, I don’t know if she said that.’

As expected given the analysis proposed here, both interrogative and declarative CPs can be remnants for polar TREQs:

(47) Sonia preguntó cuándo leyó el libro Bruno, pero cuándo vio la película,
 Sonia asked.3SG when read.3SG the book Bruno but when watched.3SG the movie
 no sé.
 not know.3SG
 Literal: ‘Sonia asked when Bruno read the book, but when he watched the movie, I don’t know.’
 Interpretation: ‘Sonia asked when Bruno read the book, but I don’t know if she asked when he watched the movie.’

(48) Sonia dijo que leíste el libro, pero que viste la película, no sé.
 Sonia said.3SG that read.2SG the book but that watched.2SG the movie not know.1SG
 Literal: ‘Sonia said that you read the book, but that you watched the movie, I don’t know.’
 Interpretation: ‘Sonia said that you read the book, but I don’t know if she said that you watched the movie.’

For the sake of explicitness, in (49) and (50) I provide the sources of the polar TREQs in (47) and (48) respectively. In both cases, the remnants (*cuándo vio la película* ‘when (he) saw the movie’ and *que viste la película* ‘that you saw the movie’) are topicalized out of the ellipsis site, and the embedded polar questions undergo ellipsis:

- (49) Sonia preguntó cuándo leyó el libro Bruno, pero cuándo vio la película,
 Sonia asked.3SG when read.3SG the book Bruno but when watched.3SG the movie
 no sé <ellipsis site ~~si quiere~~ ___i>.
 not know.3SG if asked.3SG
 ‘Sonia asked when Bruno read the book, but when he watched the movie, I don’t know ~~if she asked (that).~~’
- (50) Sonia dijo que leíste el libro, pero que viste la película, no sé
 Sonia said.3SG that read.2SG the book but that watched.2SG the movie not know.1SG
<ellipsis site ~~si dije~~ ___i>.
 if said.3SG
 ‘Sonia said that you read the book, but that you watched the movie, I don’t know ~~if she said that.~~’

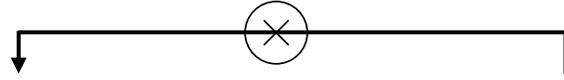
2.1.8. Attributive Adjectives

The previous sections provided examples of constituents that can be topicalized out of embedded polar questions. According to the proposal put forth here, all these constituents are predicted to be possible remnants for polar TREQs. As I showed above, this prediction is borne out. Examples of constituents that cannot be topicalized, and subsequently cannot be remnants of polar TREQs will complement my analysis. In this respect, the following examples show that post-nominal attributive adjectives cannot be topicalized out of embedded polar questions in Spanish (51)⁸, and cannot be remnants for polar TREQs (52):

- (51) *[Joven_{top}]_i, no sé si contrató a un amigo ___i.
 young not know.3SG if hired.3SG DOM a friend
 Intended: ‘As for young, I don’t know whether she hired a young friend.’
- (52) *Sonia contrató a un amigo viejo, pero joven, no sé.
 Sonia hired.3SG DOM a friend old but young not know.1SG
 Literal: ‘Sonia hired an elderly friend, but young, I don’t know.’
 Intended: ‘Sonia hired an elderly friend, but I don’t know if she hired a young friend.’

⁸ An anonymous reviewer asks why attributive adjectives cannot be topicalized. While I lack a specific response to this question, I believe that the answer is not particularly relevant to the current proposal. In essence, what matters for the proposed analysis is that any constituent that can be topicalized out of an embedded polar question in non-elliptical contexts should be a possible remnant in polar TREQs. This holds true for the constituents analyzed so far. In this subsection, I demonstrate the converse scenario, that is, a situation in which a constituent cannot be topicalized from an embedded polar question and, as a result, cannot serve as a remnant for polar TREQs.

That is, the polar TREQ in (52) is ungrammatical because it would involve the illicit topicalization of the adjective *joven* ‘young’, as schematically illustrated in (53):



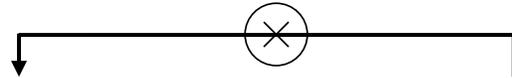
- (53) *Sonia contrató a un amigo viejo, pero [joven]_i, no sé si contrató a un amigo _____i.
 Sonia hired.3SG DOM a friend old but young not know.1SG if hire.3SG DOM a friend
 Literal: ‘Sonia hired an elderly friend, but young, I don’t know if she hired a friend.’

Similarly, (54) shows that pre-nominal attributive adjectives cannot be topicalized out of embedded polar questions, and, as predicted, polar TREQs (55) are ungrammatical:

- (54) *[Nuevo_{top}]_i, no sé si contrató a un _____i amigo
 new not know.1SG if hired.3SG DOM a friend
 Intended: ‘As for new, I don’t know if she hired a new friend.’

- (55) *Sonia contrató a un viejo amigo, pero nuevo, no sé.
 Sonia hired.3SG DOM an old friend but new not know.1SG
 Literal: ‘Sonia hired a long-time friend, but a new one, I don’t know.’
 Intended: ‘Sonia hired a long-time friend, but I don’t know if she also hired a new friend.’

For the sake of explicitness, (56) provides the source for the ungrammatical polar TREQ in (55), where the ungrammaticality comes from the illicit topicalization of the adjective *nuevo* ‘new’:



- (56) *Sonia contrató a un viejo amigo, pero [nuevo]_i, no sé si contrató a un _____i amigo.
 Sonia hired.3SG DOM a old friend but young not know.1SG if hire.3SG DOM a friend
 Literal: ‘Sonia hired a long-time friend, but new, I don’t know if she hired a friend.’

2.1.9. Interim Summary

To sum up, the preceding subsections provide evidence to establish a clear correlation between constituents that can undergo topicalization and constituents that can be remnants in polar TREQs. First (Sections 2.1.1 to 2.1.7), I showed that contexts that allow topicalizations out of embedded polar questions also allow polar TREQs. Subsequently (Section 2.1.8), I showed that contexts where topicalizations out of polar questions are not possible, also disallow polar TREQs. This is summarized in the table below:

Table 1. Availability of constituents as remnants of polar TREQs and as topicalised elements

Constituent	Topicalization	Remnant for polar TREQs
Subjects	✓	✓
Direct Objects	✓	✓
Indirect Objects	✓	✓
Prepositional Phrases	✓	✓
Temporal and Locative phrases	✓	✓
Adverbs	✓	✓
Predicative adjectives	✓	✓
Infinitivals	✓	✓
CPs	✓	✓
Attributive adjectives	✗	✗

These patterns, in turn, support the claim put forth here that there is structure inside the ellipsis site, and that the remnant has been topicalized out of it. That is, movement of the remnant out of the ellipsis site is independently motivated, eliminating the need of resorting to some kind of ‘exceptional movement’ only present in elliptical contexts. Moving forward, in the next section I delve into the discussion of connectivity effects.

2.2. Connectivity effects

In this section I provide evidence that syntactic identity between the ellipsis site and the antecedent is needed to license polar TREQs. This evidence comes from various connectivity effects, such as the impossibility of case and voice mismatches, the unavailability of P-stranding under ellipsis, and the ban on *spray/load* alternations.

2.2.1. Case mismatches

Ross (1969) was the first one to observe that, in contexts of ellipsis, the remnant must match the case of its correlate (for a succinct overview of some exceptions to this observation, see Vicente 2015). As it is well known, Spanish does not mark its objects with morphological case; however, human/animate objects must be marked with DOM (Differential Object Marking) (see, e.g., Leonetti 2004, López 2012, Fábregas 2013, among many others). This is exemplified in (57), where DOM cannot be omitted from the remnant in the context of polar TREQs:

- (57) Sonia escondió a Bruno, pero *(a) Ana, no sé.
 Sonia hid.3SG DOM Bruno but DOM Ana not know.1SG
 Literal: ‘Sonia hid Bruno, but Ana, I don’t know.’
 Interpretation: Sonia hid Bruno, but I don’t know if she hid Ana.’

This patterns with other types of clausal ellipsis, such as sluicing (58) and fragment answers (59), which also resist DOM-omission from their remnants:

- (58) Sonia escondió a alguien, pero no sé *(a) quién.
 Sonia hid.3SG DOM someone but not know.1SG DOM who
 ‘Sonia hid someone but I don’t know who.’

(59) A: ¿A quién escondió Sonia?
 DOM who hid.3SG Sonia
 ‘Who did Sonia hide?’

B: *(A) Bruno.
 DOM Bruno
 ‘Bruno.’

Merchant (2001) argues that the ungrammaticality of examples such as (58) and (59) (and any case of impossible case mismatches more generally) can be easily explained if the ellipsis site contains a structure that includes the relevant case assigner (in this case, the verb). The relevant factor here is not that the remnant and its correlate *match* in case, but that the elided structure is identical to its antecedent, that is, that it includes the case assigner that triggers DOM. Further supporting evidence for this claim comes from examples like (60) below, where DOM is not present in the antecedent (given that the object is not human/animate), yet it must be present in the remnant (given that the extracted object is human/animate):

(60) Sonia escondió el tesoro, pero *(a)l tesorero, no sé.
 Sonia hid.3SG the treasure but DOM.the treasurer not know.1SG
 Literal: ‘Sonia hid the treasure, but the treasurer, I don’t know.’
 Interpretation: ‘Sonia hid the treasure, but I don’t know if she hide the treasurer.’

What’s relevant here—and in elliptical contexts more generally—is not just case *matching*, but case *assignment*. For instance, in the Spanish example above, a condition purely based on case *matching* would predict that the remnant shouldn’t bear DOM, contrary to fact. Moreover, the ungrammaticality of sentences with remnants lacking DOM serves as evidence for the claim put forth here that remnants are indeed topics that move from within the embedded clause, and out of the ellipsis site. In the following example, *el tesorero* ‘the treasurer’ is a hanging topic, based-generated in the left periphery of the clause, and hence, it cannot bear DOM:

(61) *(A)l tesorero, no sé si Sonia escondió a esa persona.
 DOM.the treasurer not know.1SG if Sonia hid.3SG DOM that person
 ‘As for the treasurer, I don’t know if Sonia hid that person.’

Conversely, topicalized objects require DOM, as shown in (62), aligning with the elliptical cases presented earlier:

(62) *(A)l tesorero, no sé si Sonia lo escondió.
 DOM.the treasurer not know.1SG if Sonia it hid.3SG
 ‘As for the treasurer, I don’t know if Sonia hid him.’

2.2.2. Voice mismatches

Additional support for an ellipsis-based analysis of polar TREQs, and for the need for syntactic identity between the ellipsis site and its antecedent, comes from the unavailability of voice mismatches (see, Merchant 2013, et. seq.). As the following example shows an active sentence cannot be elided if the antecedent is a passive sentence:

- (63) *La casa fue destruida por Sonia, pero Bruno, no sé.
 the house was.3SG destroyed by Sonia but Bruno not know.1SG
 Literal: ‘The house was destroyed by Sonia, but Bruno, I don’t know.’
 Intended: ‘...but Bruno, I don’t know if he also destroyed the house.’⁹

Crucially, a non-elliptical version of (63) is perfectly possible in this context, as shown in (64), which means that the ungrammaticality of (63) is due to the elliptical operation:

- (64) ...pero Bruno no sé si (también) destruyó la casa.
 but Bruno not know.1SG if also destroyed.3SG the house
 ‘...but, as for Bruno, I don’t know if he also destroyed the house.’

Moreover, a passive sentence cannot be elided if the antecedent is an active sentence:

- (65) *Sonia destruyó la casa, pero por Bruno, no sé.
 Sonia destroyed.3SG the house but by Bruno not know.1SG
 Literal: ‘Sonia destroyed the house, but by Bruno, I don’t know.’
 Intended: ‘...but I don’t know what was destroyed by Bruno.’

In summary, the unavailability of voice mismatches supports the argument made here that the structure inside the ellipsis site must be identical/isomorphic to the structure of its antecedent.

2.2.3. Spray/load alternations

The so-called *spray/load alternation* is an alternation in which a verb describing caused motion of one entity to another exhibits two arguments (I refer the reader to Beavers 2017, and references therein, for an in-depth description of this phenomenon). This is exemplified in (66)-(67):

- (66) *with* variant:
 Sonia cargó el camión con libros.
 Sonia loaded.3SG the truck with books
 ‘Sonia loaded the truck with books.’
- (67) *onto* variant:
 Sonia cargó libros en el camión.
 Sonia loaded.3SG books in the truck
 ‘Sonia loaded books onto the truck.’

Contexts that have one of the variants in the antecedent and the other variant in the ellipsis site are ungrammatical, as the sluicing examples below show:

- (68) *Sonia cargó algún camión con libros, pero no sé en qué camión.
 Sonia loaded.3SG some truck with books but not know.1SG in which truck
 ‘Sonia loaded some truck with books, but I don’t know onto which truck.’

⁹ This polar TREQs would be possible if it’s intended to convey that the speaker doesn’t know whether Bruno was also destroyed by Sonia. This reading is not the relevant one under examination here.

- (69) *Sonia cargó algunos libros en el camión, pero no sé con qué libros.
 Sonia loaded.3SG some books in the truck but not know.1SG with which books
 ‘Sonia loaded something onto the truck, but I don’t know with which books.’

Only structural matching is allowed under ellipsis, as shown below:

- (70) Sonia cargó algún camión con libros, pero no sé qué camión.
 Sonia loaded.3SG some truck with books but not know.3SG which truck
 ‘Sonia loaded some truck with books, but I don’t know which truck.’
- (71) Sonia cargó algunos libros en el camión, pero no sé qué libros.
 Sonia loaded.3SG some books in the truck but not know.1SG which books
 ‘Sonia loaded some books onto the truck, but I don’t know which books.’

The fact that this structural alternation is disallowed under ellipsis is usually taken to be strong evidence for the need for syntactic identity, and against pure semantic approaches, since both alternatives entail the same meaning. Importantly, with regards to the empirical domain under analysis here (i.e., polar TREQs), *spray/load* alternations are also disallowed. Crucially, this restriction is not due to a question/answer incongruity, as the non-elliptical counterparts of the elliptical sentences (72a)-(73a) below are possible, as shown in (72b) and (73b):

- (72) Sonia cargó el camión con libros...
 Sonia loaded.3SG the truck with books
 ‘Sonia loaded the truck with books...’
- a. *...pero en el auto, no sé.
 but in the car not know.1SG
 Literal: ‘...but in the car, I don’t know.’
 Intended: ‘...but I don’t know if she also loaded books in the car.’
- b. ...pero en el auto, no sé si cargó libros.
 but in the car not know.1SG if loaded.3SG books
 ‘...but I don’t know if she loaded books in the car.’
- (73) Sonia cargó libros en el camión...
 Sonia loaded.3SG books in the truck
 ‘Sonia loaded books in the truck...’
- a. *...pero con revistas, no sé
 but with magazines not know.1SG
 Literal: ‘...but with magazines, I don’t know.’
 Intended: ‘...but I don’t know if she loaded the truck with magazines.’
- b. ...pero con revistas, no sé si lo cargó.
 but with magazines not know.3SG if it loaded.3SG
 ‘...but I don’t know if she loaded it with magazines.’

For the sake of completeness, the only possible option for polar TREQs is the one in which there's structural matching between the antecedent and the ellipsis site (i.e., one where the same variant is used both in the antecedent and in the ellipsis site):

- (74) Sonia cargó el camión con libros...
 Sonia loaded.3SG the truck with books
 'Sonia loaded the truck with books...'
- a. ...pero con revistas, no sé.
 but with magazines not know.1SG
 Literal: '...but with magazines, I don't know.'
 Interpretation: '...but I don't know if she loaded the truck with magazines.'
- b. ...pero el auto, no sé.
 but the car not know.1SG
 Literal: '...but the car, I don't know.'
 Interpretation: '...but I don't know if she loaded the car with books.'
- (75) Sonia cargó libros en el camión...
 Sonia loaded.3SG books in the truck
 'Sonia loaded books in the truck...'
- a. ...pero revistas, no sé.
 but magazines not know.1SG
 Literal: '...but magazines, I don't know.'
 Interpretation: '...but I don't know if she loaded magazines onto it.'
- b. ...pero en el auto, no sé.
 but in the car not know.1SG
 Literal: '...but onto the car, I don't know'
 Interpretation: '...but I don't know if she also loaded books onto the car.'

Again, these empirical facts provide strong evidence that some type of syntactic identity is needed to license polar TREQs.

2.2.4. P-stranding under ellipsis

As the following examples show, a preposition cannot be stranded (i.e., omitted) from the remnant in polar TREQs:

- (76) Sonia habló con Bruno, pero *(con) Ana, no sé.
 Sonia talked.3SG with Bruno but with Ana not know.1SG
 Literal: 'Sonia talked with Bruno, but with Ana, I don't know.'
 Interpretation: 'Sonia talked with Bruno, but I don't know if she talked with Ana.'

This contrasts with what we observe in other types of clausal ellipsis in Spanish, such as sluicing, which do allow optionally omitting the preposition from the remnant (for a discussion on P-stranding under ellipsis in Spanish I refer the reader to Vicente 2008, Rodrigues et al. 2009, Barros 2014, 2016, and Stigliano 2022):

- (77) Sonia habló con alguien, pero no sé (con) quién.
 Sonia talked.3SG with someone but not know.1SG with who
 ‘Sonia talked with someone but I don’t know (with) who.’

Building upon recent research on the syntax of clausal ellipsis in Spanish, and the observation concerning P-stranding/omission under ellipsis provided in (78), I consider the examples above as additional evidence supporting the claim that the remnant *con Ana* ‘with Ana’ in (76) is topicalized and moves to the left-periphery. More specifically, in recent work, Stigliano (2022) formulates the following generalization:

- (78) The *Preposition Omission Generalization* for Spanish:
 P-omission in ellipsis in Spanish is only allowed when the following two conditions are met: (a) the remnant’s correlate in the antecedent does not move, and (b) the remnant does not move.

(adapted from Stigliano 2022, p. 29)

In particular, the example in (76) above complies with Stigliano’s *Preposition Omission Generalization* in (78), given that (a) the remnant’s correlate in the antecedent (i.e., *con Bruno* ‘with Bruno’) hasn’t moved, but (b) the remnant itself (i.e., *con Ana* ‘with Ana’) undergoes movement, as it’s topicalized. Consequently, the omission of the preposition from the remnant is predicted to be ungrammatical, a prediction that is empirically supported. Specifically, the ban on omitting the preposition in polar TREQs arises from the general ban on P-stranding in Spanish. That is, if, as proposed here, the remnant is topicalized, it must pied-pipe the preposition, hence the impossibility of leaving it behind and falling under the scope of ellipsis.

2.3. Polar TREQs in other contexts

Before concluding this section, I present data to demonstrate that embedded polar TREQs are not a crystallized construction but rather involve a productive elliptical process that can occur with various embedded verbs, besides *saber* ‘to know’. For instance, they are possible with *recordar* ‘remember’, as shown in (79):

- (79) Sonia comió pizza, pero Bruno, no recuerdo.
 Sonia ate.3SG pizza but Bruno not remember.1SG
 Literal: ‘Sonia ate pizza, but Bruno, I don’t remember.’
 Interpretation: ‘Sonia ate pizza, but I don’t remember if Bruno ate pizza.’

In addition, as (80) shows, *estar seguro/a* ‘to be sure’ also allows embedded polar TREQs:

- (80) Sé que Sonia comió pizza, pero Bruno, no estoy segura.
 know.1SG that Sonia ate.3SG pizza but Bruno not be.1SG sure
 Literal: ‘I know that Sonia ate pizza, but Bruno, I’m not sure.’

Interpretation: ‘I know that Sonia ate pizza, but I’m not sure if Bruno also ate pizza.’

Finally, another context for polar TREQs is given in (81), where they can occur with the verb *averiguar* ‘to find out’:

- (81) Averigüé que Sonia comió pizza, pero Bruno, no averigüé (todavía).
 found.out.1SG that Sonia ate.3SG pizza but Bruno not found.out.1SG yet
 Literal: ‘I found out that Sonia ate pizza, but Bruno, I didn’t find out yet.’
 Intended: ‘I found out that Sonia ate pizza, but I didn’t find out if Bruno ate pizza.’

2.4. Interim summary

To sum up, in this section I have provided compelling evidence to show that: (i) there is indeed structure inside the ellipsis site and embedded polar TREQs are the result of an elliptical construction; (ii) the remnant undergoes topicalization; and (iii) some form of syntactic identity/isomorphism is necessary to license this construction. With these points established, the following section presents a formal analysis for embedded polar TREQs.

3. The syntax of polar TREQs and the Ellipsis-COMP generalization

In this section, I provide a comprehensive analysis of embedded polar TREQs. I propose that polar TREQs arise as the result of clausal ellipsis, triggered by an [E]-feature on C. This parallels other clausal ellipsis phenomena, such as sluicing, fragment answers, stripping, and split questions. More specifically, following Merchant (2001) and subsequent work, I claim that ellipsis is triggered by an [E]-feature, responsible for deleting the complement of the head that bears it—in this case, the C head—, under the right identity conditions (more on this below). Drawing on the evidence from Section 2, I argue that some form of syntactic identity is needed for licensing polar TREQs. Additionally, in this section I demonstrate that polar TREQs offer valuable insights into the mechanisms underpinning elliptical constructions more broadly. In particular, I discuss the *Sluicing-COMP Generalization* proposed by Merchant (2001), and argue that, despite initial appearances, polar TREQs do align with it. Finally, I show how the examination of this novel elliptical construction sheds light on the architecture of the clausal spine in Spanish more generally, providing supporting evidence for the existence of functional projections on the left periphery of the embedded clause in this language.

3.1. Syntactic identity and the Sluicing-COMP Generalization

Based on the evidence laid out in Section 2, it has become evident that polar TREQs are not possible in contexts that involve structural mismatches, such as voice mismatches and *spray/load* alternations. Moreover, it is not possible to omit case (i.e., DOM) or the preposition from the remnant. Considering these findings, the distribution of polar TREQs presents a compelling case in favor of an identity condition based on syntactic, rather than semantic, identity.

There have been different proposals regarding the implementation of a syntactic identity condition for licensing ellipsis. In recent work, it has been made the point that syntactic identity seems to be better accounted for by a condition that is calculated head-by-head (see, for example, Tanaka 2011, Saab 2008, 2010, 2022, Merchant 2013, Rudin 2019, Ranero 2021, and Stigliano 2022). Given the extensive body of evidence supporting a head-by-head evaluation of syntactic identity, I follow these recent proposals, although the analysis of polar TREQs might also be compatible with other approaches. It is worth mentioning, however, that these proposals diverge

Interpretation: ‘Sonia ate pizza, but I don’t know what Bruno ate.’

If, as I posit earlier, embedded polar TREQs stem from clausal ellipsis, and this ellipsis arises as the result of deleting the complementizer of the head carrying the [E]-feature (i.e., the C head), it follows that the complementizer itself would be outside the ellipsis site. This means that, under the current implementation, it wouldn’t undergo deletion, and thus, we expect it to be overt, contrary to what we observe (see, e.g., (85) above). To account for these facts, I claim here that embedded polar TREQs offer empirical support for Merchant’s (2001) *Sluicing-COMP Generalization*. In (87) I adapted Merchant’s generalization to align with the terminology used throughout this paper:

(87) *Clausal Ellipsis-COMP Generalization:*

In clausal ellipsis, no non-operator material may appear in C.

(adapted from Merchant 2001, p. 62)

The polar TREQs analyzed so far would fall under the category of the second type of elements Merchant examines—namely, based-generated COMP-Internal Elements—, since *si* ‘if’ is a realization of the C head. Another example illustrating this generalization is presented below for Brazilian Portuguese. In Brazilian Portuguese, a complementizer can optionally follow a moved *wh*-phrase, as shown in (88); however, this complementizer cannot appear in sluicing contexts, as shown in (89B):

(88) Quem (que) saiu?
 who COMP left.3SG
 ‘Who left?’

(89) A: Alguém saiu.
 someone left.3SG
 ‘Someone left.’
 B: Quem (*que)?
 who COMP
 ‘Who?’

(adapted from Mendes and Kandybowicz 2023, exs. (1)-(2))

Merchant accounts for (87) by proposing a condition that states that a C head with phonetic exponence cannot be followed by a prosodic constituent lacking phonetic exponence. Importantly, as observed by Merchant in the context of Hungarian, there are some exceptions to this generalization (for additional exceptions to Merchant’s *Sluicing-COMP Generalization* see Marušič et. al. 2015 for Slovenian, Martinovic 2015 for Wolof, and Mendes and Kandybowicz 2023 for Nupe, among others). In Hungarian the complementizer *hogy* ‘that’ can be overt in the context of sluicing, as shown in (88):

(88) A gyerekek találkoztak valakivel de nem emlékszem, (hogy) kivel
 the children met.3PL someone.with but not remember.1SG that who.with
 ‘The kids met someone, but I don’t remember who.’

(adapted from Merchant 2001, ex. (117))

Hungarian facts are explained given that the remnant *wh*-phrase *kivel* ‘with who’ in the example above follows the C head. In other words, it is not the case that a C head with phonetic exponence is followed by a prosodic constituent lacking phonetic exponence. Intriguingly, a similar phenomenon is found in Spanish: in polar TREQs, when the remnant remains low within the embedded clause, the complementizer is overt:

- (89) Sonia comió pizza, pero no sé *(si) Bruno también.
 Sonia ate.3SG pizza but not know.1SG if Bruno also
 Literal: ‘Sonia ate pizza but I don’t know if Bruno also.’
 Interpretation: ‘Sonia ate pizza, but I don’t know if Bruno also ate pizza.’
- (90) Sonia comió pizza, pero no sé *(si) pasta también.
 Sonia ate.3SG pizza but not know.1SG if pasta also
 Literal: ‘Sonia ate pizza, but I don’t know if pasta also.’
 Interpretation: ‘Sonia ate pizza, but I don’t know if she also ate pasta.’

To have a complete empirical picture, the non-elliptical counterparts are also grammatical:

- (91) Sonia comió pizza, pero no sé si Bruno también comió pizza.
 Sonia ate.3SG pizza but not know.1SG if Bruno also ate.3SG pizza
 ‘Sonia ate pizza, but I don’t know if Bruno also ate pizza.’
- (92) Sonia comió pizza, pero no sé si pasta también comió.
 Sonia ate.3SG pizza but not know.1SG if pasta also ate.3SG
 ‘Sonia ate pizza but I don’t know if she also ate pasta.’

Even in the absence of a remnant, the mere presence of an element with phonetic exponence like *también* ‘also’ somewhat improves the acceptability of the sentence with an overt complementizer. Compare (85), repeated in (93), with (94) below:

- (93) Sonia comió pizza, pero Bruno no sé (*si).
 Sonia ate.3SG pizza but Bruno not know.1SG if
 Literal: ‘Sonia ate pizza but Bruno, I don’t know if.’
- (94) ??Sonia comió pizza, pero Bruno, no sé si también.
 Sonia ate.3SG pizza but Bruno not know.1SG if also
 Literal: ‘Sonia ate pizza but Bruno, I don’t know if also.’
 Interpretation: ‘Sonia ate pizza, but I don’t know if Bruno also ate pizza.’

Furthermore, a second remnant following *si* ‘if’ also makes an overt complementizer grammatical:

- (95) Sonia le dio una pizza a Ana pero Bruno no sé si a Fito.
 Sonia DAT.3SG gave a pizza to Ana but Bruno not know.1SG if to Fito
 ‘Sonia gave Ana a pizza, but I don’t know if Bruno gave Fito a pizza.’

Overall, I take all these facts to suggest that Spanish indeed aligns with Merchant's *Clausal Ellipsis-COMP Generalization* in that a C head with phonetic exponence cannot be followed by a prosodic constituent with no phonetic exponence. Spanish differs from languages like Hungarian in that, when some constituent with phonetic exponence follows the C head, that C head *must* have phonetic exponence (i.e., there's no optionality, as in Hungarian). To formalize Merchant's generalization, I propose the following post-syntactic (ordered) rules (see Embick 2000, 2010, Embick and Marantz 2008, Embick and Noyer 2001, Halle and Marantz 1993, Harley and Noyer 1999, among many others) to account for the exponence of the embedded polar complementizer in Spanish:

- (96) $C_{\text{embedded polar}} \leftrightarrow \emptyset / _ \emptyset$
 $C_{\text{embedded polar}} \leftrightarrow si$ *elsewhere case*

In other words, the embedded C head is phonetically null when followed by a constituent lacking phonetic exponence, and it is phonetically realized as *si* when followed by an element with phonetic exponence (i.e., in any other case).

3.2. The syntax of polar TREQs

To understand how polar TREQs are derived in Spanish, it's important to consider yet another set of facts. As the following examples show, the topicalized XP (i.e., *Bruno* in (97) and *pasta* in (98)) can precede the complementizer in non-elliptical contexts:¹⁰

- (97) Sonia comió pizza, pero no sé Bruno, si comió pizza.
 Sonia ate.3SG pizza but not know.1SG Bruno if ate.3SG pizza
 'Sonia ate pizza but I don't know if Bruno ate pizza.'
- (98) Sonia comió pizza, pero no sé pasta, si comió.
 Sonia ate.3SG pizza but not know.1SG pasta if ate.3SG
 'Sonia ate pizza but I don't know if she ate pasta.'

Moreover, the elliptical versions of the examples above are also possible. Consistent with the generalization in (87), and its implementation in (96), the complementizer cannot be spelled out in these contexts:

- (99) Sonia comió pizza, pero no sé Bruno (*si).
 Sonia ate.3SG pizza but not know.1SG Bruno if
 Literal: 'Sonia ate pizza, but I don't know Bruno.'
 Interpretation: 'Sonia ate pizza but I don't know if Bruno also ate pizza.'
- (100) Sonia comió pizza, pero no sé pasta (*si).
 Sonia ate.3SG pizza but not know.1SG pasta if
 Literal: 'Sonia ate pizza but I don't know pasta.'
 Interpretation: 'Sonia ate pizza but I don't know if she also ate pasta.'

¹⁰ Note that these sentences also require a particular intonation, which involves deaccenting after the topicalized constituent (i.e., *Bruno* in (99), and *pasta* in (100)).

The fact that the topicalized XP can appear both before or after the complementizer *si* ‘if’ in Spanish, as shown above, suggests the existence of suitable landing sites both preceding and following the complementizer C within the embedded clause. I posit that this landing site is the specifier of a Topic Phrase (TopP), as schematically shown in (101):¹¹

(101) ... [_(TopP) Top [_{CP} C_{embedded} [_(TopP) Top [_{TP} T ...

Additional evidence for the claim that the intermediate landing sites are Topic Phrase arises from the fact that the moved element must be clitic doubled in non-elliptical contexts, as shown below:

(102) Sonia comió la pizza, pero no sé la ensalada si *(la) comió.
Sonia ate.3SG the pizza but not know.1SG the salad if it ate.3SG
‘Sonia ate the pizza, but I don’t know the salad, if she ate it.’

(103) Sonia comió la pizza, pero no sé si la ensalada *(la) comió.
Sonia ate.3SG the pizza but not know.1SG if the salad it ate.3SG
‘Sonia ate the pizza, but I don’t know she ate the salad.’

Based on the facts discussed so far in this paper, in the remainder of this section I put forth a proposal on how polar TREQs are derived. In brief, there are three possible scenarios that need to be accounted for. These are summarized in (104), for the non-elliptical sentences:

(104) a. ...pero no sé si Bruno comió pizza.
but not know.1SG if Bruno ate.3SG pizza
‘(Sonia ate pizza) but I don’t know if Bruno ate pizza.’
b. ...pero no sé Bruno, si comió pizza.
but not know.1SG Bruno if ate.3SG pizza
‘(Sonia ate pizza) but I don’t know Bruno, if he ate pizza.’
b. ...pero Bruno, no sé si comió pizza.
but Bruno not know.1SG if ate.3SG pizza
‘(Sonia ate pizza) but Bruno, I don’t know if he ate pizza.’

An anonymous reviewer asks about interpretational differences among the three options outlined in (104), or whether there is optionality. To the best of my knowledge, there don’t appear to be any interpretational differences. I argue that which structure arises depends on the location of the TopP, since the topicalized element undergoes movement to its specifier. If TopP is situated in the embedded clause below the CP, then (104a) will result—as demonstrated in (102) above, clitic doubling patterns provide supporting evidence to consider this a topic position. If TopP is within the embedded clause but above the CP, then (104b) will result—again, evidence supporting the claim that this a topic position comes from clitic doubling patterns and is given in (103). Finally, if the TopP is in the matrix clause, we will obtain (104c). Further details on this are

¹¹ Consistent with Rizzi’s (1997) split-CP hypothesis, it is plausible that there may be additional projections in the left periphery of the sentence, aside from TopP (e.g., ForceP, FinP, among others). For the sake of clarity and exposition, I have opted to omit them and concentrate solely on the relevant projections.

discussed below. In each case, movement of *Bruno* is triggered by the need of checking a [\bullet top \bullet] feature on the Top head.

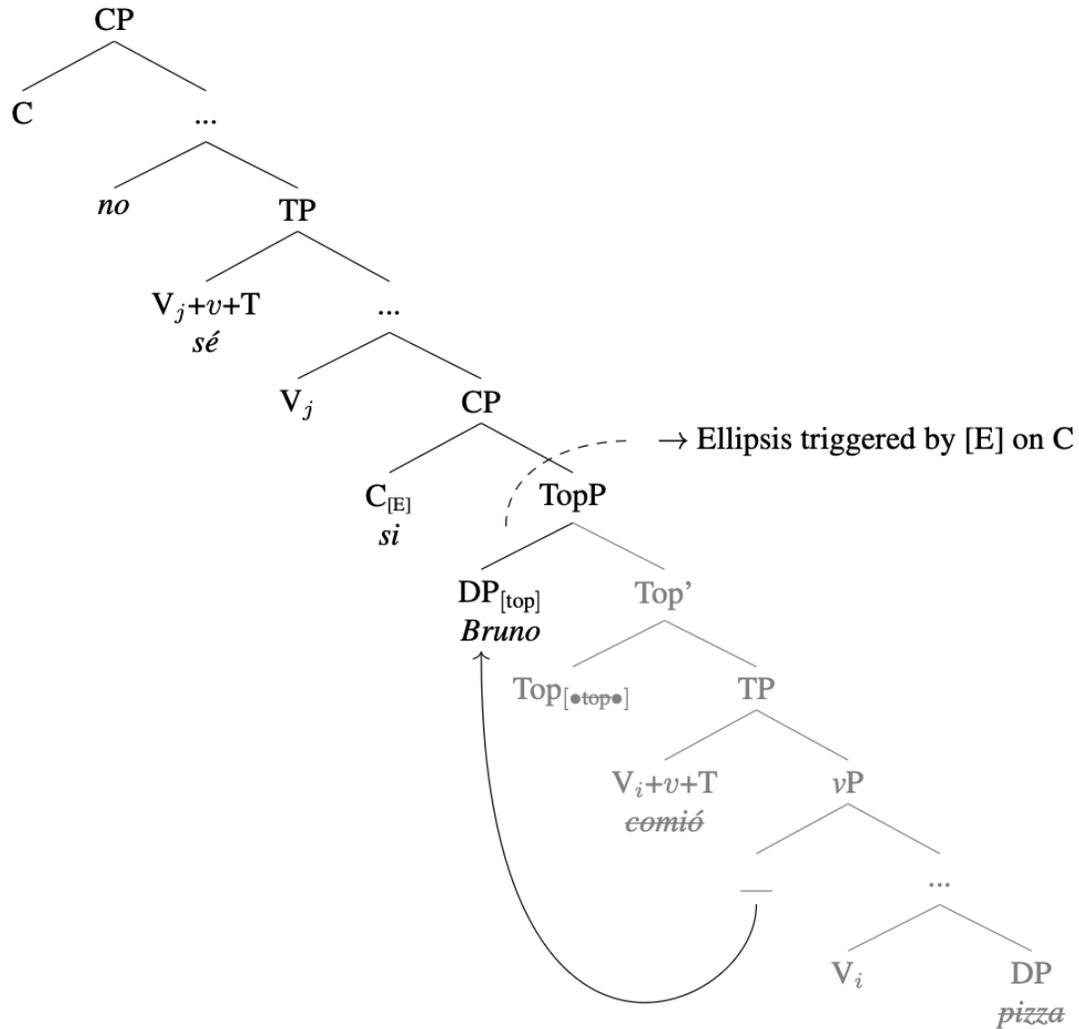
The elliptical counterparts of the sentences in (104) would be the structures in (105):

- (105) a. ...pero no sé si Bruno ~~comió~~ pizza.
 but not know.1SG if Bruno ate.3SG pizza
 Lit: '(Sonia ate pizza) but I don't know if Bruno.'
- b. ...pero no sé Bruno, si ~~comió~~ pizza.
 but not know.1SG Bruno if ate.3SG pizza
 Lit: '(Sonia ate pizza) but I don't know Bruno.'
- b. ...pero Bruno, no sé si ~~comió~~ pizza.
 but Bruno not know.1SG if ate.3SG pizza
 Lit: '(Sonia ate pizza) but Bruno, I don't know.'

Here again, which of the three cases arises depends on which TopP is active in a given structure. In the first case, *Bruno* moves to an intermediate position within the embedded clause. This position is the specifier of a TopP that sits below the embedded C head. In the second case, *Bruno* also moves to an intermediate position within the embedded clause, which is also the specifier of a TopP. In this case, however, the intermediate position sits above the embedded C head. Finally, in the third case, *Bruno* undergoes movement all the way up to the matrix clause, to the specifier of a TopP. The claim that this constitutes topic movement has been substantiated earlier in this paper, specifically in Section 2.1. The proposed structures and derivations for polar TREQs are presented in what follows.

Firstly, in (106), I illustrate the scenario where the remnant *Bruno* sits below the C head, following the complementizer:

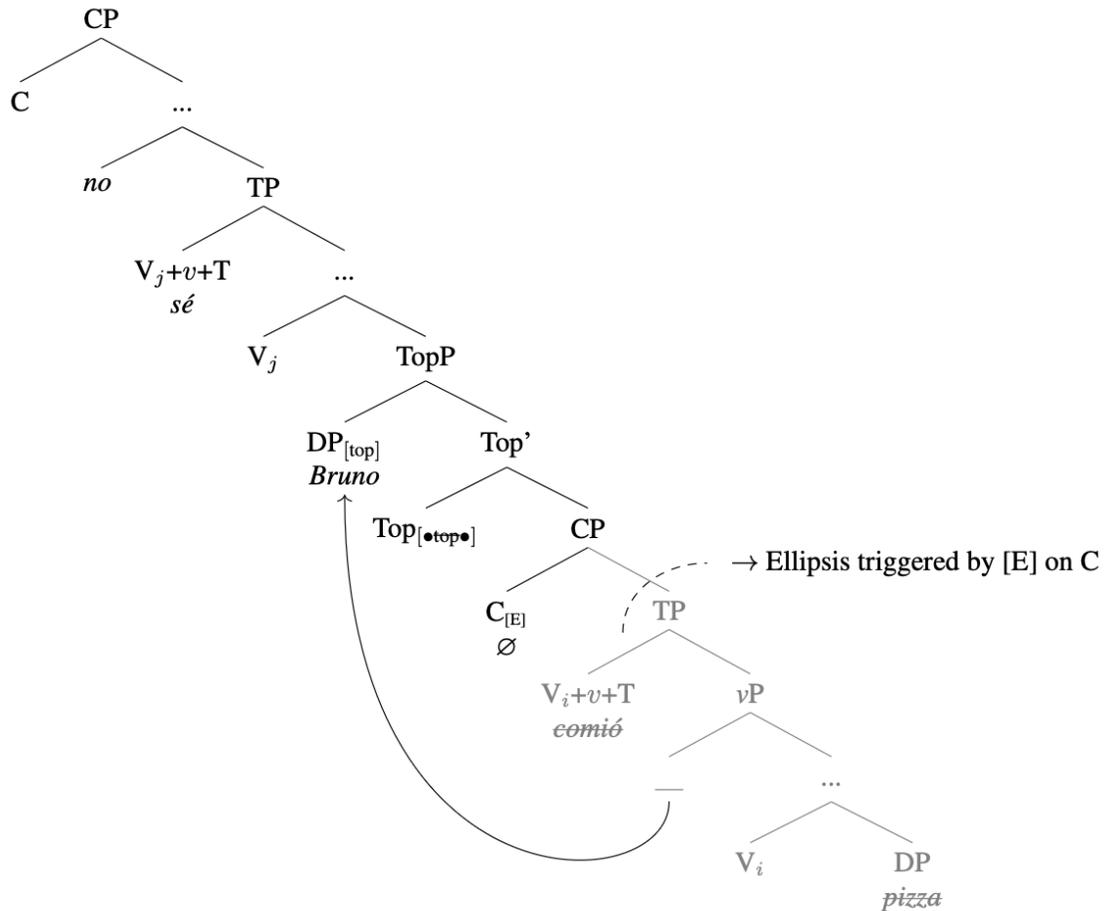
- (106) ... pero no sé si Bruno ~~comió~~ pizza.
 but not know.1SG if Bruno ate.1SG pizza
 ‘...but I don’t know if Bruno ate pizza.’



As illustrated in the tree above, the remnant *Bruno* undergoes topicalization and moves to the specifier of an embedded TopP located below the CP. Ellipsis is triggered by an [E]-feature on C. As argued by Stigliano (2022a, 2022b) for other cases of clausal ellipsis in Spanish, [top] and [focus]-marked elements do not go unpronounced even under the scope of ellipsis. This accounts for why, in the example above, the remnant is spelled out. Regarding the embedded complementizer, the post-syntactic rule in (96) dictates its overt realization as *si*, as it is the *elsewhere case*.

Second, in (107), I illustrate the scenario where the remnant *Bruno* moves to a position above the embedded C head:

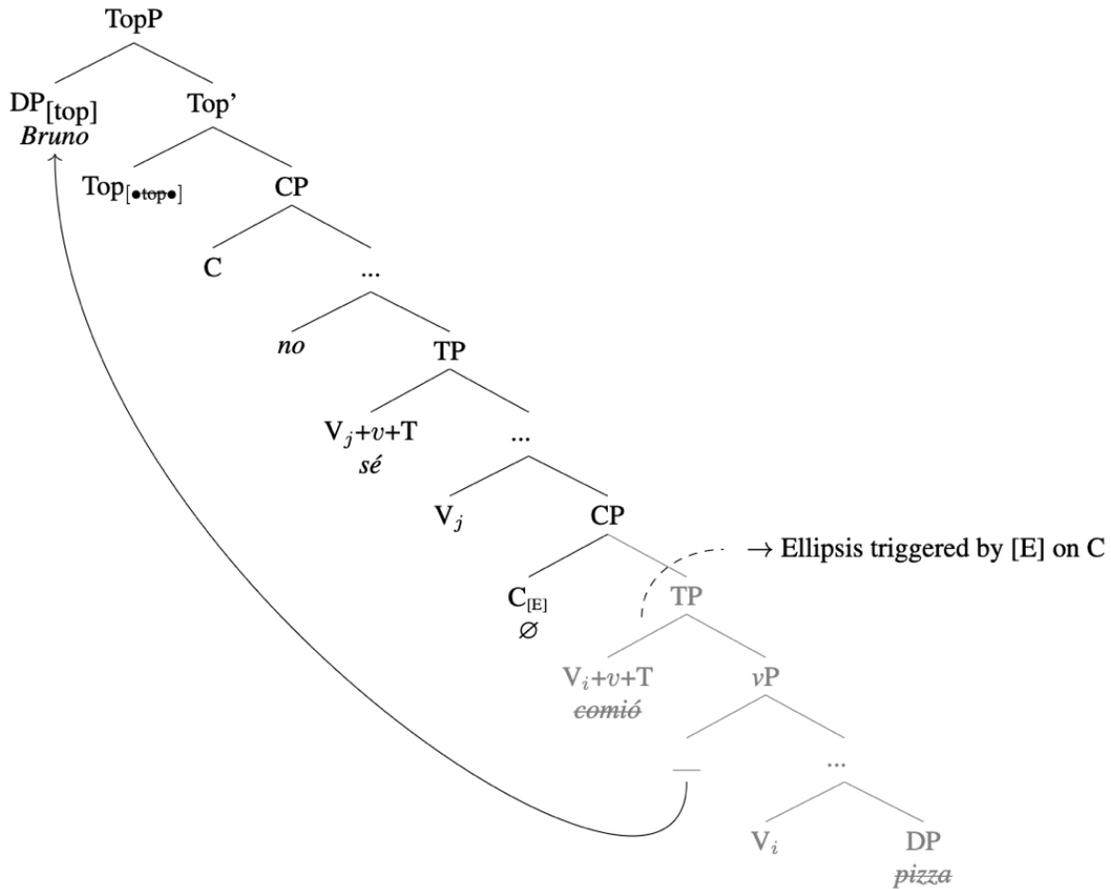
- (107) ... pero no sé Bruno ~~si comió~~ pizza.
 but not know.1SG Bruno if ate.3SG pizza
 ‘...but I don’t know Bruno if he ate pizza.’



As illustrated in the tree above, the remnant *Bruno* is topicalized and moves to the specifier of an embedded TopP, sitting above the embedded CP. According to the post-syntactic rule (96), because the complementizer is followed by a constituent with no phonetic exponence (i.e., the elided TP), it cannot itself have phonetic exponence, and it's not overtly realized.

Finally, in (108) I provide the derivation of a polar TREQ where the remnant is topicalized and moves to the matrix clause:

- (108) ... pero Bruno, no sé ~~si comió~~ pizza.
 but Bruno not know.1SG if ate.3SG pizza
 ‘...but Bruno, I don’t know if he ate pizza.’



As the tree above shows, the remnant *Bruno* is topicalized and undergoes movement to the specifier of a TopP in the matrix clause. Here again, according to the post-syntactic rule (96), the embedded complementizer lacks phonetic exponence because it's followed by a constituent without phonetic exponence.

To sum up, this section provided a comprehensive analysis of polar TREQs in Spanish. I argued that this elliptical construction is a type of clausal ellipsis, that is, ellipsis triggered by an [E]-feature on C. This operation deletes the complement of the head that bears it, except for any constituent that is [top] or [focus]-marked. Furthermore, I presented evidence supporting the claim that, in certain contexts, the remnant moves to the specifier of a TopP within the embedded clause. I showed that this embedded TopP can sit above or below the embedded CP. Finally, I demonstrated how the contexts that determine the presence or absence of an overt embedded complementizer in Spanish elliptical constructions align with Merchant's *Clausal Ellipsis-COMP Generalization* and are accounted for by the post-syntactic rule in (96) that governs their distribution.

4. Conclusions

This paper has conducted an in-depth exploration of the intricate syntactic properties underlying an understudied elliptical construction in Spanish, which I dubbed *Topic-Remnant Elided Polar Questions* (or *polar TREQs*, in short). The comprehensive analysis I put forth here has revealed that these constructions arise as the result of clausal ellipsis. Following previous claims in the literature, I argued here that, in polar TREQs, ellipsis is triggered by the presence of an [E]-feature on C. This [E]-feature is responsible for deleting the complement of the head that bears it.

I presented evidence supporting the claim that the remnant is a topicalized XP. This claim was mainly based on the correlation between those constituents that can be topicalized out of embedded polar questions and those constituents that can be remnants for polar TREQs. Furthermore, evidence for the need for syntactic identity came from the ban on structural mismatches (mismatches in voice, and *spray/load* alternations), as well as from other connectivity effects (the impossibility of omitting DOM or the preposition from the remnant).

Regarding the specific analysis proposed herein, the distribution of the overt complementizer lent support to an analysis based on the movement of the remnant to the specifier of a TopP. I argued that, in some cases, the remnant might move to the specifier of an embedded TopP, that can sit above or below the embedded CP. Evidence for this came from clitic doubling patterns. It's important to mention that the patterns provided in this paper illuminate the intricate syntactic structure underpinning these constructions, contributing to ongoing debates on movement and elliptical phenomena in Spanish and beyond. Finally, the analysis of the patterns regarding the presence or absence of an overt embedded complementizer in Spanish polar TREQs shed light into Merchant's *Sluicing-COMP Generalization*, providing empirical data to support it, while also accounting for its apparent exceptions.

In conclusion, this investigation has not only provided a detailed account of the syntactic intricacies of a novel elliptical construction, dubbed polar TREQs, in Spanish, but has also offered valuable insights into the broader landscape of elliptical phenomena in this language.

Laura Stigliano
The Ohio State University
College of Arts and Sciences
Department of Spanish and Portuguese

252 Hagerty Hall
1775 College Rd S
Columbus, OH 43210

stigliano.4@osu.edu
<https://orcid.org/0000-0002-1280-8344>

References

- Arregi, Karlos. 2010. Ellipsis in split questions. *Natural Language & Linguistic Theory* 28:539–592. <https://doi.org/10.1007/s11049-010-9097-x>
- Barros, Matthew. 2014. *Sluicing and Identity in Ellipsis*. Doctoral Dissertation, Rutgers.
- Barros, Matthew. 2016. Syntactic Identity in Ellipsis, and Deviations Therefrom: The case of copula clauses in sluicing. Manuscript. <https://lingbuzz.net/lingbuzz/002940>. Accessed 18 October 2021.

- Beavers, John. 2017. The Spray/Load Alternation. *The Wiley Blackwell Companion to Syntax, Second Edition* 1–31. <https://doi.org/10.1002/9781118358733.wbsyncom066>
- Embick, David, and Marantz, Alec. 2008. Architecture and Blocking. *Linguistic Inquiry* 39 (1):1–53. <https://doi.org/10.1162/ling.2008.39.1.1>
- Embick, David, and Noyer, Rolf. 2001. Movement Operations after Syntax. *Linguistic Inquiry* 32 (4):555–595. <https://doi.org/10.1162/002438901753373005>
- Embick, David. 2000. Features, Syntax, and Categories in the Latin Perfect. *Linguistic Inquiry* 31 (2): 185–230. <https://doi.org/10.1162/002438900554343>
- Embick, David. 2010. *Localism versus globalism in morphology and phonology*. Cambridge: MIT Press. <https://doi.org/10.7551/mitpress/9780262014229.001.0001>
- Fábregas, Antonio. 2013. Differential Object Marking in Spanish: state of the art. *Borealis – An International Journal of Hispanic Linguistics*, 2 (2), 1–80. <https://doi.org/10.7557/1.2.2.2603>
- Fox, Danny and Pesetsky, David. 2005. Cyclic Linearization of Syntactic Structure. *Theoretical Linguistics*, 31 (1-2): 1-45. <https://doi.org/10.1515/thli.2005.31.1-2.1>
- Halle, Morris, and Marantz, Alec. 1993. Distributed morphology and the pieces of inflection. In *Morphology: Critical Concepts in Linguistics, Volume 1*: 111–176.
- Harley, Heidi, and Noyer, Rolf. 1999. Distributed morphology. *Glott international* 4(4): 3–9.
- Leonetti, Manuel. 2004. Specificity and differential object marking in Spanish. *Catalan journal of linguistics*: 75–114. <https://doi.org/10.5565/rev/catjl.106>
- Li, Haoze. 2016. Fragment questions: Deleting question items. *Proceedings of the 46th Annual Meeting of the North East Linguistic Society*, 279–292. Amherst: Graduate Linguistics Student Association.
- López, Luis. 2012. *Indefinite objects: Scrambling, choice functions, and differential marking*. Cambridge, MA: MIT Press. <https://doi.org/10.7551/mitpress/9165.001.0001>
- Martinovic, Martina. 2015. *Feature geometry and head-splitting: Evidence from the morphosyntax of the Wolof clausal periphery*. Doctoral Dissertation, The University of Chicago
- Marušič, Franc, Mišmaš, Petra, Plesničar, Vesna, Razborsek, Tina, and Šuligoj, Tina. 2015. On a potential counter-example to Merchant’s Sluicing-COMP generalization. *Grazer linguistische Studien* 83 (1): 47–65.
- Mendes, Gesoel, and Kandybowicz, Jason. 2023. Salvation by deletion in Nupe. *Linguistic Inquiry* 54 (2): 299–325. https://doi.org/10.1162/ling_a_00434
- Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780199243730.001.0001>
- Merchant, Jason. 2013. Voice and Ellipsis. *Linguistic Inquiry* 44 (1): 77–108. https://doi.org/10.1162/LING_a_00120
- Ranero, Rodrigo. 2021. *Identity conditions on ellipsis*. Doctoral Dissertation, University of Maryland.
- Rizzi, Luigi. The Fine Structure of the Left Periphery. 1997. In: Haegeman, L. (eds) *Elements of Grammar. Kluwer International Handbooks of Linguistics*. Springer, Dordrecht. https://doi.org/10.1007/978-94-011-5420-8_7
- Rodrigues, Cilene, Nevins, Andrew, and Vicete, Luis. 2009. Cleaving the interactions between sluicing and P-stranding. *Romance Languages and Linguistic Theory 2006: Selected papers from ‘Going Romance’, Amsterdam, 7–9 December 2006*, 175–198. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/cilt.303.11rod>

- Ross, John Robert. 1969. Guess who? *Proceedings of the 5th Annual Meeting of the Chicago Linguistic Society*, ed. Robert I. Binnick, Alice Davison, Georgia M. Green, and Jerry L. Morgan, 252–286. Chicago: Chicago Linguistic Society.
- Rudin, Deniz. 2019. Head-Based Syntactic Identity in Sluicing. *Linguistic Inquiry* 50 (2): 253–283. https://doi.org/10.1162/ling_a_00308
- Saab, Andrés. 2008. *Hacia una teoría de la identidad parcial en las elipsis*. Doctoral Dissertation, Universidad de Buenos Aires.
- Saab, Andrés. 2010. Silent interactions: Spanish TP-ellipsis and the theory of island repair. *Probus* 22 (1): 73–116. <https://doi.org/10.1515/prbs.2010.003>
- Saab, Andrés. 2022. Grammatical silences from syntax to morphology. A model for the timing of ellipsis. *The Derivational Timing of Ellipsis*, ed. Güliz Güneù and Anikó Lipták. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780198849490.003.0005>
- Stigliano, Laura 2022b. *The Silence of Syntax: A Theory of Ellipsis Licensing and Identity*". Doctoral Dissertation, The University of Chicago
- Stigliano, Laura. 2022a. P-omission in ellipsis in Spanish: Evidence for syntactic identity. *Natural Language & Linguistic Theory* 1–37. <https://doi.org/10.1007/s11049-021-09535-w>
- Tanaka, Hidekazu. 2011. Syntactic identity and ellipsis. *The Linguistic Review* 28: 79–110. <https://doi.org/10.1515/tlr.2011.003>
- Vicente, Luis. 2008. Syntactic isomorphism and non-isomorphism under ellipsis. Manuscript, UCSC
<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.462.9947rep=rep1type=pdf>.
Accessed 18 October 2021
- Vicente, Luis. 2015. Morphological case mismatches under sluicing. *Snippets* 29: 16–17. <https://doi.org/10.7358/snip-2015-029-vice>
- Villa-García, Julio. (2016). TP-ellipsis with a polarity particle in multiple-complementizer contexts in Spanish: on topical remnants and focal licensors. *Borealis – An International Journal of Hispanic Linguistics*, 5 (2), 135–172. <https://doi.org/10.7557/1.5.2.3781>
- Wei, Ting-Chi. 2013. Fragment question and ellipsis in Chinese. *Studies in Chinese Linguistics* 34 (3): 151–198.
- Wei, Ting-Chi. 2018. Fragment questions in mandarin Chinese: Topic movement and pied-piping. *Language and Linguistics* 19 (2): 266–305. <https://doi.org/10.1075/lali.00010.wei>
- Weir, Andrew. 2014. *Fragments and Clausal Ellipsis*. Doctoral Dissertation, University of Massachusetts Amherst. <https://doi.org/10.7275/5823750.0>.
- Yoshida, Masaya, Nakao, Chizuru, and Ortega-Santos, Iván. 2015. The syntax of *Why-Stripping*. *Natural Language and Linguist Theory* 33: 323–370. <https://doi.org/10.1007/s11049-014-9253-9>