

## Pseudo-relative clauses, infinitives and gerunds with Spanish perception

verbs:

### A comparative view

#### 1 Introduction

It is well known that Spanish allows four types of clausal complements with the matrix perception verb *ver* ‘see’. First, Spanish allows a proto-typical finite complement clause, being fully specified for tense and phi-features, introduced by the complementizer *que* ‘that’:

- (1) Juan vio        que { María / yo / él / pro ... } bailaba.  
Juan saw.3SG that María I he Ø danced.3SG  
‘John saw that Mary/I/he danced.’

In this clause, the embedded subject can be a full DP, a strong pronoun, or a null subject with free reference.

Furthermore, *ver* can take nonfinite complement clauses, either an infinitive (see (2)) or a gerund (see (3)):<sup>1</sup>

- (2) Juan vio        a        María bailar.  
Juan saw.3SG DOM María dance.INF  
(3) Juan vio        a        María bailando.  
Juan saw.3SG DOM María dance.GER  
‘John saw Mary dancing.’

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<sup>1</sup> Note that the properties of infinitival and gerundial clauses in Spanish perception complements is not readily comparable with the English infinitival and gerundial clauses in the same contexts; cf. for English Felser (1996). Therefore, in some cases we use an English gerund to translate a Spanish infinitive, or vice versa.

In both of these configurations, the embedded clause lacks tense and phi-specifications as well as a complementizer.

In a fourth configuration, *ver* appears with an object DP or clitic in the matrix clause and is followed by an inflected complement introduced by the complementizer *que* ‘that’. Note that, the semantic subject of the embedded verb occurs overtly in the matrix object position, and not within the embedded clause, unlike (1):

- (4) Juan vio a María<sub>i</sub> que { \*María<sub>i</sub> / \*Juan / *pro*<sub>i/\*j</sub> } bailaba.  
Juan saw.3SG DOM María that María Juan danced.3SG

The configuration in (4) has standardly been referred to as a pseudo-relative clause (henceforth, ‘PR’), pointing to parallels and differences with respect to ‘true’ relative clauses:

- (5) Juan llamó a María, que bailaba.  
Juan called.3SG DOM María who danced  
‘John called María, who was dancing.’

Even though infinitives, gerunds and PRs as complements of perception verbs (2) - (4) have been studied on a separate basis in Spanish, a systematic comparison between the different configurations is still a matter of open research. One of the main aims of this paper is thus to provide an in-depth study of the syntactic differences and similarities between these types.

### 1.1 The data used for this paper

Our study relies on various data types throughout the paper, so this section aims at making these explicit. We relied on observations from (i) previous literature, (ii) corpus data, (iii) an online questionnaire, and (iv) judgments from linguist informants.

We (i) consulted the observations and generalizations that have been made regarding the syntax of clausal embedding with perception verbs on Spanish in the literature, for example Suñer

(1984), Campos (1994), Di Tullio (1998) Rafel (1999, 2000), Camacho (2011), Ciutescu (2018), among others.<sup>2</sup> However, some properties that are crucial for determining the syntactic (transparency) of the (non-)finite complements are not fully addressed in previous studies. For example, the (im-)possibility of verbal periphrasis and embedded modal verbs (see (6)) could provide some evidence regarding the structural richness of the extended functional projection of the embedded verb and long passivization (see (7)) is crucial evidence for extraction possibilities. However, these phenomena are either not discussed in the literature, or they are only discussed for a subset of configurations (e.g. gerunds vs. infinitives in Di Tullio 1998):

(6) % Vi a María (teniendo que/tener que/ que tenía que) vomitar.

saw.1SG DOM Mary having-to/have.INF-to/that had to vomit.INF

‘I saw that Maria had to throw up.’

(7) % María fue vista {bailando/bailar/que bailaba}.

María was seen dancing/dance.INF/that danced.3SG

‘Maria was seen dancing.’

We therefore (ii) collected corpus data from CORPES XXI (RAE), above all with respect to pseudo-relatives, which are the least studied in the literature on Spanish perception verbs. In our search of CORPES XXI (RAE) we looked for occurrences of the lemma *ver* ‘see’ that was preceded by an accusative clitic pronoun and followed by a complement clause introduced by *que* ‘that’.<sup>3</sup> We obtained just 160 hits and, after manual revision, only 74 of them were classified as unambiguous cases of PRs. Furthermore, these 74 sentences were from different varieties of Peninsular and American Spanish. As a consequence, various properties occurred only once, or

<sup>2</sup> For gerunds, see e.g. Borgonovo (1996), Di Tullio (1998), Fernández Lagunilla (1999), Casalicchio (2013, 2019), Fábregas & Jiménez Fernández (2016), and Hernanz (1999); for infinitives, Di Tullio (1998), Hernanz (1999), and Ciutescu (2018). Finally, data for PRs can be found in Suñer (1984), Campos (1994), Brucart (1999), Camacho (2011), and Herbeck (2020). In addition, papers that discuss two constructions (usually contrastively) are Fernández Lagunilla (2011; gerunds and PRs), Di Tullio (1998; gerunds and infinitives), and Rafel (2000, 2001; infinitives and PRs). Note that Rafel (2000, 2001) also discusses gerunds, but only in English, and not in Spanish.

<sup>3</sup> The reason why we limited the search to clitic antecedents is because these cases are unambiguously PRs, i.e. they cannot receive the structure of a canonical relative clauses, as is the case with DP antecedents.

a few times, in the corpus (such as tense mismatches or embedded modal verbs), which made it impossible to generalize the findings. Throughout the paper, all corpus examples that we discuss are from these 74 examples obtained through the search of CORPES XXI.

While the corpus search allowed us to detect several properties of interest of this structure, the overall scarcity of pseudo-relatives in the corpus data made it necessary to rely on alternative methods. Thus, (iii) we carried out an online acceptability judgments task with 75 native speakers of (different varieties of) Spanish (see § 3). With the questionnaire, we intended to find out the acceptability of three phenomena related to the structural size and transparency of the complement – acceptability of embedded modal verbs, long passivization (of the matrix verb), and short passivization (of the embedded verb) – and one related to the (non-)existence of subject-object asymmetries, which is not the focus of this paper (see Casalicchio & Herbeck *in prep*). In this online task, native speakers rated the acceptability of the relevant sentences (plus fillers) on a Likert scale from 1-5 (see § 3 for a detailed description of the methodology).

While the online questionnaire allowed us to test a lower number of constructions (long and short passives and embedded modal verbs) with a higher number of speakers, the results raised new questions with respect to the investigated constructions, which made it necessary to (iv) carry out a follow up study with linguist informants. We thus designed two further questionnaires (in written form) – one with 13 and the other one with 7 linguist informants – asking for grammaticality judgments ranging from unacceptable (\*), intermediate acceptability (?) and acceptable (ok). The phenomena that were tested included left peripheral fronting inside the embedded clause and embedded negation in relation to long passives.

In the remainder of this paper, we refer to the online acceptability task with ‘AJT’ and the two questionnaires with linguist informants with ‘Q13’ and ‘Q7’.

## 1.2 Main proposal and outline

The main results of our study show that the three constructions in (2) - (4) have different syntactic properties, with the clearest differences arising with long passives: the matrix verb *ver* ‘see’ can be passivized when it embeds a gerundial clause, while it cannot when it embeds a PR. With infinitival clauses we find a bimodal distribution, with the majority of informants rejecting passivization, but there are several speakers that accept it.<sup>4</sup>

We propose that these differences can be explained if the clauses with the perception verb *ver* have different ‘sizes’ and are the result of different integration mechanisms into the matrix vP. In a nutshell, gerundial clauses are secondary predicates (Small Clauses), while PRs and infinitives are complements of different sizes in Spanish. PRs do not allow passivization because, adopting a finite raising analysis of Spanish pseudo-relatives (see Herbeck 2020), the promotion of the semantic subject of the embedded verb into the matrix subject position (Spec,TP) would either violate Chomsky’s (2001) PIC2 (in the vein of Sheehan & Cyrino 2018) or it would yield improper A-A'-A movement. In the case of infinitives, we propose that there are two grammars: the majority of speakers, which rejects passivization, assigns a (phasal) VoiceP-structure to the infinitival clause (following the phase-based approach of Sheehan & Cyrino 2018, *to appear*); while those accepting passivization assign a TP-structure with an intermediate A-position. Thus, we argue that there is inter-speaker variation with respect to whether Spanish infinitival complements of perception verbs are interpreted as bare infinitives or not. The availability of two different structures assigned to infinitival clauses is proved by the acceptability of negation (through Q7), the embedding of modal verbs and variation with respect to the acceptability of long passivization (both through the AJT).

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<sup>4</sup> In this paper, we refer to the passivization of the matrix verb *ver* ‘see’ with the term ‘long passive’, and to the passivization of the embedded verb with ‘short passive’.

This paper is structured as follows: First, we discuss properties of gerunds, infinitives and pseudo-relatives in Spanish that have been observed in the literature to date and offer some preliminary observations from corpus data and judgments from linguist informants (§ 2). Thereafter, we present in detail the data and methodology of the acceptability judgment task ('AJT') regarding complements of the perception verb *ver* 'see' in Spanish that we have carried out (§ 3). Thereafter, we offer a theoretic proposal for the differences observed between the three structures in terms of phase theory, different degrees of truncation of complement clauses, and selectional and configurational properties of the nonfinite and finite structures. Section 5 is dedicated to some issues for future research, paying special attention to some comparative notes with respect to Italian and other Romance languages. The last section offers some concluding remarks.

## **2 Complements of *ver* 'see' in Spanish – previous data and analyses**

Although perception complements have been studied in various Romance languages, there are still some unsolved issues. In Spanish, their core properties have been described and analysed in various papers which have their main focus on gerundial and infinitival constructions (see e.g. Di Tullio 1998; Hernanz 1999; Ciutescu 2018 for an overview). PRs have been paid less attention to in the literature on Spanish perception verbs (but see Suñer 1984, Campos 1994, Camacho 2011, Herbeck 2020). In addition, while some properties have been studied in detail (e.g., availability of negation, direct perception readings, word order, etc.), other properties have not been studied to a full extent in any construction (e.g., the availability of short passives), and comparative data between the different constructions are rare.

In the following subsections, we will outline the properties of complements of perception verbs in Spanish that have been discussed in previous literature and some preliminary

observations from corpus examples and from native speaker judgments (Q7 and Q13). Thereafter, we discuss open issues and turn to the online AJT that has been designed to address them.

## 2.1 *Morpho-syntax: tense, phi-features and structural deficiency*

Gerunds and infinitives lack tense and phi-features with perception verbs (see Casalicchio 2019), and usually their interpretation depends on the syntactic structure in which they occur. Thus, the event time of the embedded verb is interpreted as coincident with the event time of the matrix verb. In addition, the external argument of the non-finite form shares the same reference with the accusative DP of the perception verb (as in English):

- (8) Veo            a        José { bailando   /   bailar}.  
       see.PRES.1SG DOM José    dancing.GER    dance.INF  
       ‘I see José dancing/dance.’

On the contrary, PRs do have a morphological specification for phi-features and tense. However, it has been observed in the literature that tense features of pseudo-relatives, even though being morphologically specified, must be anaphoric with respect to the matrix tense (Campos 1994, Rafel 1999:169; see also Cinque 1992, Casalicchio 2016, Graffi 2017 for Italian):

- (9) a. \* Veo            a        José que venía.  
       see.PRES.1SG DOM José    that came.IMPF.3SG  
       b. \* Vi                a        José que viene/vendrá.  
       saw.past.1sg    DOM José    that come.PRES.3SG/come.FUT.3SG

(Campos 1994:212)

The corpus data also point into the direction that matching matrix and embedded tense is the highly preferred option. Even though some apparent tense mismatches can be found (as in (10)), these were extremely rare (only three potential cases):

- (10) [...] hasta que los **vimos** que **habían entrado** en una casa,  
 until that them.ACC saw.PAST.1PL that had.3PL entered in a house  
 se escondieron en una casa.  
 REFL hide.PAST.3PL in a house  
 ‘[...] until we saw that they had entered a house, they hid in a house.’  
 (CORPES XXI (Peru; written, fiction) [emphasis and translation added])

In (10), what makes the tense mismatch possible is that the result of the action of entering the house is still perceivable even when the action itself is completed. Thus, it seems firm to assume that PRs do not have fully independent tense, because there is at least a partial overlap between the time at which the event of seeing takes place and the time of the embedded event, or of its result.

Just as the embedded tense is anaphoric to the matrix tense in PRs, phi-features of the embedded verb are usually anaphoric to the matrix object antecedent:<sup>5</sup>

- (11) a. Juan ve a María que {\_\_i/\*j / \*Juan} baila.  
 Juan sees DOM María that Juan dances  
 ‘Juan sees Maria dancing.’  
 b. \* Juan ve a María que bailo/bailas.  
 Juan sees DOM María that dance.1SG/dance.2SG

This indicates that neither tense nor phi, even though morphologically encoded in T/AGR, are anchored to full deictic tense and speaker/addressee coordinates in C (in the sense of Bianchi

<sup>5</sup> We abstract away from the cases of PRs in which it is the embedded dative or accusative clitic that corefers with the matrix object, see Campos (1994), Herbeck (2020) and Casalicchio & Herbeck (*in prep.*) for this type of PR.



2003, Sigurðsson 2011). This could have as a consequence that pseudo-relatives, even though containing a complementizer, are at most deficient CPs lacking an ‘external logophoric centre’, as will be discussed in section 4.

Thus, PRs are morphologically specified for tense and phi, but they share the property with infinitives and gerunds of not sanctioning fully specified, independent syntactic tense and phi-features, which need to be at least partially anaphoric to the matrix tense and referent.

## 2.2 Left peripheral fronting

In the literature on perception constructions, left peripheral fronting is discussed by Gallego (2010) for gerunds and Camacho (2011) for PRs. In both cases, they argue that the two constructions have a defective left periphery blocking topicalization:<sup>6</sup>

- (12) \*Vi                      a        Luis, los libros, leyéndolos.  
see-PAST-1SG DOM Luis, the books, reading-them                      (Gallego 2010: 147)
- (13) a. Vi                      a        María que compró     los panes.  
saw.PAST.1SG DOM María that bought.3SG the bread  
'I saw Mary buying bread.'
- b. \*Vi                      a        María que los panes, los compró.  
saw.1SG DOM María that the bread them bought.3SG
- (Camacho 2011:26 [glosses added])

On the other hand, as far as infinitives are concerned, left peripheral fronting is not discussed in the literature on perception verbs.

<sup>6</sup> This is in contrast with Italian PRs, where clitic left dislocation is allowed (Casalicchio 2013, 2016).

The data from grammaticality judgments by our linguist informants (Q13) show more variation as (12) and (13) suggest. Thus, there is a trend that CLLD is more easily accepted in PRs than in nonfinite structures, but less than in canonical finite complements:

(14) full finite complement:

Vi que, los libros, los leían en la biblioteca. (ok: 13, ?: 0, \*: 0)  
saw.1SG that the books them read.3PL in the library

(15) pseudo-relative:

La vi que, los libros, los leía en la biblioteca. (ok: 7, ?: 3, \*: 3)  
her saw.1SG that the books them read.3SG in the library

(16) infinitive:

La vi, los libros, leerlos en la biblioteca. (ok: 3, ?: 3, \*: 7)  
her saw.1SG the books read.INF-them in the library

(17) gerund:

La vi, los libros, leyéndolos en la biblioteca. (ok: 2, ?: 4, \*: 7)  
Her saw.1SG the books read.GER-them in the library

This indicates that for most speakers (but not for all), non-finite structures lack a position for left dislocated objects in the complement of perception verbs. Pseudo-relatives project a low topic position for most speakers and a projection hosting the complementizer. However, PRs do not have a full-fledged CP, lacking deictic (person and tense) coordinates in the C-domain (see § 4).

### 2.3 Negation

A further property of infinitives, gerunds and PRs that might testify the degree of their deficiency is negation. In fact, studies on all three structures have claimed that there is an

incompatibility between negation and the embedded clause, see Hernanz (1999) for infinitives, Fernández Lagunilla (2011) and Casalicchio (2019) for gerunds and Campos (1994) for PRs:

(18) \*Las vi no caminar. (Hernanz 1999:2247)  
 them saw.1SG not walk.INF

(19) \*Vi a Juan que no durmió en su cama. (Campos 1994:215)  
 saw.1SG DOM Juan that not slept.PAST.3SG in his bed

However, the status of negation is not fully clear if further data are considered. On one hand, Campos (1994) observes for pseudo-relatives that these have a requirement of direct perception and that negation is impossible in some structures given that negated events cannot be directly perceived. In fact, if the negated event can be visually perceived, negation becomes possible in PRs (see Herbeck 2020):

(20) La vi que no paraba.  
 her saw.1SG that not stopped  
 ‘I saw how she didn’t stopped [doing something]’

Here, the embedded negated event implies that somebody is doing an action that can be directly perceived and negation is possible. In fact, corpus examples with negation inside a PR can be found, and they imply that direct perception of the event or state is possible (as indicated by *que se pone morao* ‘that he turn violet’ in (21); see Herbeck 2020):

(21) De pronto lo veo que no habla, que se pone morao  
 Suddenly him see.1SG that not speaks that REFL turns violet  
 ‘Suddenly I see that he doesn’t speak, that he turns violet.’

(CORPES XXI, RAE; taken from Herbeck 2020)

This shows that semantic factors intervene in the possibility of negation.

Also native speaker judgments indicate that negation is possible in PRs if the embedded clause is a directly perceivable event. The following represent the judgments from 7 linguist informants:

(22) [Context: My sister usually doesn't like parties]

*Pero anoche la vi que no paraba de bailar.* (ok: 7; ?: 0, \*: 0)

but yesterday.night her saw.1SG that not stopped.3SG of dance.INF

'But last night, I saw that she didn't stop dancing.'

With respect to infinitives, Fábregas & González (2020) also argue that the possibility of negation crucially depends on the semantics of the embedded event. Thus, negation is possible if the embedded event is an "inhibited eventuality" and the embedded subject an "initiator" of the event (see (23)b):

(23) a. \* Vi (a) los precios no aumentar.

saw.1SG DOM the prices not rise.INF

Intended: 'I saw that the prices didn't rise.'

b. Vi (a)l gobierno no aumentar los precios

saw.1SG DOM-the government not raise.INF the prices

'I saw the government not raise the prices.'

(Fábregas & González Rodríguez 2020:749)

According to the authors, there are two types of negation – a low one, which is possible with events that imply an initiator (as in (b)), and a high sentence negation, which is impossible in infinitives. Only low negation should thus be allowed in infinitival complements of perception verbs, explaining the ungrammaticality of (a).

However, these semantic restrictions do not explain the existence of general inter-speaker variation.<sup>7</sup> For example, Ciutescu (2018: 132f) claims that native speaker judgments vary with respect to the acceptability of negation. In fact, there is no unanimous rating by the linguist informants we consulted (compare with (22)):

(24) [Context: My sister usually doesn't like parties]

*Pero anoche la vi no parar de bailar.* (ok: 3; ?: 2, \*: 2)

but yesterday.night her saw.1SG not stop.INF of dance.INF

'But last night, I saw that she didn't stop dancing.'

In the case of gerunds, they are generally taken to be incompatible with negation in the literature (Fernández Lagunilla 2011). Casalicchio (2019) shows that when speakers want to describe the perception of something that is not happening, speakers resort to the construction '*sin* + infinitive':<sup>8</sup>

(25) Mientras, observo a mi tío con la mirada perdida,

in.the.meantime I.observe DOM my uncle with the look lost,

sin ya comer, negando con la cabeza

without any.more eat.INF negating with the head

y sujetándose el mentón con las manos entrelazadas.

and seizing the chin with the hands joint

'In the meantime, I observe my uncle and see that he has a lost look, that he has stopped eating, is shaking his head and grasping his chin with hands interlinked.'

(example from the web, cited in Casalicchio 2019: 107)

<sup>7</sup> In Moore (1991:150), negation is considered possible with infinitives:

(i) Vimos a Pedro no comer el potaje.  
we.saw DOM Pedro not eat the soup  
'We saw that Pedro didn't eat the soup.'

<sup>8</sup> Note that the 'gerundial' value of the expression '*sin* + infinitive' is confirmed by the fact that it is coordinated with two gerunds (*negando* 'negating' and *sujetándose* 'seizing'), see Casalicchio (2019) for more details.

Native speaker judgments confirm this interpretation. Negated gerunds are rejected by all 7 linguist informants we consulted:

(26) [Context: My sister usually doesn't like parties]

*Pero anoche la vi no parando de bailar.* (ok: 0; ?: 0, \*: 7)

but yesterday.night her saw.1sg not stop.GER of dance.INF

‘But last night, I saw that she didn’t stop dancing.’

This confirms that gerunds are more restrictive than infinitives with respect to the possibility of negation. If we take negation to be evidence in favor of the projection of at least a TP, this might indicate that gerunds even lack this projection (cf. Casalicchio 2019); in the case of infinitives, the projection of a TP may be subject to inter-speaker variation.

In fact, we argue in § [4.2.34.3.3](#) that infinitives in the complement of *ver* ‘see’ are ambiguous between a VoiceP and TP structure and that the use of one or the other depends on the speaker.

#### 2.4 Interim summary, open issues, and aims of the current study

Table 1 summarizes the properties of negation, non-anaphoric tense and left dislocation in the three configurations of gerunds, infinitives and pseudo-relatives, as discussed above. In addition, we include three properties that have been paid less attention to in the literature, and that are therefore the focus of this paper: long passives, short passives and the embedding of modal verbs. Of these three properties, only the first has found some discussion in the literature: long passives are held to be possible when the embedded structure is a gerund (Sheehan & Cyrino *to appear*), while there is microvariation when it is an infinitive: according to Sheehan & Cyrino’s (2018, *to appear*) analysis of causative constructions, long passives of infinitives are only possible when the promoted subject is an internal argument of the embedded infinitive (thus, only if it is the object of a transitive verb and the subject of an unaccusative verb). Finally, long passives in PRs are only briefly mentioned in Rafel (2000) and Herbeck (2020), but not

fully developed. In addition, no paper offers a complete comparative view that includes all three structures. We come back to these three properties in §3 and §4.

	PRs	Gerunds	Infinitives
Negation	ok	*	?
non-anaphoric tense	*? (only partial)	*	*
left dislocation	?yes	*	*
matrix passivization	*?	yes	*?
embedded passivization	NA	NA	NA
modal verbs	NA	NA	NA

**Table 1:** Summary of some key properties in the syntax of PRs, gerunds and infinitives  
with perception verbs

The previous discussion has shown that gerunds are most restrictive with respect to negation, non-anaphoric tense and left dislocation of objects. Infinitives are also restrictive with respect to the latter two phenomena, but are more permissive with respect to embedded negation for some speakers. Pseudo-relatives are the most permissive structures with respect to all three phenomena. Thus, they structurally allow negation and they allow clitic left dislocation for most speakers (even though not for all, contrary to full finite complement clauses). However, unlike canonical finite subordinate clauses, PRs do not sanction deictic tense or person features.

The observed properties indicate that gerunds, infinitives, and pseudo-relatives, even though they occur in the same context and have certain commonalities, have a different underlying structure. We think that the three selected properties (long passives, short passives and embedded modal verbs) might provide further, crucial indications for a better understanding of the structure of PRs, gerunds and infinitives, and the variation between them: the (un-)acceptability of modal verbs allows us to establish if the embedded construction projects

a TP layer, following Cinque’s (2006) monoclausal analysis of modal verbs. On the other hand, the possibility of short passives indicates that a VoiceP is projected above VP inside the subordinate clause. Finally, we take long passivization as crucial evidence for the question of whether movement out of the embedded clause is possible; in addition, following Sheehan & Cyrino (2018, *to appear*), and Casalicchio & Sheehan (2021), the grammaticality or ungrammaticality of long passives is evidence for the structural size of the embedded clause (see below for details).

In the next section, we outline the methodology of the online AJT that has been carried out to examine the three phenomena. Thereafter, we present the results and the consequences for the syntactic structure of gerunds, infinitives, and PRs with the perception verb *ver* ‘see’ in Spanish.

### **3 Investigating complements of perception verbs with an online acceptability judgment task**

In this section we discuss the methodology and results of the online acceptability judgement task (AJT) that we carried out in 2020. We chose to investigate modal verbs and long and short passives with this type of task because it allows us to directly contrast the use of PRs, gerundial and infinitival clauses in the same contexts in a systematic way. The online AJT had the further advantage of being able to reach a considerable number of participants. In § 3.1 and 3.2, we outline the methodology of the online questionnaire, and in §3.3 we present the results.



### 3.1 Design of the questionnaire

The online AJT was designed with Google Modules. It was divided into three parts: The first part asked for basic sociolinguistic data (such as age, country and gender). Thereafter, participants had to answer a short training example with a clearly grammatical and an indisputably ungrammatical sentence (valid for all native varieties of Spanish). Finally, the participants were directed to the tested sentences.

The total number of test items contained 21 target sentences, which concerned the acceptability of embedded modal verbs (6 sentences), long passivization (3 sentences), short passivization (3 sentences) and subject-object asymmetries with resumptive pronouns (9 sentences). As has been mentioned, the current paper focuses on the first three phenomena.<sup>9</sup>

The 21 target sentences were complemented by 22 filler sentences, which were related to different syntactic phenomena of Spanish: we chose some clearly ungrammatical, some grammatical and some sentences for which we expected varying judgements. The totality of 43 sentences were presented in a previously fixed, randomised order.

As for modal verbs, we tested the verbs *querer* ‘want’ and *tener que* ‘must’, each followed by a gerund, an infinitive, and a pseudo-relative clause. The following represent the 6 tested sentences with modal verbs:

(27) Modal verbs (6 test sentences):

- a. Los vi  $\left[ \begin{array}{c} \text{que querían} \\ \text{queriendo} \\ \text{querer} \end{array} \right]$  ganar a cualquier precio.  
 them.CL I.saw WANT win at any price

<sup>9</sup> The last phenomenon is an issue of current research and it deserves a full separate study (see Casalicchio & Herbeck *in prep.*) because it involves several further factors not involved in the structural ‘size’ of the embedded clause types.

‘I saw that they wanted to win at any price.’

- b. La vi  $\left[ \begin{array}{c} \text{que tenía} \\ \text{teniendo} \\ \text{tener} \end{array} \right]$  que vomitar  
 her.CL I.saw HAVE that throw.up  
 ‘I saw that she had to throw up.’

For short (embedded) and long (matrix) passivization, we built on corpus examples with PRs in the active voice. We subsequently converted them into passives with gerundive, infinitival and pseudo-relative clauses:

(28) ‘Short’ passivization (3 test sentences):

- A María, la vi  $\left[ \begin{array}{c} \text{que estaba siendo} \\ \text{siendo} \\ \text{ser} \end{array} \right]$  forzada.  
 DOM Maria, her.CL I.saw BE forced  
 ‘I saw Maria being forced.’

(29) ‘Long’ passivization (3 tested sentences):

- La actriz fue vista  $\left[ \begin{array}{c} \text{que lloraba} \\ \text{llorando} \\ \text{llorar} \end{array} \right]$  en un restaurante berlinés.  
 the actress was seen CRY in a restaurant Berliner  
 ‘The actress was seen crying in a restaurant in Berlin.’

The informants had to rate all sentences on a Likert-scale from 1 to 5 (1 corresponding to ‘completely ungrammatical’ and 5 to ‘perfectly fine’). At the end of the questionnaire, we added

one forced-choice question to have a generic picture of whether the variety spoken by the informant was *leísta* or not: the choice was between two sentences that only differed in the use of an accusative and a dative clitic referring to a direct object.<sup>10</sup>

### 3.2 Participants

In total, 83 participants took part in the questionnaire; of these, eight were excluded: one of them was not a native speaker and seven did not answer correctly the two control questions at the beginning. Therefore, we considered the answers of 75 speakers. Their age ranged from 18-75 (mean age 32, median 30.5), and they were in majority female (58.5%; 40.2% were male and 1.3% other/I don't want to say). Their countries of origin were the following:<sup>11</sup> 55 informants were from Spain (13 of them from Catalonia), 6 from Mexico, 4 from Argentina, 2 each from Costa Rica, Cuba and Venezuela, and 1 each from Chile, Colombia, Peru and Uruguay.

### 3.3 Results

In this section, we present the results of the tested sentences in the online questionnaire. First, we discuss modal verbs, then we turn to short passives. Lastly, we discuss the acceptability of long passives, where the semantic subject of the embedded verb is promoted to the subject position of the matrix clause containing the (passivized) perception verb. In the results, we indicate the mean and median acceptability. Furthermore, we indicate the standard deviation to illustrate the extent of variation in the judgements.

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<sup>10</sup> We are aware that the issue of *leísmo* (as well as *loísmo* and *laísmo*) is much more complex and fine-grained. Therefore, this sentence was intended to give us just a rough indication of the status of the variety of the informant, and should not be taken as a fully-reliable indicator. In any case, we could not spot any difference between the judgements of the speakers related to their status as *leístas* or not.

<sup>11</sup> Note that, with the small number of speakers from regions outside of Spain, we do not attempt to make any claim about dialectal differences, even though, these cannot be excluded. More research is needed to determine whether there are clear regional differences in the judgements of the three perceptive constructions under investigation.

### 3.3.1 Modal verbs

Modal verbs have been tested because they have been argued to occupy a functional projection above vP/voiceP (see Cinque 2006, a.o.); therefore, their presence or absence can be considered a piece of evidence for the size of the embedded (non-)finite clause.

Looking at the corpus data, only one example of a modal verb inside a PR has been found:<sup>12</sup>

- (30) lo veo que quiere jugar a una rapidez muy alta en el Morera[...]  
 him (I).see that wants.3SG play.INF at a speed very high in the Morera  
 ‘I saw that he wanted to play at high speed in the Morera’ (CORPES XXI, RAE)

As outlined in section 3.1, we tested the two verbs *querer* ‘want’ (the same used in the corpus example) and *tener que* ‘have to’ occurring either in a gerundial, infinitival, or PR-clause as complement of a matrix perception verb (see (27)). The results are shown in Table 2, indicating the mean acceptability, median and standard deviation:

**Table 2:** Acceptability of the modal verbs *querer* ‘want’ and *tener que* ‘have to’ in the complement of the perception verb *ver* ‘see’:

	<i>querer</i> ‘want’			<i>tener que</i> ‘must’		
	mean	median	SD	mean	median	SD
PR	3.72	4	1.27	3.56	4	1.46
Gerund	4.01	4	1.18	2.99	3	1.59
Infinitive	4.21	5	1.12	2.47	2	1.36

It is interesting to observe that acceptability is generally higher with the modal verb *querer* ‘want’ than with *tener que* ‘have to’. In the case of *querer* acceptability is indeed high for all

<sup>12</sup> On the other hand, a number of aspectual periphrases ‘*estar* + ger.’ have been found in the corpus. Note that, according to Cinque (2006), aspectual verbs are lower than modals.

three configurations (and highest with infinitives). With *tener que* ‘have to’, on the contrary, acceptability is highest with PRs (mean acceptability = 3.56); it drops with gerunds (2.99), and even more so with infinitives (2.47).

The higher acceptability of *querer* ‘want’ could be due to the fact that it is ambiguous between a modal verb (allowing restructuring) and a volitional lexical verb with a biclausal structure.<sup>13</sup> Therefore, the general high acceptability in all three structures is not conclusive evidence for the richness of the functional structure of the embedded clause, given the potential biclausal structure this verb sanctions. In this structure, *querer* ‘want’ would not head a functional projection above VP, but a lexical control V, taking a nonfinite complement:

(31) Los vi [<sub>TP</sub> *querer*-T [...] [<sub>VP</sub> ~~*querer*~~ [<sub>CP</sub> C<sub>def</sub> [<sub>TP</sub> PRO *ganar*-T [...] ~~*ganar*~~ a cualquier precio...

On the other hand, *tener que* ‘have to’ is unambiguously a modal verb: its low acceptability with infinitives and gerunds is expected if these structures lack a TP. However, the fact that some speakers do not reject modal verbs in nonfinite complements might indicate that for these speakers a TP is available:

(32) % La vi ([<sub>TP</sub> *tener-que*-T) [<sub>VoiceP</sub> vomitar [<sub>VP</sub> ~~*vomit*~~ ...

PRs, on the other hand, show a higher acceptability of modal *tener que* ‘have to’, which is expected if they project more structure than uninflected verb forms. We will return to the syntactic analysis and the existence of speaker variation regarding the acceptability of modal *tener que* ‘have to’ in §4.24.3.

<sup>13</sup> The double nature of *querer* ‘want’ is shown e.g. by the fact that it can take inflected subjunctive complement clauses (with obviation effects), unlike *tener que* ‘have to’ which always introduces infinitives:

- (i) a. *Quiero ir al mercado.*  
want.1SG go.INF to.the market
- b. *Quiero que Pablo vaya al mercado.*  
want.1SG that Pablo go.SBJ.3SG to.the market
- (ii) a. *Tengo que ir al mercado.*  
have.1SG that go.INF to.the market
- b. \**Tengo que Pablo vaya al mercado.*  
have.1SG that Pablo go.SBJ.3SG to.the market

### 3.3.2 Short passivization

Some further evidence for the structure of gerunds, infinitives, and PRs with perception verbs might come from short (i.e., embedded) passivization. If we follow accounts in which active and passive voice, as well as the external argument, are encoded in a separate functional category VoiceP (see Kratzer 1996, Chomsky 1995, Sheehan & Cyrino 2018, among many others), the possibility of embedded passivization might indicate that at least a functional VoiceP on top of vP/VP is present in the structure.

In our AJT, there is a slight tendency for embedded passive to be judged more acceptable in PRs and less so in infinitives. However, there is no categorical rejection of embedded passives in either of the three structures (see Table 3):

**Table 3:** Mean acceptability of short passivization with PRs, gerunds, and infinitives and PRs with the perception verb *ver* ‘see’:

	PR			Gerund			Infinitive		
	mean	median	SD	mean	median	SD	mean	median	SD
embedded	3.87	4	1.27	3.45	4	1.35	3.16	3	1.39
passive									

Given the similar acceptability of embedded passives in all three structures, this configuration seems to indicate that all structures under investigation contain at least VoiceP for most speakers, especially with PRs.

### 3.3.3 Long passives

Di Tullio (1998) postulates that one difference between gerunds and infinitives with perception verbs is that the former allow long passives while the latter block them (see also Castillo 2001:130 for infinitives):

(33) *María fue vista leyendo una novela.*

*María was seen reading a novel*

*‘Mary was seen reading a novel.’*

(34) *\*María fue vista leer una novela.* (Di Tullio 1998:205)

*María was seen read.INF a novel*

With respect to PRs, long passivization has scarcely been investigated in the literature on Spanish PRs. According to the following judgments in the work of Rafel (2000), PRs would pattern with infinitives and not with gerunds:

(35) *?\* María fue vista que besaba a Juan.*

*María was seen that kissed DOM Juan* (Rafel 2000: 99; fn. 74)

However, there is no comparative data with respect to long passivization in PRs, infinitives and gerunds.

In our AJT, we tested a passivized version of the matrix perception verb *ver* followed by a pseudo-relative clause, a gerund, or an infinitive containing the unergative verb *llorar* ‘cry’ (see (29)). The results are shown in Table 4:

**Table 4:** Mean acceptability of long passivization with PRs, gerunds, and infinitives and PRs with the perception verb *ver* ‘see’:

	PR			Gerund			Infinitive		
	mean	median	SD	mean	median	SD	mean	median	SD
long passive	1.89	1	1.29	4.57	5	0.87	2.77	3	1.55

The results show that native speakers have in general sharp judgements as far as PRs and gerunds are concerned: PRs have a strong tendency towards being rejected (mean acceptability:

1.89; median: 1), while gerunds are considered grammatical by almost all speakers (mean acceptability: 4.57; median: 5). Infinitives received a mean rating of 2.77 (median 3) and have the highest Standard Deviation (1,55). The high SD indicates that long passives were not uniformly judged as ‘marginally acceptable’ (i.e. rated 3) by the speakers, but that inter-speaker variation exists with respect to the acceptability of this structure. In fact, looking in detail at the individual responses, the ratings show a bimodal distribution, with most speakers either considering the sentence unacceptable (1 = 32%) or acceptable (5 = 20%) and only few speakers gave intermediate ratings (3 = 15%):

**Table 5:** Percentages of ratings given in the AJT to long passive with an infinitival complement

rating	1	2	3	4	5	TOT
no. of speakers	<b>24</b>	12	11	13	15	75
	(=32%)	(=16%)	(=15%)	(=17%)	(=20%)	

In section 4.3, we argue that inter-speaker variation with respect to infinitives can be accounted for by the (morphological) ambiguity of Spanish infinitives between bare *v*P infinitives and TP complements.

Out of the three tested phenomena in the AJT, long passivization is the phenomenon that has the sharpest contrast between PRs, gerunds and infinitives. This indicates that there are either differences with respect to their transparency status and correlated availability of A-movement out of the complement clause, or the embedded clause is a complement only in some cases and passivization is not ‘long’, the passivized NP being base-generated in the matrix clause. This issue will be further discussed in the theoretic analysis in § 4.3.



### 3.4 Interim summary of the main differences among gerunds, infinitives and pseudo-relatives

If we sum up the data from sections 2 and 3, the following picture emerges. As has been reported in the literature and as we could confirm by means of native speaker judgments (Q7 and Q13):

- PRs have anaphoric tense and phi-features, even though these are marked morphologically; infinitives and gerunds lack tense and phi-marking altogether.
- Left peripheral fronting (CLLD), even though less acceptable than in canonical finite structures, is more easily accepted in PRs than in gerunds and infinitives
- Negation is possible in PRs, but not in gerunds. The situation is less clear in infinitives, both as described in the literature (see Ciutescu 2018) as well as far as native speaker judgments are concerned.

The online AJT furthermore revealed the following properties of PRs, gerunds and infinitives with the perception verb *ver* ‘see’:

- Unambiguous modal verbs (like *tener que* ‘have to’) are more readily accepted in PRs and acceptability decreases succinctly with infinitives and gerunds. The verb *querer* ‘want’, which is ambiguous between a lexical control verb sanctioning a biclausal structure and a functional modal verb, is more readily accepted in all structures.
- Embedded passives have similar ratings and are marginally accepted in all three configurations, so that they cannot give us direct hints to different structures of PRs, gerunds and infinitives with the perception verb *ver* ‘see’.
- Long passives are blocked with PRs, fully grammatical with gerunds, and subject to inter-speaker variation in the case of infinitives. In our analyses we propose that this contrast reflects a clear structural contrast between the three configurations.

In the next section, we outline an approach to the differences observed between PRs, infinitives and gerunds as complements of perception verbs. We crucially rely on phase theory

in combination with the assumption that the complement of perception verbs can have different sizes (following Sheehan & Cyrino 2018).

#### 4 Analysis: phases, movement and complementation

In this section, we propose an analysis of the observed differences between PRs, infinitives and gerunds; we show that the differences depend on various factors, mainly the (non-)phasal status and the integration mechanism of the clause. Our starting point is Sheehan & Cyrino (2018, *to appear*) implementation of Chomsky's (2001) Phase Impenetrability Condition ('PIC2'), and the idea of different 'sizes' of inflected and uninflected clausal complements (Rizzi 1997, Felser 1999, Wurmbrand 2001, among others). In a nutshell, we argue that (i) PRs are defective (weak) CP phases (in the sense of Gallego 2010), introducing an A'-position, (ii) infinitives show interspeaker variation, some assigning a non-phasal TP structure, others a phasal VoiceP structure, and (iii) gerunds are AspPs, but they are not in a complement position; on the contrary, they are Small Clauses in an adjoined position.<sup>14</sup>

In the first subsection, we shortly introduce our basic assumption with respect to phase theory (Chomsky 2001, Sheehan & Cyrino 2018). Thereafter, we outline our analysis of PRs, gerunds and infinitives with matrix perception verbs.

##### 4.1 Phase theory and VoiceP as a phase

In the minimalist framework of Chomsky (2000, 2001, 2007, 2008), syntactic derivations apply bottom-up, in a step-wise fashion, but certain derivational stages function as interface points with PF and LF, i.e. derivations are cyclic. Chomsky (2001:14) motivates the CP and vP level as phases on the basis of "semantic phonetic integrity": phases are "propositional" on the LF side (Chomsky 2000:107) and they are isolable objects at PF (see Chomsky 2004:124). This

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<sup>14</sup> To be more precise, Di Tullio (1998) and Casalicchio (2019) claim that gerunds with perception verbs can enter different types of Small Clauses, which are adjunctive or argumental. The structure compatible with long passives is the adjunctive one (see below), and therefore we focus on it in this paper.

way, transitive  $vP$  (but not  $VP$ ) is a phase, because the former constitutes a full argument complex.  $CP$ , but not  $TP$ , is a strong phase because the former is a full proposition. According to Chomsky's (2000) Phase Impenetrability Condition 1 (PIC1), as soon as  $vP$  or  $CP$  is completed, the  $VP$  or  $TP$  complement is transferred to LF and PF.

In Chomsky (2001), the PIC1 is adapted so that Transfer of the complement of a phase head to the interfaces does not apply as soon as the phase head is merged, but when the next higher phase head is introduced. That is, in a full  $CP$  clause, the material inside  $VP$  remains accessible to higher operations until the phase head  $C$  is introduced:

(36) PIC 2 (Chomsky 2001):

In a configuration  $[ZP\ Z\ \dots\ [HP\ \alpha\ [H\ YP]]]$ , (where  $H$  and  $Z$  are phase heads)

“The domain of  $H$  is not accessible to operations at  $ZP$ ; only  $H$  and its edge are accessible to such operations.” (Chomsky 2001:14)

For embedded clauses, this means that material inside an embedded  $VP$  is accessible to higher operations until the embedded  $C$  is merged and, in the case of truncated,  $CP$ -less infinitives, until matrix  $v$  is merged.

Sheehan & Cyrino (2018, to appear) propose an account of the restricted availability of long passives in English and Brazilian Portuguese nonfinite complements of perception and causative verbs. They argue, building on Chomsky's (2001) PIC2, that in these contexts long passives are possible if only one phase boundary is crossed. This explains why long passives are grammatical in English infinitives introduced by *to*, but ungrammatical in bare infinitives:

(37) Long passive out of a bare infinitive:

\* $Kim_i$  was made/had/let seen/heard [ $t_i$  sing] (Sheehan & Cyrino 2018:7)

(38) Long passive out of a *to*-complement:

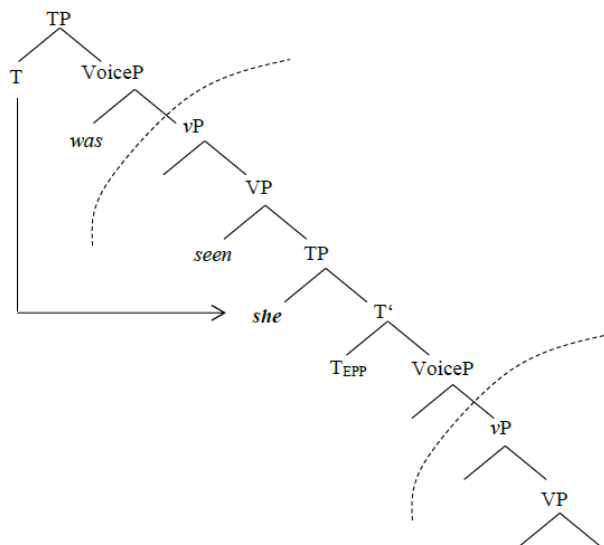
She was made/seen/heard [ $TP$  to be the best candidate]. (Sheehan & Cyrino 2018:7)

Sheehan & Cyrino (to appear) argue that VoiceP above vP is a strong phase. Since bare infinitives are VoicePs lacking a TP projection, long passivization would have to cross two phase heads, the lower and the higher Voice in (39) yielding a violation of PIC2 (see also Casalicchio & Sheehan 2021 for discussion):

(39) \*Kim [TP T<sub>[NOM]/EPP</sub> [VoiceP was [vP seen [VoiceP Voice [vP ~~Kim~~ ... sing]

If the embedded infinitive introduces a TP, however, there is an intermediate landing site for the embedded argument and, thus, only one phase head must be crossed. Sheehan & Cyrino (2018, to appear) argue that the embedded T head with an EPP feature of a non-finite clause can therefore ‘feed’ further A-movement into the matrix clause:

(40) (Graph built on Sheehan & Cyrino to appear)



In (40), A-movement of ‘she’ to the embedded Spec,TP makes further movement into the matrix Spec,TP position possible given that each movement leads the pronoun ‘she’ to only cross one phase head at a time, on its way to the matrix clause, preventing a violation of PIC2.

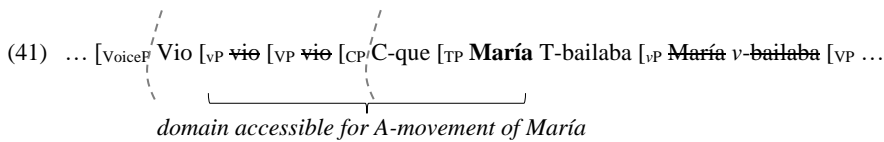
In the next section, we will have a look at how this approach can explain some properties of PRs, infinitives, and gerunds in the complement of perception verbs in Spanish.

#### 4.2 Deriving PRs, infinitives, and gerunds: their phasal status and structural integration

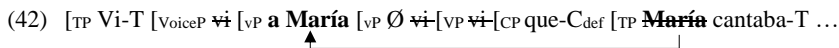
In the previous section, we have seen that Sheehan & Cyrino's (2018, to appear) analysis of the contrast between raising out of bare and raising out of TP infinitives crucially relies on Chomsky's (2001) PIC2 and on the assumption that VoiceP above *v*P is a phase. In this section, we argue that this approach can also explain the nature of gerunds, infinitives and pseudo-relatives with perception verbs in Spanish.

##### 4.2.1 PRs

Considering Chomsky's (2001) PIC2 in the context of Spanish PRs, we observe that material inside Spec,TP of an embedded PR should still be accessible to operations inside the matrix domain until the matrix phase head Voice is merged, even if CP is a (weak) phase, given that only one phase head would have to be crossed:



According to PIC 2, phase theory does not block A-movement of an embedded subject in Spec,TP (= *María*) into the matrix *v*P domain. This opens the possibility of assuming finite subject-to-object raising in Spanish pseudo-relatives (see Herbeck 2020):



We would therefore expect long passives to be grammatical in PRs. However, recall that long passives show the lowest acceptability ratings between PRs, gerunds and infinitives: Most speakers judge them ungrammatical with PRs (mean acceptability: 1.90; median: 1), while

gerunds receive almost full acceptability (mean acceptability: 4.52; median: 5), and there is interspeaker variation with infinitives (mean acceptability: 2.76; median: 3).

We would like to argue that these patterns can be explained by means of (i) the different structural ‘size’ of the (un-)inflected complement, (ii) its correlated phasal status, and (iii) the mechanism of its integration into the matrix clause. Let us start with (i): There is sufficient evidence that PRs project a VoiceP as well as a TP: as we saw in section 3.3.2, even though there is variation, short passives are accepted by most speakers (mean 3.85; median 4) indicating that a VoiceP is available. Furthermore, PRs are inflected for tense and phi-features, which constitutes morphological evidence for the projection of AGR/TP. We also saw that embedded negation is accepted by all linguist informants we consulted (see (20)) and that the ban against negation is of a semantic nature in some examples, but not excluded by syntax. However, if these structures projected just a TP, long passives would be predicted to be possible: Spec,TP introduces an additional A-position, which feeds further A-movement into the matrix clause, as in the case of *to*-infinitives in English.

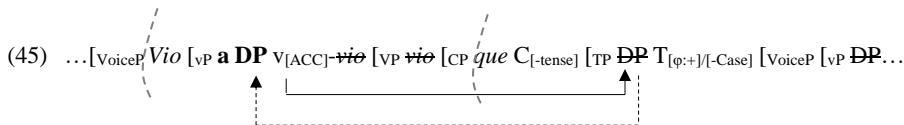
We suggest that the solution lies in (ii) the (weak) phasal status of PR clauses. First, PRs introduce a complementizer *que* ‘that’ and, as we have seen in section 2.2, even though left peripheral operations such as Clitic Left Dislocation are more marginal in PRs than in fully finite CP complements, they are accepted by most informants. This indicates that at least a defective CP is projected, which introduces an A’-position:

(43) V [<sub>CP</sub> C<sub>def</sub> *que* [<sub>TP</sub> T ...

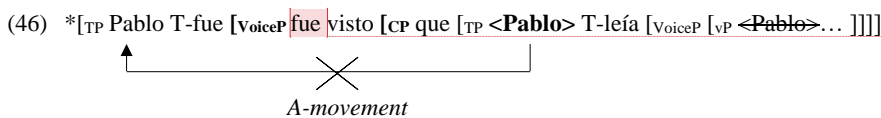
The possibility of CLLD below the complementizer is not problematic if left peripheral fronting operations can target a low topic position (see Rizzi 1997; Haegeman 2004) or Spec,FP (in the sense of Uriagereka 1995; Gallego 2010) in Spanish:

(44) V [<sub>CP</sub> C<sub>def</sub> *que* [<sub>TopP</sub> CLLD Top [<sub>TP</sub> T [<sub>VoiceP</sub> Voice [<sub>VP</sub> \_\_\_ v [<sub>VP</sub> V]]]]]]

However, even though there is evidence for the projection of a phasal CP, this projection must be defective with respect to its feature specification:<sup>15</sup> We have seen in section 2.1 that PRs, even though having morphological tense and phi-specifications, do not have fully specified Tense, i.e. tense specifications must at least partially be anaphoric to the matrix tense. This indicates that embedded PRs do not sanction a full, external logophoric centre in the C-domain (in the sense of Bianchi 2003), being responsible for external, deictic anchoring of tense (see Herbeck 2020 for Spanish PRs). If the external logophoric centre is responsible for nominative Case assignment (cf. Bianchi 2003) and this is absent in PRs, it follows that embedded subjects in Spec,TP are still ‘active’ for further A-movement if phase theory doesn’t block it. As outlined above, the fact that the embedded T-head does not deactivate the subject for further movement together with PIC2 gives rise to the possibility of finite subject-to-object raising operations in Spanish PRs into the matrix VP/vP domain, i.e., when the matrix verb has active voice:



However, while finite subject-to-object movement into Spec,vP in terms of A-movement is a theoretical option, finite subject-to-subject movement into the matrix Spec,TP position *is* blocked by PIC2: by the moment the matrix Voice is introduced, the embedded Spec,TP becomes unavailable for nominative Case and phi-feature *Agree* with the matrix T head:<sup>16</sup>



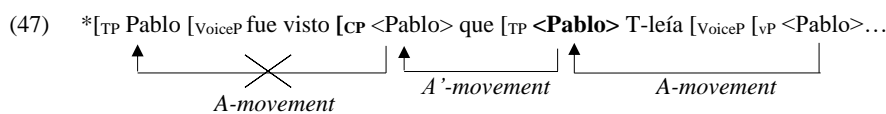
**Commentato [JC1]:** müsste fue hier nicht direkt in T gemerget werden?

<sup>15</sup> An alternative solution would be that PRs are ForcePs, but that their ForceP is in some way ‘impoverished’, as proposed by Casalicchio (2016) for Italian. If we adopt this solution, the explanation for the ungrammaticality of long passives does not change.

<sup>16</sup> In this aspect, the analysis differs from Herbeck (2020), where CP was argued not to be a strong phase, but a weak one, building on PIC1.

Here, matrix T cannot probe the subject in the embedded Spec,TP because two phase boundaries – VoiceP and CP would have to be crossed.

There would be one potential solution to circumvent the PIC2: to use Spec,CP as escape hatch. However, this would be A'-movement, and as consequence, long passivization would yield Improper Movement (A-to-A'-to-A):



In addition, there is another option that we have to consider: (iii) the PR *que*-clause could be analyzed as an adjunct and a passivized subject could originate in the matrix internal argument position (as argued by DiTullio 1998 for gerunds; see below). However, extensive discussion on PRs has shown that they are not adjuncts, as demonstrated by constituency tests applied by Campos (1994) and Rafel (1999):

- (48) Lo que vi fue [a María que abrazaba a Juan].  
 what (I)saw was DOM María that embraced DOM Juan  
 (Campos 1994:220 fn. 36)

- (49) A: ¿Qué es lo que viste que estás tan nervioso?  
 B: A Marta que asaltaba un banco.  
 DOM Marta that robbed a bank (Campos 1994: 219 [adapted])  
 ‘What have you seen that you are so nervous? B: Marta robbing a bank.’

Sentence (48) shows that the accusative marked DP can be clefted together with the PR clause and (49) shows that they can occur as answer to a *wh*-interrogative. This indicates that the accusative DP plus *que* clause form one constituent at least at some point of the derivation.

Thus, PIC2 together with the assumption that PRs are weak (defective) CP phases, which introduce an A'-position but do not deactivate their subjects, correctly predicts that ‘finite



subject-to-object raising’ is possible (PRs), but not ‘finite subject-to-subject raising’ (long passivization) in Spanish.

One further prediction of our approach is that the embedded subject can also be A’-moved out of PRs into the matrix clause, since this would constitute A-A’-movement. This prediction seems to be confirmed in the light of the following examples from our CORPES XXI search:

(50) **a él lo** vieron que se lo llevaba

DOM him him (they)saw that (he) REFL it took-away

(CORPES XXI, México, written)

(51) y **a la mujer la** veo que iba espeta perro

and DOM the woman her (I)saw that (she) went very-fast

(CORPES XXI, México, written)

(52) **A Forlín lo** veía que venía jugando muy bien

DOM Forlín him (I)saw that came playing very well

(CORPES XXI, Argentina, written)

Even though A-movement within the matrix *vP* is predicted to be possible, the movement of the subject to the left periphery in (50-52) can only be the result of cyclic A’-movement, using Spec,CP as an escape hatch.

In the next section, we have a look at how gerunds can be explained in this approach.

#### 4.2.2 Gerunds

There is strong evidence that gerunds do not project a CP nor a TP: Gerunds are not introduced by complementizers, they do not have phi- or tense specifications, and they block CLLD for most speakers (see (17)), unlike PRs. Furthermore, none of our linguist informants allows negation with gerunds (Q7; see (26)). On the other hand, gerunds project a VoiceP that can be marked as passive and active for most speakers (mean acceptance of embedded passives 3.43;

median: 3.5). In addition, they carry an aspectual reading that led Di Tullio (1998) and Casalicchio (2019) to interpret them as AspPs; more precisely, comparing them to prepositional infinitives in European Portuguese, Casalicchio argues that the verb moves to Asp where it incorporates an abstract preposition of central coincidence (Hale 1986) that gives the gerund a progressive aspectual reading (see also Gallego 2013 and Gallego/Hernández 2012 on adverbial gerunds incorporating a preposition). Regarding the accusative DP, both authors claim that it can either be merged in the embedded clause (53)(53a), or in the main clause, yielding a control structure in which the embedded clause has the function of a secondary predicate (53)(53b):

(53) Gerund (adapted from Casalicchio 2019: 83, 90):

- a. Vi <sub>[AspP a María cantar+P [VP María V-~~cantar~~]]</sub>
- b. Vi a María<sub>i</sub> <sub>[AspP PRO<sub>i</sub> cantar+P [VP V-~~cantar~~]]</sub>

Thus, gerunds have at least one derivation in which passivization of the matrix verb is predicted to be possible: in (53)(53b), the antecedent is merged in the matrix clause and, therefore, ‘short passive’ in the matrix clause is unproblematic, independently of the phasehood of the gerundive clause:

(54) [TP La actriz T<sub>EPP</sub>-fue <sub>[VoiceP fue [[VP V [VP la actriz vista-V]]] <sub>[VoiceP PRO comiendo en un restaurante berlinés]]</sub></sub>

Further evidence for the structures in (53)(53b) comes from the possibility of coordination of a gerund with a depictive AP (see Di Tullio 1998:202):

(55) Vi a Juan [muy tranquilo] y [sonriendo].

I.saw DOM Juan very quiet and smiling (Di Tullio 1998: 202)

Thus, the possibility of passives with gerunds is independent of the PIC2, given that a Small Clause analysis of gerunds is independently available, in which the internal argument of the

perception verb is not the clause, but the DP. This DP can be passivized just as any internal argument of a main clause

#### 4.2.3 Infinitives

Turning to infinitives, we first have to exclude that they can be secondary predicates like gerunds. Evidence for this is discussed in Casalicchio (2019), where it is shown that gerunds and infinitives differ both in semantics and in syntax. With respect to their semantics, gerunds focus on the perception of an individual that is involved in an action; infinitives on the event as a whole. Syntactically, this is reflected in the fact that gerunds require an overt DP antecedent, while infinitives do not:

- (56) Oigo {llover/ \*lloviendo} (Casalicchio 2019: 84)  
I.hear rain.INF rain.GER  
'I hear it rain(ing).'

In addition, coordination with a depictive AP is impossible (compare (57) with (55)):

- (57) \*Vi a Juan [muy tranquilo] y [sonreír].  
I.saw DOM Juan very calm and smile.INF  
(Di Tullio 1998:202 fn. 8; Casalicchio 2019:84)

This suggests that infinitives are not Small Clauses, differently from gerunds, which also explains why they do not allow matrix passives as readily as gerunds: in the case of infinitives, matrix passives are indeed 'long', while they are only apparently 'long' in the case of gerunds.

However, the mean acceptability of long passives with infinitives (mean: 2.76; median: 3) is not as low as with PRs (mean: 1.90; median: 1). Since infinitives are complements of the perception verb, long passives should either be possible (if they project a TP, providing an intermediate A-position), or they should be ruled out (if they only project a VoiceP, so that long passivization would involve two VoiceP phase boundaries, see above). Thus, the question is

whether there is evidence for the status of infinitival complements of *ver* ‘see’ as VoiceP or TP in Spanish.

The results of the AJT concerning the grammaticality of modal verbs does not provide us with conclusive evidence: here we find variation in the speakers’ judgements (see Table 1 above: *tener que*: 2.47; *querer*: 4.21) as well, just as we find it in long passives. The impossibility of CLLD in infinitives is not conclusive either (16), given that it is only evidence for the lack of a left peripheral CP. Note, furthermore, that Spanish cannot give us any morphological clues with respect to the difference between a radically reduced bare infinitive (in VoiceP) and a TP-infinitive, given that morphological markings like *to* in English or *zu* in German are lacking, both infinitives being morphologically marked by means of the *-r* suffix in Spanish (cf. (58) with (59)):

- (58) a. Vi/hice a María llorar.  
I.saw/made DOM María cry.INF  
b. María parece llorar.  
María seems cry.INF  
c. María promete no llorar.  
María promises not cry.INF
- (59) a. I saw/made Mary cry.  
b. Mary seemed to cry.  
c. Mary promised not to cry.

We think that this ambiguity of infinitives in Spanish is key to understanding the varying results in the judgements on long passivization: Since reduced and full infinitival complements are not distinguished morphologically in Spanish, it is expected that there is variation and that speakers might assign one or the other structure to the clausal complement:

- (60) Infinitives:

Speaker A: Vi [TP a Juan T-*cantar* [VoiceP ~~Juan~~ Voice-~~cantar~~ [VP ...]]]

Speaker B: Vi [VoiceP a Juan Voice-*cantar* [VP ...]]

Even though this reasoning is *a priori* plausible, the question is whether empirical evidence can be provided. Some preliminary evidence comes from negation: in our questionnaire with 7 linguist informants (Q7), the informants that accepted long passives all accepted negation as well:

Table 6: Judgments of Q7 regarding negation and long passives with infinitival complements of *ver* ‘see’ (S1, S2, ... = Speaker1, Speaker2, ...)

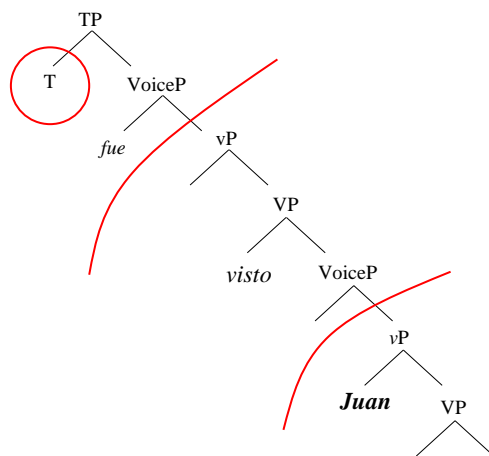
		S1	S2	S3	S4	S5	S6	S7
negation	(A mi hermana, normalmente no le gusta la fiesta) Pero <b>anoche la vi no parar</b> de bailar.	*	*	?	?	ok	ok	ok
long passive	La actriz <b>fue vista llorar</b> en un restaurante berlinés.	*	*	*	?	?	?	ok

Furthermore, if we look more closely at the individual ratings of the acceptability of our 75 informants in the online AJT (Table 5), we observe a tendentially bimodal distribution of the ratings: the majority of our informants rated the sentences either as ungrammatical (=1) or grammatical (=5), with only 15% of the speakers judging it marginal (=3). We can reformulate the result of the AJT in a more precise way: it is not the case that the long passive sentence was unanimously judged marginal by the speakers, but there is in fact considerable variation between speakers with respect to the acceptability of this structure. This is further reinforced by the observation that the SD is highest in this configuration (SD = 1.55).

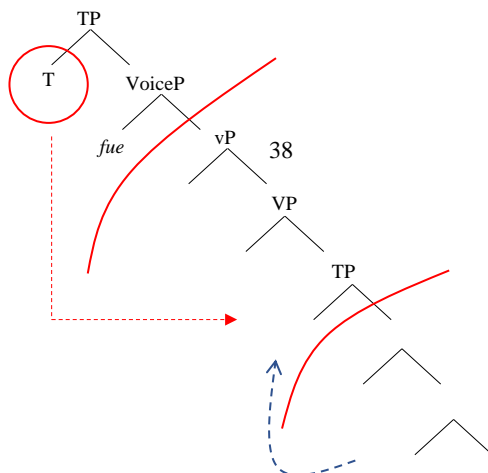
If there is indeed variation between speakers assigning a VoiceP or a TP structure to the infinitival complement of perception verbs, the variation in acceptability straightforwardly follows from Sheehan & Cyrino's (2018) approach in terms of Chomsky's (2001) PIC2:

(61) %*María fue vista llorar en un restaurante berlinés.*

A) speakers that do not allow 'long passives': **bare VoiceP infinitive**



B) speakers that accept long passives: the **infinitive projects a TP**



Inter-speaker variation in the acceptability of long passives out of infinitives with perception verbs is thus due to (i) structural ambiguity of Spanish infinitives between VoiceP and TP, possibly influenced by a lack of morphological clue to distinguish the two structures and, relatedly, (ii) the projection (or not) of Spec,TP which provides an intermediate landing site for further A-movement into the matrix Spec,TP position, following Sheehan & Cyrino's (2018) approach.

#### 4.3 *Summary*

Although PRs, gerunds and infinitives all occur with perception verbs, they display radically different structures: PRs are defective CPs – they lack an external logophoric centre and, thus, deictic tense, person, and nominative Case. This way, the subject remains active but cannot A-move any further than the matrix vP domain, giving rise to raising-to-object and blocking long passives. In the case of gerunds, long passives are just a superficial effect: since they are (at least in one configuration) secondary predicates, the DP is first merged as an internal argument of the matrix verb, from where it can be promoted to the structural subject position like any internal argument of a transitive verb. Finally, infinitives show the highest amount of variation. We have argued that they can be assigned two structures and that speakers assign infinitives to one or to the other: the majority of them assigns infinitives a bare VoiceP structure and, thus,

long passives are ruled out by PIC2. For a subset of speakers, however, infinitives as complements of *ver* ‘see’ are TPs. For these speakers, the embedded Spec,TP provides an intermediate A-position from which the subject can undergo further A-movement into the matrix Spec,TP position. In this derivation, long passives are possible because A-movement only crosses the matrix VoiceP phase, without violating the PIC 2.

In the next section, we will discuss some Italian data and show that our approach, apart from inter-speaker variation, can also account for the existence of cross-linguistic variation between closely related Romance languages.

## 5 An issue for future research: Cross-linguistic data from Italian

We have seen that the property of allowing long passives is a crucial factor to individuate the structure underlying PRs, gerunds and infinitives. In particular, long passives are out with PRs, while they are possible with gerunds. Finally, there is inter-speaker variation with infinitives, as we have seen. In this section, we sketch some differences between the relevant structures in Spanish and Italian (see Casalicchio & Herbeck *in prep.* for further discussion and data, and Casalicchio & Sheehan 2021 for a more detailed analysis of Italian infinitival complements).

If we take a comparative perspective with another Romance null subject language, Italian, the Spanish pattern is not replicated. Italian also has PRs and infinitives in perception constructions (see Cinque 1992, Guasti 1993, Casalicchio 2013, 2016, Grillo & Moulton 2016, Graffi 2017 and references therein):

(62) Ho visto Gianni che correva.

(I)have seen Gianni that ran.3SG

‘I have seen Gianni running.’



But, unlike Spanish, both PRs (Cinque 1992) and infinitives (Guasti 1993) allow long passives:<sup>17</sup>

(63) Gianni è stato visto che correva a tutta velocità. (Cinque 1992:11)

Gianni is been seen that ran.3SG at all speed

‘Gianni was seen running at full speed.’

(64) Gianni è stato visto riparare la macchina. (Guasti 1993: 137)

Gianni is been seen repair.INF the car

‘Gianni was seen repairing the car.’

First, as far as Italian PRs are concerned, there is good evidence to consider them as a correspondent not to Spanish PRs, but to Spanish gerunds. Casalicchio (2013) shows that Italian PRs and Spanish gerunds have exactly the same distribution and the same syntactic behaviour in a number of tests.<sup>18</sup> In addition, Cinque (1992) and Casalicchio (2013, 2016) proposes that three different structures can underlie Italian PRs. In two of them, the embedded subject is located within the embedded clause, while in the third it is merged in the matrix clause, from where it controls a PRO subject in the PR. It is exactly this last structure that allows long passives, just like Spanish gerunds (cf. (54) vs. (65)):

(65) *Ho visto Gianni<sub>i</sub> [PRO<sub>i</sub> che correva]* (Casalicchio 2016: 40 [simplified])

I.have seen Gianni that ran.3SG

<sup>17</sup> For a more fine-grained view on the acceptability of long passives of infinitives in Italian, see Casalicchio & Sheehan (2021).

<sup>18</sup> Italian PRs and Spanish gerunds have the same distribution, as they can occur with perception verbs, but also, for example, with other types of verbs (e.g. *sorprendere/sorprender* ‘catch’, (*non*) *sopportare/(no) soportar* ‘(not) stand’, *mangiare/comer* ‘eat’), in presentative sentences and in locative sentences. See Casalicchio (2013) for more details.

Thus, Italian PRs can have an underlying structure with the accusative DP as an internal argument of the matrix perception verb and the PR as a small clause predicate; a possibility that is excluded in Spanish PRs, but possible in Spanish gerunds.<sup>19</sup>

A nice piece of evidence for the analysis of PRs as Small Clauses in Italian (65) comes from the possibility of coordination with an AP:

(66) Ho visto Gianni [triste] e [che piangeva].

I have seen Gianni sad and that cried.3SG

‘I saw Gianni sad and crying.’

**Commentato [JC2]:** vielleicht sollten wir das rausnehmen, da wir diese Daten für spanische PRs nicht haben (und wenn ein Reviewer (66) sieht, könnte es ihm einfallen)

So, apparently long passives in Italian PR structures are in fact ‘short’ passives, exactly as in the case of Spanish gerunds (cf. (67) with (54)):

(67) [Gianni]<sub>i</sub> è stato visto [~~Gianni~~]<sub>i</sub> [PRO<sub>i</sub> che correva].

Gianni is been seen Gianni that ran.3SG

‘Gianni was seen running very fast.’

To understand where these differences between Spanish and Italian may stem from, we would like to point out another difference between the two languages: gerundive structures cannot occur as Small Clauses relating to a matrix object in Italian, unlike in Spanish. Thus, in (68) the only possible interpretation is that Maria (the subject) is the person singing:

(68) Maria<sub>i</sub> ha visto Paolo<sub>j</sub> PRO<sub>i/\*k</sub> cantando

Maria has seen Paolo singing

‘Maria saw Paolo while she was singing.’

Therefore, neither Italian PRs nor gerunds are fully comparable to Spanish: Italian PRs can have three different structures, which are all available in a basic sentence like (62): a

<sup>19</sup> Casalicchio (2013) explicitly compares Italian PRs with Spanish gerunds, claiming that *mutatis mutandis* they have exactly the same three structures.

complement clause with the accusative DP merged in the left periphery of the embedded clause (ForceP for Italian, see Casalicchio 2016), a Small Clause structure in which the *che*-clause is not in the position of the internal argument of the matrix verb, and a complex DP which hosts the PR as modifier of the nominal head. Apparently ‘long’ passives are possible in one of the three structures, namely, when the PR functions as a Small Clause in non-argument position (see (67)), exactly because in this structure, passives are in fact ‘short’.<sup>20</sup> This configuration, on the other hand, is fulfilled by gerunds in Spanish, while PRs lack this option:

(69)

Spanish		Italian
PR	}	PR
Gerund		
Infinitive		Infinitive

Thus, cross-linguistic differences between Italian and Spanish PRs and gerunds stem from the distribution of gerunds and PRs in Small Clauses.

## 6 Conclusions

In this paper, we have offered a contrastive analysis of PRs, gerunds and infinitives as complements of the perception verb *ver* ‘see’ in Spanish. Even though these configurations have been dealt with on a separate basis before, we have aimed at providing a detailed comparison of the three configurations. Furthermore, for some phenomena that have not been addressed in detail in previous literature, but which are crucial for the structure underlying them,

<sup>20</sup> We may speculate that this threefold structure of PRs is due to the fact that gerunds cannot be used in perception complements in Italian (but they could in Old Italian), so that PRs may have inherited this property from gerunds. An account of the diachronic evolution of Italian gerunds and PRs is beyond the scope of this paper.

such as long and short passives and embedded modal verbs, new data has been provided to offer new insights into the analysis of the respective configurations.

The AJT has revealed the strongest contrasts between the three structures in the availability of matrix (long) passives: pseudo-relatives block long passives, gerunds allow them, and infinitives show inter-speaker variation. We have argued that gerunds do in fact not license long passives, but they are Small Clauses in non-argument position; thus matrix passives are always short. Pseudo-relatives, on the other hand, are complements which project a feature defective CP – a weak phase which introduces an A'-position but, given the lack of deictic anchors in C (an external logophoric centre; Bianchi 2003), structural nominative Case is not assigned and the subject position is active for further movement. This situation gives rise to the availability of finite subject-to-object raising, but blocks subject-to-subject raising, i.e. long passives. Building on Sheehan & Cyrino's (2018) implementation of Chomsky's (2001) PIC2, the embedded subject of a PR would have to cross two phases on its way to matrix Spec,TP – CP and matrix VoiceP – so that PIC2 is violated. Subject-to-object raising is possible, with the subject crossing only one CP phase boundary, respecting PIC2 and giving rise to the PR configuration in Spanish.

This approach can also account for the behavior of infinitives, which show inter-speaker variation, both with respect to negation and long passives: Given the absence of morphological clues, infinitives are structurally ambiguous between a VoiceP and a TP structure. The prediction is that speakers assigning the former will not allow long passives or negation, while speakers assigning the latter will.

This approach is also capable of explaining several differences regarding PRs and gerunds with perception verbs between Spanish and the closely related language Italian: PRs in the latter language do allow long passives. We have argued that this is because Italian PRs have a

derivation similar to Spanish gerunds – namely, as SC predicates. At the same time, Italian gerunds cannot fulfil this function, differently from Spanish.

An account of the differences and similarities between infinitives, gerunds and PRs with perception verbs in Romance languages must thus consider the morpho-syntactic properties of the extended verbal projection, different clausal ‘sizes’, and general configurational properties in terms of clausal embedding and integration.

Future research will hopefully reveal further properties of the nature of the syntax of Romance perception verbs by analyzing more data on a micro-comparative level.

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