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On subject realization in infinitival complements of causative and perceptual verbs in European Portuguese: Evidence from monolingual and bilingual speakers

Abstract: This study aims to investigate knowledge of a heritage language (HL), i.e. the language of origin of bilingual speakers who grow up in the context of migration with exposure to the HL and the dominant language of the host country. We focus on European Portuguese (EP), and concentrate on bi-clausal infinitival complements of causative and perception verbs. These may have different forms depending on whether the infinitival complement is inflected or uninflected. In particular, the subject may be Nominative or Accusative. Two experimental tasks were applied, a Completion Task and an Acceptability Judgment Task, to a total of 60 adult informants: 30 native speakers raised in a monolingual context, and 30 heritage speakers (HSs), raised in a bilingual context with EP as home language and German as environmental language. Overall both groups demonstrate an evident preference for Accusative over Nominative Case marked subjects, regardless of the presence of inflection on the infinitive. Concerning the monolingual group, the most striking result regards the residual rates of Nominative Case marked subjects in the presence of an inflected infinitive in both tasks. This result is unexpected under standard assumptions concerning clause structure in EP. We offer an alternative analysis based on the idea that pre-verbal Nominative Case marked subjects in EP are (typically) left-dislocated topics (Alexiadou & Anagnostopoulou 1998; Barbosa 1995). Left-dislocated topics in EP are assigned Nominative Case by default. On this view, preference for avoiding a Nominative subject in the presence of an inflected infinitive reduces to preference for the operation of raising to object over the last resort operation of default (Nominative) Case assignment. This preference can be viewed as an instance of the Paninian principle Blocking, whereby a general, default form is blocked by the existence of a more specific rival form. In this case, the default Case option is blocked by the more specific operation of raising to object. The most significant difference between monolinguals and bilinguals concerns a higher rate of acceptance of Nominative pronouns by HSs, including in uninflected infinitives. This means that, on a par with the predominant raising to object option, the HSs allow

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for the default Case strategy; i.e., they fail to apply blocking. This strategy has also been attested in early stages of the acquisition of these constructions by EP monolingual children (Santos et al. 2016), a fact that reinforces the view that the process of acquisition of the HL is native-like in the sense that it goes through the same stages as the process of monolingual acquisition. However, by retaining an option that is no longer available in mature grammars, the HSs reveal protracted development.

1 Introduction

Research into infinitival complements, either of control verbs or of causative and perception verbs has a long tradition, not only from a theoretical perspective (e.g., Rosenbaum 1967), but also in the field of language acquisition (see overview in Santos, Gonçalves & Hyams 2016). European Portuguese (EP) is a particularly attention-grabbing case of interest in this domain, because infinitives may be uninflected or inflected. In the latter case, a Nominative case marked subject is licensed in virtue of the presence of agreement inflection (Raposo 1987). Infinitival complements of perception and causative verbs are especially interesting since, in addition to the inflected infinitival option, uninflected infinitives show up with Accusative Case marked subjects. In addition, perception verbs allow yet another type of infinitival complement, namely the prepositional infinitival construction (PIC), in which the subject surfaces in the Accusative form regardless of the presence of agreement inflection. This means that infinitival complements of perception and causative verbs are a highly complex domain of variability raising interesting learnability issues, particularly in a context of language contact.

Taking the co-existence of these different structures as a starting point, the present study aims to determine, on the basis of experimental data, which structures are preferred by native speakers and how the presence/absence of agreement in the infinitival form is correlated with the Case of the complement's subject. The distribution of these constructions in native EP will be assessed not only by looking at the performance of native speakers raised in a monolingual context, but also of bilingual speakers, who acquired Portuguese as heritage language (HL) in a migration context, so-called heritage speakers (HSs). This allows us to evaluate if the context of native language acquisition, i.e. as primary language in a predominant monolingual context or as primary language in co-existence with another, more dominant environmental language, constrains the speakers' knowledge of the target structures.



The role of the context (and the resulting particular input conditions) in native language acquisition has been standing in the middle of theoretical debates for some time. Numerous authors argue that mature heritage grammars diverge qualitatively from mature monolingually acquired grammars because the process of HL acquisition is constrained by limited input and by the dominant presence of the majority language (see Benmamoun, Montrul & Polinsky 2013). According to the *incomplete acquisition hypothesis*, proposed by Montrul (2008), the development of a HL under reduced input conditions may result in incomplete grammars, which often resemble late acquired L2 knowledge (see also Montrul 2016). As influential as this proposal might be, it is also very challenging for formal perspectives on language acquisition, since it assumes that individuals exposed to a language since birth and growing up with uninterrupted naturalistic, even though reduced, exposure to this language may still not develop native knowledge. The construct of *incomplete acquisition* has been criticized in recent years (Guijarro-Fuentes & Schmitz 2015; Meisel 2013; Pascual y Cabo & Rothman 2012; Pires & Rothman 2009; Putnam & Sánchez 2013) and there has been an attempt to replace the label of incompleteness by less evaluative terms (see references in Kupisch & Rothman 2016). One major point of discussion, which we want to take up in the present work, is the debate on the nativeness of HSs' language competence (Rothman & Treffers-Daller 2014). Studies on HL development have consistently shown that HSs tend to differ from monolinguals in various domains of linguistic knowledge, from phonetics (Rao & Ronquest 2015) to morpho-syntax (Flores 2015). A closer look at these studies, particularly those focusing on morpho-syntactic properties, reveals, however, that HS groups usually amplify a linguistic behavior also observed in monolingual groups (Rinke & Flores 2014). An important (though not the only one) causal factor that explains differential and variable outcomes in HSs' test performances is general inaccessibility to different language registers (particularly more formal registers), to different language modes (written sources) and to formal instruction (Kupisch & Rothman 2016) in the HL.

Previous work on EP as HL has shown that second generation speakers from Portuguese communities in Germany tend to develop very stable knowledge of their HL, which is explained by their continuous, daily contact with the HL (Flores 2015). However, it has also been shown that some properties are acquired with delay when compared with monolingual peers, in particular late linguistic properties like clitic placement (Flores & Barbosa 2014) or the subjunctive (Flores, Santos, Jesus & Marques 2017). What is important to highlight in these cases is that the observed delay displays the developmental patterns described for L1 native acquisition, i.e. adolescent or adult HSs may show features of linguistic behavior consistent with an earlier developmental stage of L1 acquisition.

In this paper, we intend to evaluate the ‘nativeness’ of EP HSs’ knowledge of the different types of infinitival complements of perception and causative verbs. In particular, we will show that heritage bilinguals develop native knowledge of these structures but retain features that are characteristic of early stages of the process of acquisition of EP by monolingual children, which seem not to be totally overcome. In this sense, we reject the idea of a non-native development of heritage grammars.

2 Infinitival complements of causative and perception verbs in European Portuguese

In EP, causative and perception verbs may select at least three different types of clausal complements: a finite clause (cf. (1)), an inflected infinitival clause (cf. (2)) and an uninflected infinitival complement (cf.(3)):

- (1) a. O pai {mandou/deixou} que os filhos saíssem do quarto.
the father ordered/allowed that the kids leave.SUBJ of.the room
‘The father {ordered/allowed} the kids to leave the room.’
- b. Eu {vi/senti/ouvi} que as crianças saíam do quarto.
I saw/felt/heard that the kids left.IMP of.the room
‘I {saw/felt/heard} the kids were leaving the room.’
- (2) a. O pai {mandou/deixou} as crianças falarem
the father ordered/allowed the kids to.talk.INF.3PL
com a professora.
with the teacher
‘The father {ordered/allowed} the kids to talk to the teacher.’
- b. Eu {vi/senti/ouvi} as crianças falarem com a professora.
I saw/felt/heard the kids to.talk.INF.3PL with the teacher
‘I {saw/felt/heard} the kids talk to the teacher.’
- (3) a. O pai {mandou/deixou} as crianças falar com a professora.
the father ordered/allowed the kids talk.INF with the teacher
‘The father ordered/allowed the kids to talk to the teacher’

- b. Ele {viu/sentiu/ouviu} as crianças falar com a
 he saw/felt/heard the kids talk.INF with the
 professora.
 teacher
 ‘The father {saw/felt/heard} the kids talk to the teacher’

In this paper, we focus on constructions that take infinitival complements (as illustrated in (2) and (3)). These differ from each other with respect to verbal inflection: while (2a,b) contain agreement morphology on the infinitive, (3a,b) feature non-agreeing infinitives. The presence *versus* absence of agreement morphology on the infinitive has potential consequences for the syntax of these complements, particularly regarding the Case of the notional subject of the infinitival clause. According to Raposo (1987) and Gonçalves (1999), there is a one way relation between inflection and Case: an inflected infinitival complement takes a Nominative subject (cf. (4a)) and an uninflected infinitive takes an Accusative subject (cf. (4b)).

- (4) a. O pai {mandou/deixou} [**elas** falarem com a
 the father ordered/allowed [they speak.INF.3PL with the
 professora].
 teacher]
 ‘The father {ordered-them/allowed-them} talking to the teacher.’
 b. Eu {vi/senti/ouvi} [**elas** falarem com a professora].
 I saw/felt/heard they to.talk.INF.3PL with the teacher
 ‘I {saw-them/felt-them/heard-them} talk to the teacher.’
- (5) a. O pai {mandou-**os**/deixou-**as**} falar com a
 the father ordered-them/allowed-them speak.INF with the
 professora.
 teacher
 ‘The father {ordered-them/allowed-them} to speak with the teacher.’
 b. Ele {viu-**as**/sentiu-**as**/ouviu-**as**} falar com a professora.
 he saw-them/felt-them/heard-them talk.INF with the teacher
 ‘He saw/felt/heard them talk to the teacher.’

Raposo (1987) and Gonçalves (1999) propose that, when agreement inflection is present, Nominative case is available for the subject clause internally. Assuming that Nominative Case is connected to phi-agreement (rather than Finiteness), the subject of the infinitive is assigned Case by [-FIN] AGR (Raposo 1987). When agreement inflection is absent, the subject surfaces in the Accusative form

(cf. (5)). Since Accusative pronouns are clitics in EP, the Accusative pronoun appears attached to the matrix verb. Sentences (5a,b) are analysed as instances of Exceptional Case Marking or, more recently, raising to object (Barbosa & Raposo 2013): given that the subject of the embedded infinitive cannot be assigned Case within the embedded clause, it raises to the matrix where it gets Case from the matrix verb.

This account works pretty well for the paradigm above, but fails when an additional observation is brought into the picture, namely that it is not uncommon to find examples with an inflected infinitive and an Accusative Case marked subject:

- (6) Ela viu-os correrem.
 she saw-them run.INF.3Pl
 ‘She saw them run.’

Sentence (6) is not ungrammatical in EP, a fact that is unexpected under Case theory: since agreement inflection is present, Nominative Case is available, so raising to object should be a superfluous step in the derivation. Sentence (6) should be out in violation of Economy (Chomsky 1995), contrary to fact. Since, to date, these data have not been checked against a reasonable number of native speaker intuitions, our experimental tasks are designed so as to determine the preference patterns found not only in bilingual subjects, but also in monolinguals. The monolingual data will constitute the baseline for assessing the behavior of HSs.

One intriguing fact regarding such examples is that not all persons of the paradigm behave alike. Thus, (7a,b) below, with a first person plural subject and a second person singular subject appear to be more degraded than (6):

- (7) a. ??Ela viu-nos correremos.
 she saw-us run.INFL.1PL
 b. ??Ela viu-te correres.
 She saw-you run.INFL.2SG

Hornstein, Martins and Nunes (2008) offer a formal account of these facts, but, to our knowledge, these data have never been the focus of empirical enquiry. In this study, our experimental tasks are designed so as to elicit data belonging to the different persons of the paradigm, and thus shed light on this puzzling asymmetry. Moreover, our experimental study is intended to clarify the status of examples such as (6–7).

The sentences discussed above containing an uninflected complement and an Accusative subject should be distinguished from superficially similar constructions involving complex predicate formation. Consider example (8):

- (8) a. Eu {mandei/deixei} ler o livro às crianças.
 I ordered/allowed read.INF the book to.the children
 'I {ordered/allowed} the children to read the book.'
 b. Eu mandei-**lhes** ler o livro. [*lhes* = *as crianças*]
 I ordered-3PL.Dat read.INF the book
 'I ordered them to read the book.'

In (8), the subject surfaces in the Dative form, an NP introduced by the preposition *a* in (8a), or a Dative pronoun in (8b). As extensively argued in Gonçalves (1999), (8) is best analysed as a single clause headed by a complex predicate formed by the finite verb *mandei* ('ordered') and the infinitival form *ler* ('read'). Jointly the complex predicate assigns Dative case to the agent of *ler* 'read'.

One important point to make regarding this kind of clause union is that Dative case is assigned to the causee only when the embedded verb is transitive. If the embedded verb is intransitive, the Case assigned is Accusative:

- (9) a. Eu [mandei sair] as crianças. *Clause Union*
 I ordered leave.INF the kids
 b. Eu [mandei-as sair].
 I ordered-them leave.INF

(9b) is the pronominal counterpart to (9a). Note that, when the embedded verb is intransitive and the causee is a pronoun, the outcome of clause union is indistinguishable from the output of raising to object. (10a) below contains the representation of a raising to object construction with an intransitive verb. (10b) contains the pronominal counterpart to (10a), which is homophonous with (9b):

- (10) a. Eu mandei [as crianças]_i [*t_i* sair]. *Raising to Object*
 I ordered the kids leave.INF
 b. Eu mandei-as_i [*t_i* sair].
 I ordered-them leave.INF

What distinguishes the representations in (10) from those in (9) is their biclausal character: whereas (10a,b) are biclausal, (9a,b) are monoclausal constructions. Here we will not discuss the monoclausal construction any further, since all experimental items of our tasks are biclausal.

Perception verbs allow yet another type of infinitival construction, known as the Prepositional Infinitive Construction (PIC):

- (11) a. Eu vi as crianças a falarem com a professora.
 I saw the kids at talk.INF.3PL with the teacher
 b. Eu vi as crianças a falar com a professora.
 I saw the kids at talk.INF with the teacher
 ‘I saw the kids talking to the teacher.’

In (11) the embedded infinitive is introduced by the preposition *a*. The infinitive may be inflected (11a) or uninflected (11b). Two key aspects characterize the PIC and distinguish it from bare infinitival complements. The first aspect concerns the aspectual properties of the PIC as opposed to the bare infinitive. The infinitival complement in (11) has a progressive interpretation that is very similar to that of the English gerund (as attested in the glosses). In order to better understand the difference in meaning between the PIC and bare infinitival complements, let us consider the following minimal pair:

- (12) a. O Carlos viu o pássaro a morrer, mas conseguiu
 the Carlos saw the bird at die.INF, but managed.3SG
 salvá-lo.
 save.INF-it
 ‘Carlos saw the bird dying, but managed to save him.’
 b. # O Carlos viu o pássaro morrer, mas conseguiu
 the Carlos saw the bird die.INF, but managed.3SG
 salvá-lo.
 save.INF-it
 ‘Carlos saw the bird die, but managed to save it.’

While (12b) sounds contradictory, (12a) doesn’t. Assuming that the bare infinitival form does not alter the lexical aspect of the verb (cf. Silvano & Cunha 2016), (12b) is expected to be contradictory, since the verb ‘die’ is an achievement and, as such, it denotes a culmination. Therefore, the clause is incompatible with a continuation that denies that culmination. When the infinitive combines with *a*, however, the aspectual properties of the base are altered so that the situation is viewed as a process in progress, namely the process that precedes the culmination of the event. It is this phase of the process that is taken to be the object of perception in (12a) and this is why the sentence is not perceived as a contradiction.

The second aspect that distinguishes the PIC from the bare infinitival construction concerns the Case of the subject: the subject of the PIC is invariably

assigned Accusative Case regardless of whether agreement inflection is present or not:

- (13) a. O Carlos viu as crianças a falarem com a
 the Carlos saw the kids at talk.INF.3PL with the
 professora.
 teacher
 ‘Carlos saw the kids talking to the teacher.’
 b. O Carlos viu-as a falarem com a professora.
 the Carlos saw-them at talk.INF.3PL with the teacher
 ‘Carlos saw them talking to the teacher.’
 c. *O Carlos viu elas a falarem com a professora.
 the Carlos saw they at talk.INF.3PL with the teacher
- (14) a. O Carlos viu as crianças a falar com a professora.
 the Carlos saw the kids at talk.INF with the teacher
 ‘Carlos saw the kids talking to the teacher.’
 b. O Carlos viu-as a falar com a professora.
 the Carlos saw-them at talk.INF with the teacher
 ‘Carlos saw them talking to the teacher.’
 c. *O Carlos viu elas a falar com a professora.
 the Carlos saw they at talk.INF with the teacher





(13c) shows that the DP *as crianças* (‘the children’) or its pronominal counterpart is not assigned Nominative Case in spite of the presence of agreement inflection on the embedded infinitive. This contrasts with the bare infinitival construction, where Nominative Case is reported to be available in the sources cited as long as the infinitive bears agreement inflection. In order to better understand this contrast between the PIC and bare infinitival complements, we turn to an examination of the internal syntax of the PIC, as originally proposed in Raposo (1989).

Raposo (1989) suggested that the PIC has the internal syntax of a small clause that is projected by the preposition. He starts by observing that the sequence [NP α V_{INF} ...] behaves as a constituent and then goes on to offer two arguments in favor of the small clause analysis. In the first place, the PIC has a different distribution from that of other inflected infinitival complements. In particular, the PIC may occur in contexts in which a bare inflected infinitival clause is not allowed:



- (15) a. Eu quero [os meninos a trabalhar(em) já].
 I want the kids at work.INF(3PL) now
 ‘I want the kids working now.’

- b. *Eu quero [os meninos trabalhar(em) já].
 I want the kids work.INF(3PL) now

On the other hand, the PIC has a distribution that is very similar to that of canonical small clauses headed by an adjective or a PP. The parallelism between the PIC and canonical small clauses can be seen in the context of perception verbs or *querer* ‘want’.

- (16) a. Eu vi [os meninos nus].
 I saw the kids naked
 ‘I saw the kids naked.’
 b. Eu vi [os meninos no quarto].
 I saw the kids in.the room
 ‘I saw the kids in the room.’
 c. Eu vi [os meninos a nadar(em)].
 I saw the kids at swim.INF(3PL)
 ‘I saw the kids swimming.’ (Rapos  8  4)
- (17) a. Eu quero [a encomenda entregue ainda hoje].
 I want the parcel delivered still today
 ‘I want the parcel delivered today.’
 b. Eu quero [o livro na estante].
 I want the book in.the shelf.
 c. Eu quero [os meninos a trabalhar(em) já].
 I want the kids at work.INF.(3PL) now
 ‘I want the kids at work now.’ (Rapos  8  4)

Furthermore, the PIC is not possible in the contexts in which a small clause headed by a preposition is not allowed. This is shown by the predicates *considerar* ‘suppor’ (‘suppose’). While the former precludes a prepositional small clause, the latter doesn’t. The PIC patterns with the small clause headed by a preposition.

- (18) a. Eu considero [os meninos inteligentes].
 I consider the kids intelligent
 b. *Eu considero [os meninos com febre].
 I consider the kids with fever
 c. *Eu considero [os meninos a trabalhar(em)].
 I consider the kids at work.INF.(3PL) (Rapos  8  5)

- (19) a. Eu supunha [os meninos com febre].
 I supposed the kids with fever
 'I supposed that the kids were with a fever.'
- b. Eu supunha [os meninos a trabalhar(em)].
 I supposed the kids at work.INF.(3PL)
 'I supposed the kids were working.' (Raposo, 1989:285)

According to Raposo (1989), these distributional facts argue in favor of the idea that the PIC is a small clause headed by a preposition. In addition, Raposo observes that there is a parallelism between the PIC and control structures such as (20).

- (20) Eu obriguei [os meninos] [a [*pro*/*PRO* ler(em) esse livro]].
 I forced the kids to *pro*/*PRO* read.INF.(3PL) that book
 'I forced the kids to read this book.' (Raposo 1989: 286)

Even though the embedded clause bears inflection in (20), the (null) embedded subject cannot have independent reference and must be controlled by the object of *obrigar* ('force'). The author proposes that the relation established between the notional subject of the PIC (NP in the structure NP *a* V_{INF}) and the infinitival complement is similar to the relation established between the matrix object and the infinitival complement in control structures. The infinitival complement of the PIC is a clause with a null subject which is controlled by the lexical subject of the small clause headed by the preposition. Assuming this theory, Raposo (1989) proposes the following structure for the PIC containing agreement inflection:

- (21) DP [_{PP} *a* [_{IP} *pro* Infl_[+AGR] VP]]

In (21) the controlled null subject is *pro*, which is assigned Case by Infl_[+AGR]. When the infinitive is not inflected, the controlled null subject is *PRO* (Raposo assumes that, in this case, the complement of P is CP).

- (22) DP [_{SP} *a* [_{CP} [_{IP} *PRO* Infl_[+AGR] VP]]] (Raposo, 1989 *apud* Cochofel, 2003)

The parallelism between the PIC and small clauses can be extended to the domain of Case. Whenever a small clause occurs as complement of V, its subject is assigned Accusative Case from V:

- (23) Eu vi-os nús / com fome.
 I saw-them naked / with hunger

Raposo's analysis of the PIC offers an elegant way of accounting for the Case patterns in the PIC and was further corroborated by data discussed in Barbosa and Cochofel (2005), so we will adopt it here (see Duarte 1992 for a different analysis). To conclude, the PIC is a small clause headed by P, which selects a clausal infinitival complement. It is a proleptic structure in the sense that the subject of the small clause controls a null subject (*PRO* or *pro*, depending on the presence of agreement inflection) contained in the clausal projection that is selected by P.

According to Raposo (1989), the difference regarding Case assignment between the PIC and bare infinitival complements of perception verbs is that, in the latter case, inflected and non-inflected infinitives are predicted to pattern differently. When nonfinite Infl bears agreement inflection, Nominative Case should be automatically available for the subject clause internally (the subject is in Spec-IP, wherefrom it is governed by Infl_[AGR]),

$$(27) \quad V_{\text{CAUS/PER}} \left[{}_{\text{IP}} \begin{array}{c} \text{DP} \quad \text{Infl}_{[+AGR]} \\ \uparrow \\ \text{Noninative} \end{array} \right] \text{VP}$$

For this reason, the subject is predicted to surface in the Nominative Case in agreeing infinitives (economy considerations should bar the superfluous operation of raising to object). In the absence of agreement inflection, the only source for Case is matrix V, so raising to object must apply and the subject is predicted to surface in the Accusative Case.

$$(28) \quad V_{\text{CAUS/PER}} \begin{array}{c} \text{DP}_i \quad \text{Infl}_{[-AGR]} \\ \uparrow \\ \text{Accusative} \end{array} \left[{}_{\text{IP}} t_i \right] \text{VP}$$

In the PIC, by contrast, the source of Case is invariably matrix V, as outlined above.

Table 1 summarizes the different patterns predicted to occur under Raposo's (1989) analysis.

As mentioned above, there is one other pattern that is not predicted by Raposo's analysis and yet is attested in naturally occurring data, namely the (apparently uneconomical) derivation in which an Accusative Case-marked subject combines with a bare infinitival bearing agreement morphology (cf. (6)). Recall that the degree of acceptability of such examples appears to depend on the feature Person on the agreeing infinitive: 3rd person appears to yield better results than 1st or 2nd.

Table 1: Overview of the structures predicted under Raposo (1989).

Structure	Inflection	Expected Case
Infinitival complements of causative/perception verbs	+AGR	NOMINATIVE
	-AGR	ACCUSATIVE
PIC (only with perception verbs)	+AGR	ACCUSATIVE
	-AGR	ACCUSATIVE

3 The present study

Research questions

Based on the above description of infinitival complements, our research questions are two-fold. Our first question concerns the preferences of EP monolingual speakers regarding the acceptance and the production of different types of infinitival complements of perception and causative verbs. Although these structures have been thoroughly discussed from a formal perspective, as shown in the previous section, empirical evidence of EP native speakers' preferences is still lacking. We are interested in knowing which option – inflected infinitival complement *versus* uninflected infinitival complement – is more productive in native EP and how each option correlates with Case morphology on the subject of the infinitive (Nominative or Accusative).

From the perspective of standard Case theory, a very clear prediction is made concerning bare infinitival complements, namely that an Accusative Case marked subject should show up just in case agreement inflection is absent. In the presence of agreement, the expected form is Nominative, all other things being equal. The experimental tasks are designed so as to evaluate whether speakers in fact show the preferences predicted.


Our second question concerns the HSs of EP living in Germany. First, these speakers have had much less exposure to EP than monolingual speakers raised in Portugal and, second, they have had very limited formal instruction in EP and almost no contact with written sources and formal registers. Our goal is, therefore, to determine whether these speakers develop a knowledge of the target structures that is similar to that of monolinguals, despite unequal input conditions and coexistence with the dominant German language.

Similarly to EP, German perception and causative verbs take infinitival complements (see (29)). However, German differs from EP in several ways: (i) standard

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German does not have clitic pronouns; (ii) it does not have inflected infinitives and, importantly, (iii) the subject pronoun always bears Accusative case, a structure traditionally known as ‘accusative cum infinitivo’ (ACI) (Felser 2000).

- (29) a. Ich sah den Mann / ihn ins Haus hineingehen.
 I saw the man.ACC/ him.ACC into.the house go.INF
 ‘I saw the man / him entering the house.’
 b. Der Vater ließ seine Kinder / sie einen Hamburger
 the father allowed his kids.ACC / them.ACC a hamburger
 essen.
 eat.INF
 ‘The father allowed his  to eat a hamburger.’

Consequently, if HSs of EP develop a divergent non-native grammar, for reasons of reduced input and cross-linguistic influence, they will not show the same preferences as the monolingual speakers.

Participants

A total of 60 adult informants participated in the present study: 30 native speakers of EP raised in a monolingual context, and 30 HSs of EP, raised in a bilingual context with EP as home language and German as dominant environmental language.

The monolingual group includes 30 university students in the age span of 18 to 36 years (mean age = 20.0; SD = 3.8). No informant of this group was raised bilingually or lived abroad for an extended period of time.

The HSs of EP are second generation immigrants in the age span of 14 and 47 years (mean age = 26.3; DP = 10.6), who live in Germany since birth or early childhood. They completed a detailed questionnaire, focused on sociolinguistic and biographical information such as age of migration, place of birth, amount of formal instruction in Portuguese, language habits, amount and type of contact with EP, knowledge of other languages, the parents’ migration background. The age span of the experimental group is larger than that of the monolinguals, but all speakers share the fact that they were exposed to Portuguese since birth and speak that language frequently in their daily routines.

Twenty one speakers were born in Germany, the other participants were born in Portugal and immigrated to Germany with their families until the age of five years. All speakers have frequent contact with their heritage language; however, exposure to Portuguese is mainly restricted to oral input – no informant reports reading literature or newspapers in Portuguese. The only contact the bilingual HSs have or had with the

written register occurred in the special program of instruction for child HSs, where Lusophone children become literate in Portuguese and are also taught some Portuguese History and Geography. Only one participant never attended these classes; nine are still enrolled. The others have attended a HL program for two to ten years but were no longer in school age at the time of data collection. In the self-assessment test, all participants rated their proficiency in German higher than in Portuguese, particularly the writing skills. This is in line with their statement to be German-dominant and to feel much more comfortable in speaking German than their HL.

Method

Data collection

Data collection consisted of a written biographic questionnaire, followed by the experimental tasks: a written Completion Task (CT) and an Acceptability Judgment Task (AJT). The monolingual control data were collected in a classroom at the University of Minho. The bilingual HSs were tested in different places in their area of residence in Germany: at their homes, in the headquarters of a cultural association or in a school. The untimed tasks were conducted as paper and pencil tests and took approximately 30 minutes to complete.

Experimental tasks

Two experimental tasks were applied, a CT and an AJT. The test conditions of both tasks result from the combination of the following variables:

- i. 3 linguistic structures: sentences with the inflected infinitive, sentences with the simple infinitive (without agreement) and PIC structures (with and without verbal agreement features);
- ii. Nominative *versus* Accusative Case marked pronouns as subjects of the infinitive;
- iii. Grammatical person: 2P Sgl, 1P Pl, 3P Pl;
- iv. Verbs: 3 perception verbs (*ver* ‘to see’, *ouvir* ‘to hear’, *sentir* ‘to feel’); 2 causative verbs (*mandar* ‘to order’, *deixar* ‘to let’), 3 control verbs (*convencer* ‘to persuade’, *aconselhar* ‘to advise’, *obrigar* ‘to order’).

Completion task

The CT task consists of four short narratives with 28 gaps: the 23 experimental items distributed according to the conditions shown in Table 2 (conditions

Table 2: Test conditions for the completion task with one example per condition.

Condition	Verbs	Nº of items
I Perception verb without agreement	<i>ver, ouvir, sentir</i>	3
O pai viu eles / -os brincar àquela hora. the father saw they / them play.INF at.that hour		
II Perception verb with agreement	<i>ver, ouvir, sentir</i>	3
Eu vi tu / -te brincares ontem. I saw you.NOM / you.ACC play.INF.2SG yesterday		
III Causative verb without agreement	<i>mandar, deixar</i>	3
O professor deixou nós / -nos voltar ao ensaio. the teacher let we / us return.INFto.the rehearsal		
IV Causative verb with agreement	<i>mandar, deixar</i>	3
O patrão mandou nós / -nos irmos ao seu gabinete. the boss ordered we / us go.INF.1PL to.the his office		
V PIC without agreement	<i>ver, ouvir, sentir</i>	3
A professora viu tu / -te a conversar também. the teacher saw 2.SG.NOM./ 2.SG.ACC at talk.INF too		
VI PIC with agreement	<i>ver, ouvir, sentir</i>	3
A professora ouviu nós / -nos falarmos muito hoje. the teacher heard we / -us talk.INF.1PL a.lot today		
VII Control verb without agreement	<i>aconselhar, obrigar</i>	3
Eu aconselho tu / -te a treinar muito, a ti e a mim, para sermos tão bons como eles. I advise 2.SG.NOM./ -2.SG.ACC to train.INF a lot, you and me, to be as good as they		
VIII Control verb with agreement	<i>Convencer</i>	2
Um colega chamou por eles e convenceu eles / -os a voltarem ao ensaio. a colleague called for them and persuaded they / -them to return.INF.3PL to.the rehearsal		

I to VIII) and five additional distractor items (corresponding to missing articles). ~~The participant was requested to fill the gap with either an Accusative or a Nominative pronoun.~~ The test was preceded by a training exercise. An example of one short story is given in the appendix.

Acceptability judgment task

The AJT consisted of 39 sentences, 36 sentences distributed between the conditions 1 to 8, listed in Table 3 below (6 sentences per condition 1 to 4; 3 sentences per condition 5 to 8). Conditions 8 and 9, with control verbs, were included as control items. All sentences included in this test were taken from the previous CT. Participants were asked to make a binary choice, judging the sentences either as ‘sounding bad’ or ‘sounding fine’. An additional correction of all sentences judged as ‘bad’ was required.


Table 3: Test conditions for the AJT with one example per condition.

Condition	Nº of items
1 Accusative pronoun without agreement	6
O pai viu-os brincar àquela hora. the father saw-them play.INF at.that hour	
2 Accusative pronoun with agreement	6
Eu vi-te brincares ontem. I saw-2SG.ACC play.INF.2SG yesterday	
3 Nominative pronoun without agreement	6
O pai viu eles brincar àquela hora. the father saw they play.INF at.that hour	
4 Nominative pronoun with agreement	6
Eu vi tu brincares ontem. I saw 2SG.NOM play.INF.2SG yesterday	
5 PIC + Accusative pronoun without agreement	3
A professora viu-te a conversar. the teacher saw-2SG.ACC at talk.INF	
6 PIC + Nominative pronoun without agreement	3
A professora viu tu a conversar. the teacher saw 2SG.NOM at talk.INF	
7 PIC + Accusative pronoun with agreement	3
A professora viu-te a conversares. the teacher saw 2SG.ACC at talk.INF.2SG	

(continued)

Table 3: (continued)

Condition	Nº of items
8 PIC + Nominative pronoun with agreement	3
A professora viu tu a conversares. the teacher saw 2SG.NOM at talk.INF.2SG	
9 Control verb without agreement	2
O pai obrigou tu / -te a dar-me um abraço the father forced 2SG.NOM / 2SG.ACC to give.INF-me a hug	
10 Control verb with agreement	1
O pai obrigou tu / -te a dares-me um abraço the father forced 2SG.NOM / 2SG.ACC to give.INF.2SG-me a hug	

For codification, only the sentences judged as ‘bad’ with a correction targeting the tested structure  were actively counted as ‘bad’. When the correction focused on other properties or on the content of the sentence, the answer was coded as ‘sounds good’.

4 Results

In the following sections we will present the comparative results for each task. Statistics was performed in SPSS, version 21.0. Since the data are not normally distributed, non-parametric tests for inter-group comparisons were applied.

Completion task

As described above, in the CT the participants ~~were required to fill the gaps with either an Accusative or a Nominative pronoun. Furthermore, participants~~ were instructed to always fill the blanks, so that null subjects were not an option. Since the rate of unfilled blankets was marginal, they were not considered for quantification. For reasons of simplification, we will present the results by indicating always the rate of **Accusative** selection (as opposed to Nominative). Figure 1 shows the mean rate of Accusative pronouns per condition for both groups, monolingual and bilingual speakers.

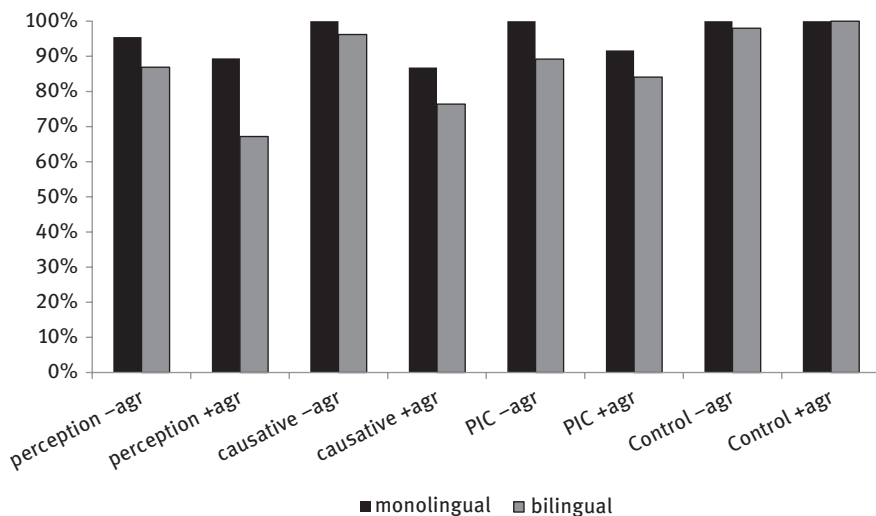


Figure 1: Choice of Accusative pronouns (mean rate per condition and group).

As shown in Figure 1, overall both groups demonstrate an evident preference for the use of the Accusative clitic instead of a Nominative pronoun in all conditions, but this preference is stronger in the monolingual group. Looking at the conditions in detail, the results show that in the sub-conditions with perception and causative verbs without agreement, i.e. in uninflected infinitival complements (conditions I and III) the values of both groups are very similar. In condition I (perceptual verb without agreement) the monolinguals select an Accusative pronoun in 95.5% (SD = 7.9) and the bilinguals in 86.9% (SD = 13.5) of all contexts. In condition III (causative verb without agreement) the rate is even higher with 100% Accusative Case in the monolingual group and 96.2% (SD = 0.2) in the bilingual group. Two Mann-Whitney tests indicate that inter-group differences are not statistically significant neither in condition I ($U = 334.500$; $p = .051$) nor in condition III ($U = 420.500$; $p = .154$). This means that, as expected, raising-to-object constructions are clearly favoured by EP speakers, both monolinguals and bilinguals, in these contexts.

In the constructions with perception and causative verbs with agreement, i.e. with inflected infinitives (conditions II and IV), the values of the two groups are more apart. Interestingly, the monolingual speakers still have a preference for the Accusative subject pronoun in 89.4% of all sentences (SD = 4.7) with perception verbs, while the bilingual group presents only a mean rate of 67.2% (SD = 8.5). A Mann-Whitney test confirms that this difference is statistically

significant ($U = 244.000$; $p = .003$). This means that in the presence of agreement features the bilingual HSs select the Nominative case more often than their monolingual counterparts. With causative verbs the between-group difference is less evident (monolinguals: 86.8%, $SD = 3.5$; bilinguals: 76.4%, $SD = 9.3$). A Mann-Whitney test confirms that this difference is not statistically significant ($U = 351.000$; $p = .172$). What is interesting to bear in mind is that, overall (and rather unexpectedly), also in infinitival complements with inflected infinitives the speakers of EP show a preference for raising-to-object structures.

Concerning the PIC conditions (V and VI), also in this case both groups use high rates of Accusative pronouns. Again, however, this rate is lower in the bilingual group than in the monolingual group. In condition V (PIC without agreement) the monolinguals always selected the Accusative clitic (100%), while the bilingual HSs use Accusative clitics in 89.2% ($SD = 3.4$) of the contexts. In condition VI (PIC with agreement), clitic pronouns are selected in 91.7% ($SD = 5.6$) of all contexts by monolingual EP speakers and in 84.1% ($SD = 7.2$) of the contexts by heritage bilinguals. In both conditions, this difference is statistically significant (V: $U = 345.00$, $p = .017$; VI: $U = 321.00$, $p = .04$).

The conditions with control verbs (VII and VIII) function as control items, since in this case it is only possible to use Accusative pronouns. Indeed, as expected, the monolingual controls use exclusively Accusative pronouns in both conditions with control verbs (with and without agreement). Also the bilingual group selects most exclusively Accusative clitics, with 100% in condition VIII and 98.0% ($SD = 3.4$) in conditions VII. A Mann-Whitney test shows that the slight difference in conditions VII is not significant ($U = 390.000$, $p = .292$).

Along with inter-group comparisons, also intra-group analyses were run in order to assess the statistical differences between the different conditions within the two groups. For this purpose, the conditions with and without inflection were pair-wise compared using Wilcoxon Z tests. The results show that, in the monolingual group, only the difference between the use of Accusative subjects in complements of causative verbs without (condition III) and with inflection (condition IV) was significant ($Z = -2.232$; $p = .026$). In all other conditions the rate of Accusative subjects does not differ significantly from each other. There are also no statistical differences between the verbs (causative vs. perception verbs).

As for the bilingual group, the difference between the use of Accusative subjects in complements with and without inflection is significant not also in the conditions with causative verbs (III vs. IV: $Z = -2.507$; $p = .012$), as in the monolingual group, but also in the conditions with perception verbs (I vs. II: $Z = -2.139$; $p = .032$). There are, similarly to the monolingual group, no statistical differences between perception and causative verbs.

In sum, the results of the completion task show that the performance of bilingual HSs is very similar to that of monolingual speakers concerning Case assignment to the subject pronoun in infinitival complements of perception and causative verbs. As their monolingual counterparts, they prefer Accusative clitics over Nominative pronouns, even in constructions with inflected infinitives. There are, however, differences between the groups. The most evident differences are found in inflected complements of perception verbs and in the PIC construction, particularly with inflected infinitives. In both cases, the heritage bilinguals select the Nominative case more often than their monolingual peers.

Acceptability judgment test

In the AJT, participants were asked to judge sentences from the previous task by giving a binary response (‘sounds good’ *versus* ‘sounds bad’) and by correcting the unaccepted sentences. Figure 2 shows the mean rate of accepted items per sub-condition and per group.

The results given in Figure 2 indicate that, overall, both groups show similar tendencies when judging the given sentences. Starting with condition 1, i.e. simple infinitives as complements of perception and causative verbs with an Accusative clitic as subject (raising-to-object constructions), results reveal that, in fact, this

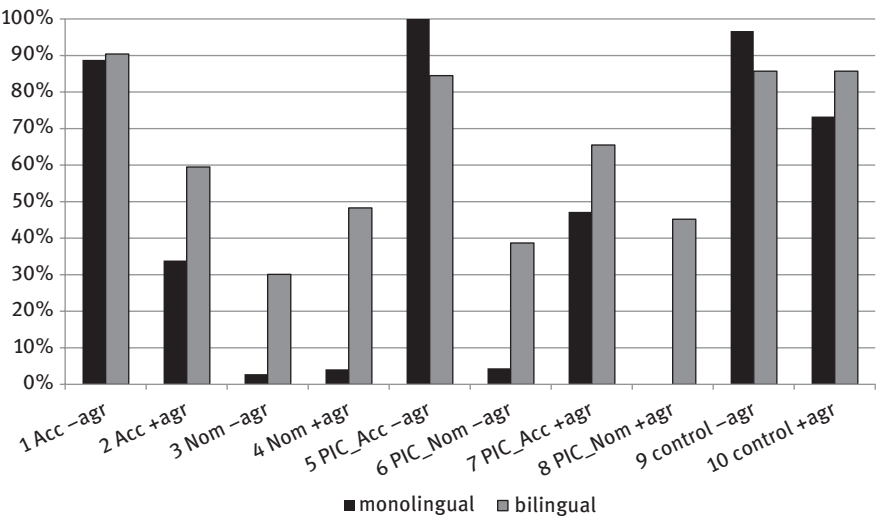


Figure 2: Mean rate of acceptance (per condition and per group).

construction is the preferred option for both speaker groups, with 88.8% acceptance in the monolingual group and 90.4% in the bilingual one. A Mann-Whitney test confirms that there are no statistically significant differences between the groups ($U = 367.500$; $p = .352$). Conversely, in condition 2 (inflected infinitive with Accusative), the rate of acceptance lowers considerably, to 33.9% in the monolingual and to 59.5% in the bilingual group. A Mann-Whitney test shows that this difference is statistically significant ($U = 239.500$, $p = .004$).

As for the structures with Nominative pronouns (i.e. conditions 3 and 4 with and without agreement), the results show evident differences between the groups. The monolingual speakers clearly disfavor the selection of strong Nominative pronouns in infinitival complements, with simple infinitives (2.8% of acceptance) as well as with inflected infinitives (4.1% of acceptance). In this case, all corrections consisted in using either an Accusative pronoun with a simple infinitival complement or a PIC structure with a simple infinitive. This shows, again, that these structures are clearly the most favored by EP speakers. In the bilingual group the acceptance of Nominative pronouns in these constructions is also lower than with Accusatives, but clearly higher than in the monolingual group. The bilinguals accept Nominative pronouns with simple infinitives in 30.1% of all cases (against 2.8% in the monolingual group) and in 48.3% with inflected infinitives (against 4.1% in the monolingual group).

Also conditions 6 and 8 test the speakers' intuitions with Nominative subject pronouns, in this case in PIC structures, where the use of Nominative pronouns is not grammatical in EP. Here we see the same differences between monolingual and bilingual speakers as in conditions 3 and 4. The monolinguals clearly reject Nominative case in PIC structures (4.4% and 0% of acceptance, respectively). In the correction exercise they consistently substitute the Nominative by the Accusative case. In the bilingual group the rate of acceptance is 38.7% in PIC structures with simple infinitives and 45.2% with inflected infinitives. Mann-Whitneys confirm that the inter-group differences are very significant in both conditions (5.2: $U = 168.000$, $p = .000$; 6.2: $U = 150.000$, $p = .000$).

The condition that, in general, is most favoured by both groups is the PIC construction with the simple infinitive and an Accusative Case marked subject (conditions 5), with 100% acceptance in the monolingual group and 84.5% of accepted sentences in the bilingual group. Still, this difference is statistically significant ($U = 315.000$, $p = .004$). Also the sentences with control verbs, with and without agreement (conditions 9 and 10), present high rates of acceptance in both groups (condition 9: 96.7% for monolinguals and 85.7% for bilinguals; condition 10: 73.3% for monolinguals and 85.7% for bilinguals). The differences between the groups are not statistically significant (7.1: $U = 356.000$, $p = .096$; $U = 368.000$, $p = .249$). Despite the high rates of acceptance in both conditions,

the monolingual speakers still prefer the structures without agreement. This is a consistent observation in all conditions when the structure without agreement (simple infinitive) is compared with the structure with agreement (inflected infinitive).

Additionally, Table 4 indicates the distribution of the structures chosen in order to correct an item that was rejected. The results show very clearly that the most favoured structures in both groups are the simple infinitival complements with an Accusative subject (MON: 37.4; BIL: 46.8) and the PIC without agreement marking and an Accusative subject (MON: 46.8; BIL: 26.3), thus corroborating the results of the completion task. The corrections proposed by the speakers consisted mainly in maintaining the Accusative pronoun and removing agreement morphology or changing Case assignment from Nominative to Accusative. With perception verbs, many monolingual and bilingual participants who deleted the agreement markers also added the preposition *a*, turning the structure into a PIC construction.

Table 4: AJT Correction task: Distribution of the structures chosen for correction.

	Monolingual group	Bilingual group
Acc –agr	37.4	42.9
Acc +agr	8.1	14.1
Nom –agr	0	1.4
Nom +agr	0	5.6
PIC Acc –agr	46.8	26.3
PIC Nom –agr	0	1.1
PIC Acc +agr	7.7	7.3
PIC Nom +agr	0	1.1

Finally, we intend to take a closer look at the rejection rate of the constructions with Accusative Case-marked subjects in the presence of agreement morphology, organized by grammatical person. Table 5 presents rejection rates per grammatical person in the cases in which the participants deleted agreement morphology in the correction task. The results reveal differences related with grammatical person. In bare infinitival complements 1st person plural is the most rejected structure (monolinguals: 88%; bilinguals: 34.5%), followed by 2nd person singular (monolinguals: 62.5%; bilinguals: 31.3%). 3rd person plural is the least rejected structure (monolinguals: 45.5%; bilinguals: 24.4%). The results concerning the PIC condition show the same tendency in both groups. Monolinguals reject the combination of 1st person plural with agreement morphology in 93.3% of the cases, 2nd person singular is rejected in 44.8% of the

Table 5: Rejection rates for ACC-subject + Inflected infinitive per grammatical person.

	Monolingual group			Bilingual group		
	2nd Sg	1st Pl	3rd Pl	2nd Sg	1st Pl	3rd Pl
Acc +agr	62.5%	88.0%	45.5%	31.3%	34.5%	24.4%
PIC Acc +agr	44.8%	93.3%	20.0%	16.0%	42.3%	8.0%

cases and 3rd person plural in only 20%. In the bilingual group the rejection rate is 42.3% for 1st person plural, 16% for the 2nd person singular and only 8% for 3rd person plural.

In sum, the results of the AJT with the correction task are in line with the data obtained in the completion task. In general both speaker groups show a marked preference for structures with Accusative clitics instead of Nominative pronouns. Unaccepted sentences tend to be corrected by deleting the agreement markers and by substituting Nominative for Accusative Case. However, there are significant differences between monolingual and bilingual EP speakers regarding the structures with Nominative pronouns, either in the bare infinitive construction or in the PIC. While monolingual speakers clearly dislike the use of Nominative pronouns, with and without agreement, HSs are more prone to using Nominative pronouns, with simple infinitival complements, with inflected infinitives and even in PIC structures, which do not allow for Nominative pronouns in the target grammar. A further interesting finding is that the rates of acceptance of the combination of an ACC-subject with an inflected infinitive vary according to grammatical person. In both groups the 1st person plural is the least accepted and the 3rd person plural the most accepted structure.

5 Discussion and conclusion

We start by examining the results of the monolingual group in order to answer the first research question; then we move on to the bilinguals and to the second question.

Concerning the monolingual group, the most striking result regards the residual rates of Nominative Case marked subjects in the presence of an inflected infinitive in both tasks. This result is unexpected since, under standard assumptions, the presence of inflection should automatically entail Nominative Case assignment (Raposo 1987). Moreover, in the completion task, the monolingual speakers of EP show a

preference for raising-to-object in infinitival complements with inflected infinitives. In the AJT, the rates of acceptance of an Accusative subject in the presence of agreement inflection are lower. This may be an effect of the task: AJTs are more permeable to the influence of prescriptive grammar than production tasks. Quite generally, EP prescriptive grammars tend to advise against the use of the inflected infinitive in contexts in which the presence of agreement morphology leads to redundancy. Since the structures with an inflected infinitive are perceived as more redundant than their counterparts with an uninflected infinitive, it is not surprising that they should get lower rates in the judgement task. Setting this effect aside, what defies explanation is that the choice of a Nominative subject with an inflected infinitive is indeed residual in both tasks. In principle, an inflected infinitive should automatically entail a Nominative Case marked subject. Moreover, this derivation should be less costly than a derivation with raising to object, contrary to fact.

Even though this result is unexpected under standard assumptions concerning clause structure in EP, it actually comes as no surprise when other alternatives are considered. In effect, since the mid-nineties there has been a growing body of work (Alexiadou & Anagnostopoulou 1998; Barbosa 1995; Kato 1999; Manzini & Savoia 2002; Ordoñez & Treviño 1998; Platzack 2004; Pollock 1997, among others) making the claim that, in consistent Null Subject Languages (NSLs), the head bearing subject agreement is interpretable. This insight is not just meant to capture the old intuition that rich agreement in these languages is, in some sense, “pronominal”, or “affix-like” (Rizzi 1982); it was also meant to capture a number of contrasts in the distribution and interpretation of overt subjects in the consistent NSLs as opposed to the non-NSLs. The particular implementations of this proposal vary, but all of them have one key feature in common: the functional head bearing subject agreement has a nominal specification ([+D]; valued phi-features; probably also Case) to the effect that it has the status of a pronominal affix/clitic on V raised to T. As a consequence of this, there is no EPP related movement to Spec-TP, the thematic subject stays inside the post-verbal field and pre-verbal subject constructions are not derived by A-movement. Since, in the particular case of the Romance NSLs, there is *v*/V raising to Infl/T, when the subject is a fully specified nominal, this yields a postverbal subject construction (so-called “free inversion”). Thus, example (30a) is analysed as in (30b):

- (30) a. Telefonou a Maria
 called the Maria
 b. [[T telefonou] [_{VP} a Maria ~~telefonou~~]]

When the subject is silent, there are in theory two possibilities: either pronominal Agr is the theta-role bearer, in which case *pro* can be dispensed with (Kato 1999;

Ordoñez & Treviño 1999; Platzack 2004), or there is a *pro* in Spec,vP/VP (Alexiadou & Anagnostopoulou 1998; Barbosa 2009). In (31b) we adopt the latter hypothesis:

- (31) a. Telefonaram.
called
'They called.'
b. [[T telefonaram] [vP *pro*]]

In a configuration such as (31b), the semantic content for the pronominal argument is supplied by the situational context, or it can be supplied linguistically, by a topic. Example (32a), with an apparent pre-verbal subject, is analysed as an instance of subject left dislocation (cf. (32b)).

- (32) a. A Maria telefonou.
the Maria called
'Maria called.'
b. [[A Maria] [Tp telefonou [*pro*]]

We assume that clitic left dislocated topics are *base-generated* in a position of adjunction to the clausal projection that is predicated of them and are licensed by rules of predication (Chomsky 1977). Alternatively, the configuration above can be recast in terms of a TopicP projection. Here we do not wish to dwell on this aspect of the analysis, the important point being that the DP *a Maria* is base-generated in place and licensed by predication: *pro* supplies the open position required to establish a predication relation with the topic. The reader is referred to Demirdache (1992) and Anagnostopoulou (1997) for arguments in favor of a base-generation analysis of clitic left dislocated topics. Within this framework of assumptions, *pro* gets Nominative Case from T and the Nominative Case that shows up on the left-dislocated topic is assigned by *default* (recall that Nominative is the *default* Case in EP; cf. the discussion surrounding example (26) above).

With this analysis in mind, we now return to infinitival complements of perception and causative verbs. Under the theory just sketched, the fact that monolingual speakers avoid using a Nominative Case-marked pre-verbal subject reduces to avoiding a left-dislocation configuration¹ in which default Case is

¹ That there are restrictions on the distribution of preverbal subject constructions in inflected infinitives can be shown also with other types of verbs, such as epistemics (Barbosa 2000; Raposo 1987).

assigned to the left dislocated DP. From this perspective, the most economical derivation is indeed the derivation with an uninflected infinitive and raising to object. This is the option that is preferred by monolingual speakers in the AJT.

Even though monolingual speakers disprefer sentences with an inflected infinitive and an Accusative subject in the AJT task, in the production task, they do produce such sentences. Under the framework of assumptions adopted in the preceding paragraphs, a sentence with an inflected infinitive and an Accusative Case marked subject is analysed as a left dislocation construction in the sense that the DP that is raised to object is base generated in a position external to the clause (33) and is licensed by rules of predication (mediated by *pro*).

- (33) Eles viram-**nos**_i [[t_i] [_{TP} correrem [*pro*]]
└──────────┘
Predication

Curiously (33) has a structure that is very similar to that of the PIC under Raposo's analysis (recall that the PIC also contains a null subject that is obligatorily controlled by the Accusative marked subject). And in effect there are some striking parallelisms between the two. In particular, both constructions are sensitive to grammatical person. As mentioned, all the participants show a preference for rejecting inflected infinitives with 1st person plural, followed by 2nd person singular, while 3rd person plural is the least rejected structure. This applies both in the case of the PIC and in the case of the bare infinitival construction and can actually be seen as an argument in favor of the idea that the phi-feature set on T is interpretable. Consider the following examples:

- (34) a. Ela viu-os fazerem isso.
 she saw-them.3S do.INF.3PL that
 'She saw them doing it.'
 b. ??Ela viu-nos fazermos isso.
 she saw-us.1PL do.INF.1PL that
 c. ??Ela viu-te fazeres isso.
 she saw-you.2S do.INF.2S that
- (35) a. Ela viu-os a fazerem isso.
 she saw-them.3S at do.INF.3PL that
 b. ??Ela viu-nos a fazermos isso.
 she saw-us.1PL at do.INF.1PL that
 c. ??Ela viu-te a fazeres isso.
 she saw-you.2S at do.INF.2S that

To our ear, (34a-c) and (35a-c) are comparable in status. In evaluating these examples, one gets a sense of redundancy, which is sharper in the case of first and second persons. We assume that first and second person pronouns are specified for a [+Part(icipant)] feature and a Number feature ([±Pl(ural)]) whereas third person pronouns are specified as [-Part; ±Pl]. When the infinitive is inflected, a similar feature specification is assigned to the interpretable [+D] set of phi-features in T (<+D i:phi>). Since both the pronoun and <+D i:phi> are interpretable, the structure is perceived as redundant (in comparison with its counterpart with an uninflected infinitive) particularly when the set of phi-features on T has the same feature specification as the set of phi-features on the pronoun. This is the case of first and second person. In the case of third person, however, the two feature sets are not the same: the pronoun has a gender feature that is absent from verbal inflection. For this reason, the sense of redundancy is less sharp.


In sum, since, on our view, preverbal subject constructions are not instances of EPP related movement to Spec-TP, the observed preference for avoiding a Nominative subject in the presence of an inflected infinitive is no longer problematic. It reduces to preference for the operation of raising to object over the last resort operation of *default* (Nominative) Case assignment. This preference can be viewed as an instance of the Paninian principle *Blocking*, whereby a general, default form is blocked by the existence of a more specific rival form. In this case, the default (Nominative) Case option is blocked by the more specific operation of raising to object.

Now we turn to the bilingual group. The first aspect to note is that inflected infinitives are without doubt part of EP heritage grammars. This has already been shown by Pires and Rothman (2009), who identified significant differences between HSs of EP and Brazilian Portuguese (BP) regarding knowledge of this structures. This discrepancy is explained by the fact that, in contrast to BP, inflected infinitives are very frequent in colloquial EP. The same observation holds also for the particular case of inflected infinitives in complements of perception or causative verbs and in the PIC, the structures under investigation.

A second important observation is that the HS group also displays a clear preference for Accusative Case marked subjects, so the HSs do not differ from monolinguals in this regard. This is robust indication of shared native knowledge in this domain, a fact that supports the claim that early, continuous exposure to EP, even under reduced input conditions, ensures the development of a native grammar that bears properties in common with the system acquired in a monolingual context. *A priori*, this contradicts the idea of incomplete HL acquisition.

However, the results also show differences between monolingual and bilingual speakers. A first difference is related with an overall higher rate of acceptance of agreement inflection by the bilingual group, particularly in infinitival

complements with Accusative subjects. As discussed above, the low rates of acceptance of inflected infinitives by the monolingual speakers can be explained with the activation of prescriptive knowledge in acceptability judgment tasks, especially in educated speakers as the ones we tested. Heritage speakers, in contrast, do not possess the same knowledge of prescriptive grammar as their monolingual counterparts due to reduced contact with formal language registers and with formal instruction. The absence of prolonged formal schooling is a strong predictor of performance differences between monolingual and bilingual groups in test situations (Kupisch & Rothman 2016), which we believe may explain part of our results.

The most significant and most striking difference between monolinguals and bilinguals concerns a higher rate of acceptance of Nominative pronouns by HSs, with simple infinitives, with inflected infinitives and even in PIC constructions. In our perspective, this means that HSs are more prone to using a configuration in which *default* Case is assigned (recall that Nominative is the default Case in EP .

Interestingly, there is evidence that the *default* (Nominative) Case strategy is an option at early stages of the acquisition of these constructions by monolingual children. Santos, Gonçalves and Hyams (2016), who study the acquisition of sentential complementation under causative, perception, and object control verbs in EP, report a tendency of their child groups to use Nominative subjects (36b) in PIC structures instead of the Accusative form (36a).

- (36) a. (A zebra) viu-os a dançar. (4;08,09)
 the zebra saw them.ACC ASP dance.INF
 ‘The zebra saw them dancing.’
 b. (A zebra) viu eles a dançar. (4;05,12)
 the zebra saw they ASP dance.INF
 ‘The zebra saw them dancing.’ (Santos, Gonçalves & Hyams 2016: 220)

The authors relate the use of the Nominative form in (36b) to the occurrence, in the target grammar, of Nominative subjects when the PIC is used in root environments:

- (37) (Olha!) Os meninos / Eles a nadar(em)
 (look!) the children they ASP swim.INF(.3PL)
 ‘(Look!) The children are swimming.’ (Santos, Gonçalves & Hyams 2016: 210)

In (37), there is no external source for Case and the subject of the PIC is assigned Nominative by *default*. The authors suggest that the same strategy applies in the case of (36b): the reason why children allow a Nominative Case marked subject in the PIC is that they allow for *default* Case assignment in this context. In the

target grammar, in the PIC, Nominative is available just in case an external Case assigner is not present, namely in root environments. When an external Case assigner is present, as in the contexts in which the PIC is selected by a perception verb, raising to object obtains and the *default* Case option is blocked. Thus, knowing the conditions under which the *default* Case option is blocked is part of the process of acquiring the PIC in EP.

Returning to the HSs, we observe that they moderately accept Nominative pronouns in infinitival complements of perception and causative verbs (regardless of the presence of inflection). In our perspective, this means that, on a par with the predominant raising to object option, these speakers allow for the *default* Case strategy. In other words, occasionally they fail to apply blocking, just like monolingual children. Hence, even though the mental grammar of HSs is not very distinct from that of monolinguals in this domain, it crucially retains features that are characteristic of a particular stage in the acquisition of the PIC in EP. This reinforces the view that the process of acquisition of the HL is native-like in the sense that it goes through the same stages as the process of monolingual acquisition; however, HSs seem to maintain an option that is no longer available in mature grammars,² revealing protracted development.

In our view, this outcome cannot be described as incomplete, non-native competence, but as native competence that has not stabilized knowledge of the conditions under which the *default* Case option is blocked. In this sense, we support claims in favor of nativeness of HL grammars such as those defended by Rothman and Treffers-Daller (2014). Variation observed in HSs is, by hypothesis, due to reduced exposure to the target language. Note in this context that the divergent behavior of the HSs cannot be attributed to cross-linguistic influence from the environmental language, since German does not allow for Nominative Case marked subjects in these complements (it rather has raising-to-object). Instead, an intra-linguistic explanation should be favoured.

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² At least in the monolingual speakers tested in the present study, this stage is overcome. However, it cannot be ruled out that also monolinguals sometimes use Nominative subjects in PIC structures, particularly less educated speakers. We will pursue this question in further work.

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Appendix

Example of a short narrative:

A Família Fonseca

O João e a Maria estavam a conversar no quarto quando o pai entra. O pai fica chateado com os dois irmãos, pois viu [1] _____ brincar àquela hora.

A mãe da Maria ouviu o alarido e foi ter com os seus filhos ao quarto, aconselhando [2] _____ a ir dormir. No dia seguinte, a Maria dirigiu-se ao irmão e disse-lhe:

– Eu vi [3] _____ brincares ontem, não respeitaste o que a mãe nos disse.

O irmão indignado ralhou-lhe:

– Tu também querias ir e, além do mais, se estivéssemos os dois a brincar, a mãe ia ouvir [4] _____ a fazer barulho.

The Fonseca family

João and Maria were talking in their room when their father came in. Father was angry with the sibling, because he saw [1] ____ *play.INF* at this late hour. Maria's mother heard the noises and joined their children in the room, advising [2] _____ *at go.INF* sleep. The next day, Maria turned to her brother and said:

“I saw [3] _____ *play.INF.2S* yesterday, you did not follow mum's orders.”

Furious, her brother scolded her:

“You also wanted to go and, besides, if we both were playing, mum would hear [4] _____ *at make.INF* noise.”