CP OMISSION IN ADULT L2 ACQUISITION OF EUROPEAN PORTUGUESE: AN INTERFACE APPROACH*

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ABSTRACT: This paper aims at contributing to the debate on the L2 acquisition of the CP layer and the lexical, morphological and syntactic properties of C in European Portuguese. The analysis is based on a cross sectional corpus of European Portuguese constituted by spontaneous written productions of adult Spanish, German and Chinese native speakers¹ attending intermediate level courses at Universidade de Lisboa. Although the learners have acquired the C pattern of finite subordinate completive and relative clauses in Portuguese, some of the German and Chinese native speakers also use a residual Null Complementizer strategy absent from the target language. To explain these facts, at first sight compatible with the Minimal Trees Hypothesis, as well as with the Valueless Feature Hypothesis or the Full Transfer/Full Access Hypothesis for L2 acquisition, we analysed the relevant properties of the learners' L1 language. The empirical evidence emerging from our corpus supports the Full Transfer/Full Access Hypothesis, since it accounts both for the contrasts in the L2 occurrences of C and the massive acquisition of the Portuguese C pattern in these contexts.

KEYWORDS: L2 acquisition; European Portuguese; null complementizer; relative clauses; finite completive clauses.

Estudos Linguísticos/Linguistic Studies, 6-7, Edições Colibri/CLUNL, Lisboa, 2012, pp. 129-143

^{*} This work has been developed within the project PTDC/LIN/66202/2006 (Silent Constituents in the Grammar of Portuguese – SILC), financed by Fundação para a Ciência e Tecnologia. It has benefited from the comments and discussion of the participants of the Workshop on Interfaces in L2 Acquisition (Faculdade de Ciências Sociais e Humanas, Universidade Nova de Lisboa) and the 2nd Workshop of SILC (Faculdade de Letras da Universidade de Lisboa, Universidade de Lisboa).

¹ When we mention Chinese, we are referring to Mandarin Chinese.

1. Introduction

In contrast with other languages, e.g., English (1), standard European Portuguese does not have the null complementizer (Null-C) strategy in finite completive clauses (cf. (2)) or in relative sentences (cf. (3)):

- (1) a. I think Ø it is for me.b. The man Ø I saw was the teacher of French.
- (2) a. *Eu penso Ø é para mim. I think is for me 'I think it is for me.'
 - b. Eu penso *que* é para mim. I think *that* is for me 'I think that it is for me.'
- (3) a. *O homem Ø eu vi era o professor de Francês. the man I saw was the teacher of French 'The man I saw was the French teacher.'
 - b. O homem que eu vi era o professor de Francês. the man that I saw was the teacher of French 'The man that I saw was the French teacher.'

Adult learners acquiring European Portuguese as L2 in a formal context, at the University of Lisbon, easily master the properties of C in these contexts, and, at the intermediate level, massively produce Overt-C in subordinate finite and relative clauses. Yet, some learners, in spite of being fully exposed to the standard language, also produce Null-C occurrences in embedded finite clauses, as shown in (4)-(5), and in (6)-(7), respectively from German and Chinese native speakers. In these examples, the relevant Null-C occurrences are represented by the symbol Ø:

- (4) Completive object clause (L1: German)
 - a. Eu acho \emptyset tu tens [de] ver as cidades de München, Hamburg (...) I think you have [of] see the cities of München, Hamburg 'I think you have to see the cities of München, Hamburg (...).'
 - b. Pareceu-me Ø estas pessoas não tomam em conta os perigos. seemed me these people not take into account the dangers 'It seems to me that these people are not aware of the danger.'
- (5) Relative clauses (L1: German)
 - a. As roupas $[[PP\emptyset]][C\emptyset]$ tu precisas para férias] the clothes you need for holidays 'The clothes you need for your holidays.'

- b. Até ao dia Ø a cidade e o governo já tenham until the day the town and the government already had usado muito dinheiro spent much money
- 'Until the day the town and the government have spent a large amount of money.'
- (6) Completive object clauses (L1: Chinese)
 - a. Eu soube Ø o Marco Paulo estava muito doente. I knew the Marco Paulo was very ill.'
 - b. Eu achava Ø o azeite cheira muito mal I thought the olive oil smells very badly 'I thought olive oil stinks.'
- (7) Relative clauses (L1: Chinese)
 - a. Há muitos professores Ø mudaram as profissões deles. there are many teachers changed the jobs of them 'There are many teachers who now have got another job.'
 - b. Têm uma esplanada Ø ficava à beira mar. have a terrace was at the seaside. 'They have a terrace at the seaside.'

In contrast, Spanish native speakers at the same level of acquisition do not produce Null-C relatives or finite complement clauses — see the occurrence of *que* in (8)-(9):

- (8) Completive object clauses (L1: Spanish)

 Permitirei *que* vás a um hotel na cidade do México.

 will allow that go to a hotel in the city of the Mexico

 'I will let you stay in a hotel in Mexico city.'
- (9) Relative clauses (L1: Spanish)

 Há pessoas *que* gostam de viver nas cidades there are people that like of to live in the cities 'There are people that love living in cities.'

Considering these data, the following questions arise:

- (i) How to explain the massive acquisition of the Portuguese Complementizer system by learners of such distinct language families?
- (ii) How to account for the residual Null-C occurrences in the L2 productions of Portuguese by German and Chinese native speakers and their absence in Spanish native speakers?

(iii) In what way is the Null-C phenomenon in embedded relative and completive clauses determined by interface linguistic knowledge of L1 and L2?

In this paper we will try to answer these questions. In section 2, we briefly present the methodology adopted to build up the subcorpora on which this work is based. In section 3 we characterise the data under study, and analyse the results of the learners' productions. Section 4 discusses these results on the basis of the current hypotheses on L2 acquisition, which clearly evidence the contribution of interface knowledge in the L2 acquisition process. Section 5 summarises the main outcomes of this study.

2. The methodology

We undertook a cross-sectional study of three subcorpora containing productions of European Portuguese by German, Chinese and Spanish native speakers learning Portuguese at Faculdade de Letras da Universidade de Lisboa². Each subcorpora was constituted by written compositions focussing on different subjects, but containing an identical number of lexical items.

All students were at the Intermediate level, which corresponds to the current A2 and B1 levels of the European Framework of Reference for Languages, and they had had at least 120 hours of learning in a formal context.

Comparative purposes determined the choice of the learners: German native speakers were acquiring a language from a different family from their L1, and European Portuguese often counts as their L3 or L4. Chinese learners were acquiring a L2 very different from their L1, and, as far as this group of students was concerned, they had not been extensively exposed to a foreign language before. In contrast, Spanish learners of European Portuguese were faced with a Romance language very similar to their own L1.

A group of native European Portuguese speakers, constituted by students of the same age, of Universidade de Lisboa, has been submitted to the same task, producing a control subcorpus.

3. The data

3.1. The Null-C data in the corpus

In the sentences (1)-(7), the omitted elements involve the form *que*. In Portuguese *que* instantiates either the complementizer (English 'that') or the wh-form that occurs in headed relative clauses. So, (4a) and (5b), repeated in

² The current subcorpora have been extracted from a larger corpus, collected and organized by Leiria, for Leiria's (2001) PhD Dissertation, published in Leiria (2006).

(10a) and (11a), would correspond to (10b) and (11b) in standard European Portuguese:

- (10) a. Eu acho Ø tu tens [de] ver as cidades de München, Hamburg (...)

 I think you have [to] see the cities of München, Hamburg
 'I think you have to see the cities of München, Hamburg (...).'
 - b.Eu acho *que* tu tens de ver as cidades de München, I think that you have to see the cities of München, Hamburg (...)
 Hamburg (...)
- (11) a. Até ao dia Ø a cidade e o governo já tenham until to the day the town and the government already had usado muito dinheiro.

 spent much money
 'Until the day the town and the government have spent a large amount of money.'
 - b. Até ao dia *em que* a cidade e o governo já until the day in which the town and the government already tenham usado muito dinheiro.

 have used much money 'Until the day the town and the government have spent a large amount of money.'

European Portuguese has different types of relative clauses. According to the strategy adopted, *que* may instantiate either a wh-form or a complementizer. Relativized constituents included inside Prepositional Phrases typically involve the wh-forms *quem* ('who(m)') and *que* ('which'), and trigger Preposition Pied Piping, as shown in (12):

- (12) a. Wh-Movement+Pied-Piping relatives (standard European Portuguese)
 [A rapariga [[de [quem₁]] eu falei [-]₁]] acabou de chegar.
 the girl about whom I talked has just to arrive
 'The girl about whom I talked has just arrived.'
 - b. Comprei o livro [de que] me falaste. bought the book about which me talked 'I bought the book you told me about'.

In contrast, the non-standard Null-Preposition strategy (cf. Klein, 1993) only admits the occurrence of the complementizer, *que*, as illustrated in (13a); the occurrence of a wh-form is excluded from this context (see (13b)):

- (13) Null-P relatives (non-standard European Portuguese)
 - a. [A rapariga [[PP Ø] [que]] eu falei [-]]] acabou de chegar. the girl that I talked has just to arrive 'The girl I talked about has just arrived.'
 - b. * [A rapariga [[${}_{PP}$ [${}_{P}$ Ø] [${}_{quem}$] eu falei [-]]] acabou de chegar the girl whom I talked has just to arrive The girl I talked about has just arrived.'

Besides, in European Portuguese, *que* may be ambiguously interpreted as a wh-P or a complementizer in relative clauses where the relativization involves the subject or the object gap.

In our *subcorpora*, we have found Null-C relatives presenting subject gaps; see, for example (7a), repeated in (14), or PP-gaps, as in (5), repeated in (15):

- (14) Há muitos professores [CP Ø [TP [-]]] mudaram as profissões there are many teachers changed the jobs deles]]. of them
- (15) As roupas $[PP \ \emptyset][PV \ \emptyset]$ the clothes you need for holidays

In sum, taking into account the properties of standard European Portuguese, we assume that the learners' Null-C productions in relative and object complement sentences have to do with the same element: the finite C head of the embedded clause.

3.2. The results

The analysis of the subcorpora leads us to the results presented in Table 1 and Table 2. Table 1 concerns the productions of the learners and Table 2 those of the control group.

FINITE EMBEDDED CLAUSES		Spanish	German	Chinese
Overt-C	que_Relative	138	104	203
	que_Completive	167	140	274
Null-C	que_Relative	0	4 (4 learners)	11 (8 learners)
	que_Completive	1^3	8 (7 learners)	7 (7 learners)

Table 1: The learners' L2 Portuguese data

³ The L2 productions of Portuguese by Spanish native speakers only present a single case where Null C could be involved (cf. (i)). However, this sentence may also be interpreted as including an interpolated parenthetical clause lacking adequate punctuation (cf. (ii)):

(i).	Com	a	saúde	é verdade está	a	mudar	
	With	the	health	is true is	to	change	
(ii)	Com	a	saúde,	é verdade,	está	a	mudar.
	With	the	health	is true	is	to	change
	'As for	health ca	re, it is true.	it is changing.'			_

FINITE EMP	Portuguese	
Overt-C	que_Relative	193
	que_Completive	138
Null-C	que_Relative	0
	que_Completive	0

Table 2: The Portuguese data of the control group

Table 1 shows that, at the intermediate level, the learners have already acquired the standard pattern of Que_Relative and Que_Completive clauses in European Portuguese, independently of their source language: the number of occurrences overtly displaying *que* largely exceeds those with Null-C.

Thus, as far as language proficiency is concerned, the number of occurrences of Null-C in finite complement clauses and in relatives is negligible, and no specific training seems to be required for the students to acquire Overt-C in these contexts.

Still, from a language acquisition point of view, the results expressed in Table 1 raise questions that may contribute to the discussion of the nature of the mental representations involved in the acquisition of L2⁴. They show that the interlanguage grammar attained by the learners at the intermediate level of L2 acquisition is massively consistent with the target language, but also suggest that the contrasts between the residual use of Null-C may be a consequence of the L2 acquisition process.

4. The discussion of the results and hypotheses on L2 acquisition

Since our subcorpora consist of productions by learners attending the intermediate level of Portuguese, the discussion of our results in the light of the hypotheses on L2 acquisition may appear awkward. However, it has been consistently reported in the literature on L1 and L2 acquisition that the (systematic) acquisition of subordinate clauses, in particular relative clauses, occurs later than the acquisition of other complex structures, namely those of coordination⁵. Thus, while our data are not suitable for dealing with the ini-

⁴ In L1 acquisition, research has been developed on related phenomena, also minoritary from a quantitative point of view. This is the case of root infinitives in Null Subject languages. As remarked by several authors, they are rare in Italian, Catalan and Spanish (see Guasti, 1993/1994, 2002 and Torrens, 1995), and there is no evidence for their existence in Portuguese (Gonçalves, 2002, 2004).

⁵ Concerning L1 acquisition of relative clauses, see, a.o, Goodluck &Tavakolian (1982), for English, and Vasconcelos (1991), for European Portuguese. For L2 acquisition of relative clauses in English by Spanish, Japanese and Chinese speakers, see Flynn (1987), a.o., and for the acquisition of relatives in Spanish by English speakers see Liceras et al. (1995).

tial state of Portuguese as L2, they are still compatible with the hypothesis that, at the intermediate level of formal learning, the learner may manifest some properties characteristic of an earlier stage of acquisition.

For ease of exposition, we will firstly consider the residual Null-C productions. At first sight, the results presented in section 2.2. are compatible with different hypotheses of L2 acquisition of the sentence articulated structure, represented in (16), in a simplified way:

(16) [CP [TP [AspP [vP]]]]

In fact, we may accept that the Null-C productions indicate that the learner's interlanguage has inconsistencies and may regress to an earlier stage, where sentence functional projections are still not available, as assumed by the Minimal Trees Hypothesis (Vainikka & Young-Scholten, 1994, 1996), formulated in (17)⁶:

(17) Minimal Trees Hypothesis

In L2 acquisition, only lexical categories and their linear orientation are transferred from L1 into the initial interlanguage grammar. Functional categories are acquired later, through a progressive bottom up process.

Alternatively, in the case where the learners' L1 adult grammar exhibits Null-C constructions in finite embedded clauses, the Null-C productions in European Portuguese could be accounted for by the Full Transfer/ Full Access Hypothesis (Schwartz & Sprouse 1994, 1996; White 2000, 2003), presented in (18):

(18) Full Access/Full Transfer Hypothesis

The grammar of L1 is fully transferred to the initial stage of L2 acquisition. When this grammar cannot account for the L2 input, the learner resorts to the Universal Grammar (UG).

As for the massive acquisition of Overt-C in finite embedded clauses in European Portuguese, we may assume, with Eubank (1994), that UG as been accessed and the target language parameters have been set, as proposed by the Valueless Hypothesis, in (19):

(19) The Valueless Hypothesis

The initial stage of L2 includes all the L1 grammar, except for the values of the functional heads. These ones are set when immersion inside L2 takes place.

⁶ In the same line of reasoning, we could also admit, as proposed by Bhatt & Hancin-Bahatt (2002) that, at an early state of acquisition, the learner has not yet acquired the CP layer, all sentences being IP/TPs.

On the other hand, we could also adopt the Full Access/Full Transfer Hypothesis, presented in (18), since it considers the learners' access to UG, whenever L1 transfer is not able to account for L2 acquisition.

Notice that none of the hypotheses presented denies the relevance of transfer from L1 into the interlanguage, or access to Universal Grammar. What is at stake is (i) to what extent this access involves the functional skeleton of the sentence (ii) and in what way the lexical and morphosyntactic properties of the target language are acquired.

4.1. C in the learners' L1 grammars and the L2 acquisition hypotheses

In order to evaluate the contribution of the hypotheses previously presented to explain our data, we must characterise the relevant properties of the learners' L1 grammar.

4.1.1. Null-C and the German L1 grammar

As is well known, German exhibits SVO order in declarative root clauses where no complementizer shows up:

(20) Karl kauft das Buch.
Karl buys the book
S V O
'Karl buys the book.'

The examples in (20) constitute a case of the V2 phenomenon. When an overt complementizer occupies the C position, as is the case in finite embedded clauses, the SOV order occurs (21):

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(21) Ich glaube dass ich Hans gesehen habe. I think that I Hans seen have S O V 'I think that I saw Hans.'
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Besides, German standard grammar does not allow for Null-C in relative clauses (22):

(22) Das Haus, in dem ich wohne, ist sehr alt. the house in which I live is very old 'The house where I live is very old.'

However, German exhibits declarative finite subordinate clauses with Null-C and V2 order, as shown in Giusti (1988):

(23) Ich glaube ich sah Hans.
I think I saw Hans
S V O
'I think I saw Hans.'

German native speakers learning Portuguese must acquire a different word order pattern in subordinate completive clauses with overt complementizers: while German finite subordinate clauses present SOV order, in Portuguese both root and subordinate finite clauses are SVO.

So, we hypothesise that in the residual productions of Null-C, German native speakers analyse Portuguese finite subordinate clauses, both in object complement sentences and in relative sentences headed by a complementizer, as V2 contexts, on the basis of the consistent SVO input. In this case, no overt complementizer should be merged, since V would raise to C and the subject would occupy the Spec, CP position.

4.1.2. Null-C in Chinese L1 adult grammar

Chinese is a SVO language with no V to I movement. Chinese completive clauses do not present an overt complementizer:

(24) a. Ta zhidao Ø wo xihuan Zhangsan. (Huang, 1982) he knows I like Zhansan 'He knows I like Zhansan.'

b. Zhangsan shuo Ø bu renshi Lisi (Huang, 1984) Zhangsan say not know Lisi 'Zhangsan says Ø he did not know Lisi.'

Chinese relative clauses are headed by *de*, which seems to play the role of C:

(25) Wo zuotian maí de neíben shu. (Huang, 1982) I yesterday buy DE that book 'The book hat I bought yesterday.'

However, de in Chinese is not a specific instance of C (cf. Huang, 1982). De is a marker that indicates the dependency status of a constituent. In the DP domain, it occurs in relative clauses, as in (25) and, for instance, in possessives, as illustrated in (26)⁷.

(26) ta de toufa he DE hair 'his hair' (cf. Huang, 1982)

⁷ According to Huang (1982:85), it may also appear inside VP and AP.

Besides, as is well known, Chinese has an impoverished morphosyntactic inflectional structure, where aspect is the relevant element. In turn, standard European Portuguese exhibits Null-C in non-finite embedded clauses, as illustrated in (27):

(27) Ele disse Ø não conhecer o Lisi. he said not know the Lisi 'He said not to know Lisi.'

Thus the Portuguese Null-C, in productions by Chinese native speakers, may be seen as a reflex in the interlanguage of their L1 grammar. We may raise the hypothesis that the finite vs. non-finite distinction is not clearly perceived by Chinese L2 learners of Portuguese at an early stage of acquisition and, residually, also at the intermediate level of learning, This would lead them to assume the existence of Null-C in Portuguese, both in infinitive and finite object clauses and in relatives headed by the complementizer.

4.1.3. Lack of Null-C in Spanish L1 adult grammar

The Spanish data corroborate the claim that the L1 grammar interferes with the L2 interlanguage: the systematic use of Overt-C in embedded object and relative clauses by the Spanish learners may be explained by the fact that Null-C in these contexts is not an option in their L1 grammar.

- (28) Permitirei *que* vás a um hotel na cidade do México. will allow that go to a hotel in the city of the Mexico 'I will let you to stay in a hotel in Mexico city.'
- (29) Há pessoas *que* gostam de viver nas cidades there are people that like of to live in the cities 'There are people that like living in cities.'

In sum, the data analysed in sections 4.1.1, 4.1.2 and 4.1.3 indicate that transfer from the L1 into the interlanguage grammar plays an important role in the use or ban of Null-C in finite completive and relative clauses.

Thus, our subcorpora seem to support the Full Transfer/Full Access Hypothesis over the Minimal Trees Hypothesis.

4.2. L2 acquisition of the Null-C vs. Overt-C option

The results of the L2 productions of German and Chinese native speakers, repeated in Table 3, show that the number of overt C occurrences largely exceeds the Null-C productions.

FINITE EMI	BEDDED CLAUSES	German	Chinese	Portuguese
Overt-C	que_Relative	104	203	193
	que_Completive	140	274	138
Null-C	que_Relative	4 (4 learners)	11 (8 learners)	0
	que_Completive	8 (7 learners)	8 (7 learners)	0

Table 3: European Portuguese learners' and control group productions

If transfer from the L1 were the only available acquisition device of the L2, Chinese speakers would not be able to produce Overt-C in object complement clauses in European Portuguese, since Overt-C does not occur in this context in Chinese.

However, Chinese learners do not use an *avoidance strategy* in these structures and produce Overt-C complement clauses in Portuguese prodigally (274 occurrences). Besides, they do so more frequently than German (140 occurrences) or Portuguese (138 occurrences) native speakers.

These data show that the learners, lacking Overt-C in these contexts in their L1 grammar, resort to UG, and set the finite-C parameter in accordance to the target language, on the basis of consistent positive evidence from the language community.

As we noticed at the beginning of Section 4, this explanation seems compatible both with the *Valueless Feature Hypothesis* (which claims that the L2 initial state comprises all the L1 grammar, except for the values of features under functional heads, which are initially unspecified or inert, and are specified according to the L2 values during the acquisition process) and with the *Full Transfer/Full Access Hypothesis* (which assumes that when L1 transfer does not account for L2 evidence, the learner accesses UG).

However, the *Valueless Feature Hypothesis* is problematic, since it predicts that valuation of the functional heads occurs when the immersion in a language community consistently provides positive evidence for a specific value. However, in this case, we would not expect that, at the intermediate level, some learners simultaneously use contradictory values for L2 functional heads, both Null-C and Overt-C.

In contrast, the Full Transfer/Full Access Hypothesis may easily accommodate these data: the learner, for a while, uses either the interlanguage based on the transfer from his/her L1 grammar or the interlanguage built on his/her access to UG.

Interface knowledge from the lexicon, morphology and syntax is involved in the setting up of the Null-C vs. Overt-C option (parameter) — see Pesetsky & Torrego (2001, 2004), Boscovik & Lasnik (2003).

Accepting Pesetsky and Torrego's (2001, 2004) proposal for English, the Null-C vs. Overt-C alternation in finite complement clauses occurs under the following circumstances:

(30) Null-C/Overt-C alternation in finite completive clause

- (i) C is merged as a null functional head, Null-C, an underspecified category, with an uninterpretable T(ense) feature, which must be valued during the derivation (or this will be ruled out).
- (ii) The valuation of the uninterpretable T feature of C may be carried out:
 - (a) by raising of that to C (that being an instance of Tense in T),
 - (b) or, alternatively, by raising of the DP subject to C to value the uT feature of C,
 - (c) or by raising of V in T to C.

According to this proposal, the minimal requirement for Null-C in finite declarative completive clauses to occur in adult grammar is DP subject raising to Specifier of CP.

Assuming the hypothesis in (30), we must conclude that in European Portuguese, only (ii.a) is an available option in finite subordinate clauses: *que* should be merged in C to value the tense feature of \mathbb{C}^8 .

It is this option that the learners have chosen to properly acquire the pattern of C in these contexts in European Portuguese.

5. Concluding remarks

To conclude, we would like to stress the main outcomes of our work. Our study of the acquisition of sentence functional structure in European Portuguese as an L2 has focussed on the acquisition of C and its lexical, morphological and syntactic properties.

Our data have shown that the L2 productions of the learners strongly indicate access to UG: when immersed in an adequate linguistic community, adult learners acquire the relevant properties of the target grammar, even when these are different from those in their own L1.

Besides, our data did not allow us to conclude that the residual Null-C phenomenon is evidence for the Minimal Trees Hypothesis. On the contrary, they seem to show that the occurrence of Null-C in finite completive and relative clauses is influenced by the lexical, morphological and syntactic properties of the L1 grammar, as claimed by the Full Transfer/Full Access Hypothesis.

⁸ Considering the lack of Null-C in finite completive and relative clauses EP, Duarte et al. (2005) and Soares (2006) claim that C in this language has always an interpretable T-feature, *que* being directly merged in C.

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