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ARTIGO ORIGINAL

Crosslinguistic influence in the production of English as L3

Influência translinguística na produção do inglês como L3

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Abstract

Crosslinguistic influence (CLI) refers to the phenomenon of how one language affects the acquisition and processing of another language by the same speaker. Bilinguals and multilinguals offer a good opportunity to study crosslinguistic phenomena since they have multiple language systems in interaction. Here we report the results of a study which investigated CLI in bilinguals and trilinguals. The objective of the study was twofold: (1) to analyze the influence of cognate words in the oral production of L2 and L3 English speakers in terms of quantity and type of cognates (English-Portuguese, English-German, English-German-Portuguese); (2) to investigate CLI in the production of English as L3. Participants were required to narrate a story on the basis of four pictures. The analysis of the narratives showed that bilinguals and trilinguals produced a similar number of cognate words of the type English- Portuguese and English- German- Portuguese. Regarding the cognate type English-German, trilinguals produced a significant higher number of these words as compared to the bilinguals. Since the bilinguals had no knowledge of German, these results indicate that the L2 (German) of the trilinguals facilitated the production of English-German cognates. We interpret these results as evidence of the coactivation of the trilinguals' languages.

Keywords: crosslinguistic influence, multilingualism, cognates.

Resumo

Influência translinguística se refere ao fenômeno de como uma língua afeta a aquisição e o processamento de outra língua do mesmo falante. Bilíngues e multilíngues oferecem uma excelente oportunidade para o estudo do fenômeno de influência translinguística já que eles possuem múltiplos sistemas linguísticos em interação. Neste artigo apresentamos resultados de um estudo que investigou influência translinguística em bilíngues e trilíngues. Os objetivos do estudo foram: (1) analisar a influência de palavras cognatas na produção oral de falantes de inglês como L2 e L3 em termos de quantidade e tipo de cognatos (inglês-português, inglês-alemão, inglês-alemão-português); (2) investigar influência translinguística na produção do inglês como L3. Os participantes foram solicitados a narrarem uma história com base em quatro figuras. A análise das narrativas mostrou que bilíngues e trilíngues produziram um número semelhante de palavras cognatas do tipo português-inglês e português-inglês-alemão. Em relação ao tipo de cognato inglês-alemão, os trilíngues produziram um

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número maior dessas palavras, quando comparados aos bilíngues. Como os bilíngues não tinham conhecimento de alemão, estes resultados indicam que a L2 (alemão) dos trilíngues facilitou a produção dos cognatos inglês-alemão. Interpretamos estes resultados como evidência da coativação das línguas dos trilíngues.

Palavras-chave: influência translinguística, multilinguismo, cognatos.

1 INTRODUCTION

The study of crosslinguistic influence (CLI) refers to the phenomenon of how one language affects the acquisition and processing of another. To occur, CLI requires at least two language systems in the same brain. These languages may influence each other in the forward (L1 -> L2) or backward (L2 -> L1) direction, or in both directions (L1 <=>L2). In the forward direction, CLI can manifest in the acquisition of the L2 and in its processing. On the other hand, in the backward direction, CLI will be more frequent regarding processing than acquisition, except for simultaneous or early bilinguals.

The more the number of languages involved in the linguistic system, the greater the chances of CLI (TOASSI, 2016). Hence, the increasing interest in studying this phenomenon in the multilingual domain. Studies in this area may help elucidate questions on the multilingual mental lexicon, particularly, in third language (L3) acquisition. CLI is evident in the following directions: (1) from the native language to the foreign languages (L1 -> L2; L1-> L3); (2) between the foreign languages (L2 <=> L3); (3) from the foreign languages into the native language (L2 -> L1; L3-> L1).

Among the different types of CLI, that from the foreign languages into the native language has been the least investigated. However, this type of CLI may offer additional insights on the dynamic nature of the multilingual lexicon and thus significantly contribute to our understanding of important questions regarding the mental lexicon, which include the interconnectivity or the degree of integration of the multiple linguistic systems of a multilingual speaker (for a review on this topic see TOASSI; MOTA, 2015). The extent to which these systems interact as well as the nature of this interaction are still open issues and CLI research can inform proposals concerning lexical access in multilinguals.

With a view to contributing to the discussion related to the interconnectivity of the various languages of multilinguals, in the present study we address CLI in the language production of L3 English speakers who had Brazilian Portuguese as the L1 and German as the L2, as compared to the production of Brazilian Portuguese (L1)-English (L2) speakers. The objective of the study was twofold: (1) to analyze the influence of cognate words in the oral production of these L2 and L3 English speakers; (2) to investigate CLI in the production of English as L3.

In what follows we present an overview of the factors that may interact with CLI, followed by the specifics of the study we carried out. In our final remarks we point out that CLI, assessed in the present study in terms of type and number of cognate words and type of CLI, is manifest mainly in the number of cognates English-German produced by the trilingual speakers, as compared to the number of the same type of words produced by the bilingual speakers. These results indicate that the L2 German of the trilinguals facilitated the production of these types of cognate words, since the bilinguals did not have knowledge of German. Therefore, the trilinguals might benefit of the representation of this type of words in two of their languages, English and German.

2 FACTORS THAT MAY INTERACT WITH CROSSLINGUISTIC INFLUENCE

There are many factors that may interact with CLI. These factors include proficiency level in each of the languages, recency, order of acquisition, and the similarity among the languages of a speaker.

A higher level of proficiency in one language may correlate with a higher level of activation of this language. Consequently, there are more chances of this language

interfering/influencing the acquisition and processing of another language, even when the former is not the target one. On the other hand, a lower level of proficiency in one of the multilinguals' languages may lead to greater chances of interference/influence from another language into the lower proficiency one. According to the Revised Hierarchical Model (RHM, KROLL; STEWART, 1994), that might occur due to the weaker links that the words of the lower proficiency language have between the lexical and conceptual levels and to its greater dependency on another language to access concepts. For instance, Bayona (2009) and Sánchez (2017) have presented evidence favoring proficiency as a key factor in CLI.

Recency is related to the frequency with which speakers use each of their languages (TOASSI, 2012). Recency is an important factor because the frequency of use of a language may increase its activation level and the greater the activation of this language, the greater the chances of CLI to occur (TOASSI, 2012).

Order of acquisition, that is, the sequence in which the languages were acquired, is another important factor in CLI. Speakers may resort to their L1 when producing a foreign language, which gives a privileged status to the L1 in matters of CLI. However, it is also possible that the speaker will prefer to resort to the last acquired language. For instance, speakers of an L4 might resort more frequently to their L3, since it was the last language acquired and the one whose metalinguistic knowledge is better developed. Evidence in favor of the factor of order of acquisition has been presented by Jin (2009), Ranong and Leung (2009), and Silva and Hübner (2015).

Similarity among languages may also determine how one language will influence the acquisition and processing of the subsequent one. It has been favored by many studies (CENOZ, 2001; CARVALHO; SILVA, 2006; FOOTE, 2009; MONTRUL; DIAS; SANTOS, 2011; ROTHMAN, 2011; WESTERGAARD et al., 2017; ORTIN; FERNANDEZ-FLOREZA, 2018; HOPP, 2019) as a determinant factor in CLI.

In addition, shared properties among languages is an important factor present in models of lexical access, such as the Bilingual Interactive Activation Model + (BIA+, DIJKSTRA; VAN HEUVEN, 2002) and its extended model, the Multilingual Interactive Activation Model (MIA, DIJKSTRA, 2003). These models make specific predictions about cognate words, arguing that they have an integrated representation in the bilinguals and multilinguals' languages.

Cognates are words that share form and meaning between two or more languages, for example the word 'hand' in English is an identical cognate with the word *Hand* in German. The word 'animal' in English is an identical cognate with the word *animal* in Portuguese. There are also examples of non-identical cognates such as the pairs 'drink' (English) – *trinken* (German) and 'famous' (English) – *famoso* (Portuguese). Cognate words might also have form and meaning shared among three or more languages. In the specific case of the three languages involved in the present study, an example of a triple cognate would be the word 'banana', which is the same in English, German and Portuguese.

Of immediate relevance to our aim here are studies (LEMHÖFER; DIJKSTRA; MICHEL, 2004; POARCH, VAN HELL, 2012; TOASSI; MOTA; TEIXEIRA, 2020; YOUNES; GATHERCOLE, 2020) that have double and/or triple cognates as stimuli and that have found evidence for the coactivation of bilinguals and multilinguals' languages.

In an early study conducted with trilingual speakers of Dutch, English and German, Lemhöfer, Dijkstra and Michel (2004) applied the tasks in the participants' weakest language, the L3, with the stimuli consisting of cognates in the participants' two and three languages. Their results show cognate effects in the combination Dutch-German, since participants answered faster to these cognates than to non-cognates. Additionally, triple cognates facilitated performance in the lexical decision task more than the double cognates. Lemhöfer et al (2004) state that both the native language and the foreign language influenced the comprehension of the target language, which suggests that participants' three languages are activated in a monolingual task.

Poarch and Van Hell (2012) conducted a study with cognates at the phonological level, where children were required to name pictures in only one language. More specifically, bilinguals and trilinguals were required to name pictures that represented cognates and

non-cognates in their dominant and non-dominant language. Participants of the study were speakers of German (L1), English (L2) and another language (X) as the L3. The results of the study favored coactivation of the bilinguals and trilinguals' languages.

Trilingual participants (Brazilian Portuguese-English-German) had their eye movements recorded while reading sentences in English which contained double and triple cognates among the participants' three languages (TOASSI; MOTA; TEIXEIRA, 2020). The results of the study showed that there was a facilitative effect of the triple cognates as compared with the double cognates for the trilingual speakers. The same effect was not observed for the control group formed by bilingual Portuguese-English participants.

Finally, Younes and Gathercole (2020) used a picture naming task containing cognates and non cognates to examine VOT values for voiced stops in Spanish-English bilinguals. Younes and Gathercole (2020) concluded that there was CLI related to the use of the cognate words in the direction of English, the participants' less dominant language.

Taking into consideration the evidence in favor of the coactivation of the languages of a multilingual speaker, we set out to investigate CLI in bilingual and multilingual speakers by focusing on the influence of previously learned languages (Brazilian Portuguese and German) in the processing of English (as L2 or L3). More specifically, the following research questions and hypotheses were pursued in the present study:

1) How do different types of cognate words influence the oral production of L2 and L3 English speakers?

2) What types of CLI manifest in the production of English as L3?

Hypotheses

1) Due to their knowledge of German, trilingual participants will produce more cognates among English, German and Brazilian Portuguese (CGEGP) and cognates between English and German (CGEG) than bilingual participants.

2) CLI will manifest in terms of transfer of form and meaning in the production of English as L3.

3 METHOD

3.1 Participants

Twenty- eighty participants took part in the present study (18 male and 10 female; mean age: 23,9 years old). The participants were divided into two groups, according to their language background: there were 12 native speakers of Brazilian Portuguese, with English as the L2 (the L2G) and 16 native speakers of Brazilian Portuguese, with German as the L2 and English as the L3 (the L3G). Table 1 summarizes information on participants' profile.

Table 1. Participants' profile

	L2G	L3G
Male	7	11
Female	5	5
Mean age	21,5	26,43
Age range (SD)	17 – 35 (5,26)	18-59 (9,95)

N= 28; L2G: 12; L3G: 16 (N= number of participants)
Source: Own authorship

All participants signed a Consent Form[1] to take part in the study. Their knowledge of English and German was analyzed by means of two vocabulary tests. The Vocabulary Levels

[1] This study was approved by the Ethics Committee of the Federal University of Santa Catarina (CAAE 32937014.2.0000.0121) .

Test (PVLT) in its productive version (LAUFER; NATION, 1999) was applied for English (available at http://www.lextutor.ca/tests/levels/productive/). The test of the *Institut für Testforschung und Testentwicklung* (Institute for Test Research and Test Development), also in its productive version, was applied for German (available at http://www.itt-leipzig.de/static/vltgerman_01p/index.html). Both tests were comprised of five levels of 18 items to be completed. In order to compare participants' results, the number of correct items in each of the levels was summed. These results can be seen in Table 2.

Table 2. Results of the vocabulary tests in German and English

L3G			L2G	
Participant	**German test**	**English Test**	**Participant**	**English Test**
P8	5	13	P1	12
P10	46	22	P3	12
P11	61	5	P4	13
P13	4	28	P5	11
P16	6	10	P6	14
P21	48	29	P7	9
P42	7	23	P9	32
P44	3	6	P12	12
P49	23	11	P20	13
P50	14	9	P24	23
P51	13	9	P28	9
P52	21	22	P41	14
P53	27	11		
P54	6	11		
P55	22	14		
P56	25	14		
Minimum	3	5		9
Maximum	61	29		32
Mean	20,69	14,81		14,5
Standard Deviation	17,58	7,56		6,57

N= 28; L2G: 12; L3G: 16 (N= number of participants)
Source: Own authorship

The results of the vocabulary tests displayed in Table 2 show that the L2G and the L3G were homogeneous with respect to the knowledge of the target language, English. This can be seen by taking into consideration the values obtained for the means (14,81 for the L3G and 14,5 for the L2G), for the minimum score (5 for the L3G and 9 for the L2G), for the maximum score (29 for the L3G and 32 for the L2G) and for the standard deviation (7,56 for the L3G and 6,57 for the L2G). Regarding the L3G, the tests showed that, on average, participants' knowledge of German was slightly higher than English (means of 20,69 for the German test and 14,81 for the English test). However, there was also a greater standard deviation for the results of the German test (SD: 17,58) indicating less homogeneity in this group regarding their knowledge of German as compared to their knowledge of English. Despite the low mean number of correct items in the VLT test, it has to be said that all of the participants were able to carry on a conversation in English at an intermediate level. Participants also filled in a language experience questionnaire in which they informed not having knowledge of other languages besides the target ones for the present study. In the next section the details about the narrative task are provided.

3.2 The narrative task

The stimuli provided for the production of the oral narrative consisted of four pictures which were adapted from the wordless book Frog, where are you? (MAYER, 1969). This book was used in previous studies by Toassi and Mota (2013a, 2013b, 2014) to elicit participants written narrative production. However, since this book did not contain many pictures that represented cognate words, the story was reproduced and pictures that represented cognate words were added. Nevertheless, the main plot of the story remained, that is, a boy looking for his frog. There were four pictures that portrayed the whole story and participants were free to choose the most appropriate order for the pictures to narrate the story. The cognate words were taken from the database developed by Toassi, Mota and Teixeira (2020). Table 3 presents the list of elements of the four pictures of the narrative task.

Table 3. List of elements of the pictures of the narrative task

	CGEG	CGEP	CGEGP	Non-cognates
	Lamp (*Lampe)*	Rat (*Rato*)	Banana (Banana/ Banana)	Table
	Cheese (*Käse*)	Jar (*Jarra*)	Poster (*Poster/ poster*)	Window
	Fish (*Fisch*)		Balloon (*Ballon/ balão*)	Boy
	Mouse (*Maus*)		Lion (*Löwe/ leão*)	Dog
	Wine (*Wein*)			Cloud
	Glass (*Glas*)			Tree
	Sun (*Sonne*)			River
	Cat (*Katze*)			
	Bed (*Bett*)			
	Moon (*Mond*)			
	Apple (*Apfel*)			
	Corn (*Korn*)			
Number of items	12 out of 25	2 out of 25	4 out of 25	7 out of 25

Note: CGEG = cognate between English and German; CGEP = cognate between English and Brazilian Portuguese; CGEGP = cognate among English, German and Brazilian Portuguese

Source: Own authorship

As can be seen in Table 3, there was a total of 25 items in the four pictures that represented the story. From these 25 items, 12 were images that represented cognates between German and English (CGEG); 2 represented cognates between English and Brazilian Portuguese (CGEP); 4 represented cognates among German, English and Brazilian Portuguese (CGEGP), and 7 represented non-cognate words. In short, there were more images that represented cognate than non-cognate words in the pictures, mainly cognates with German. Therefore, we expected a greater effect of the foreign language, German, than of the native language Brazilian Portuguese in the production of the trilingual participants (the L3G).

Instructions for this task were provided orally to participants, in Portuguese. In the instructions, participants were informed that they were going to see four pictures and they had to narrate a story on the basis of these pictures. Participants were free to organize the pictures in the order they found more appropriate. As soon as they organized the pictures, they started telling the story, while being audio recorded. The analysis of the results is presented in the next section.

4 RESULTS

Participants' narratives were transcribed and analyzed. The analysis had two main goals (1) to compare the number and type of cognates (English-Portuguese, English-German, English-German-Portuguese) produced by the trilingual participants (L3G) to that of the bilingual participants (L2G) and (2) to analyze instances of CLI, that is, if the L1 (Brazilian Portuguese) or the L2 (German) influenced participants' oral production in English. With this information, it was possible to make inferences regarding the activation of the non- target languages (German and Brazilian Portuguese) while participants produced the narrative in English. The first part of the analysis consisted in counting the number of times cognate words appeared in the transcribed narratives. Table 4 presents these results by condition.

Table 4. Number of times the cognate words appeared in the participants' oral narrative

Participants	Group	CGEG	CGEP	CGEGP
P1	L2G	9	0	0
P3	L2G	22	0	3
P4	L2G	11	5	5
P5	L2G	3	5	0
P6	L2G	7	4	2
P7	L2G	4	5	3
P9	L2G	8	0	1
P12	L2G	5	0	2
P20	L2G	9	5	2
P24	L2G	9	2	1
P28	L2G	9	4	1
P41	L2G	5	12	0
Total		**101**	**42**	**20**
P8	L3G	10	3	5
P10	L3G	10	0	1
P11	L3G	13	0	3
P13	L3G	11	1	0
P16	L3G	4	0	0
P21	L3G	9	5	3
P42	L3G	15	0	0
P44	L3G	11	0	0
P49	L3G	29	8	2
P50	L3G	12	0	1
P51	L3G	0	2	0
P52	L3G	6	1	0
P53	L3G	4	8	1
P54	L3G	12	0	3
P55	L3G	8	3	2
P56	L3G	3	11	0
Total		**157**	**42**	**21**

N= 28; L2G: 12; L3G: 16

Note: N= number of participants; CGEG = cognate between English and German; CGEP = cognate between English and Brazilian Portuguese; CGEGP = cognate among English, German and Brazilian Portuguese.

Source: Own authorship

The results presented in Table 4 show that the L3G produced more cognates English-German (CGEG) than the L2G (157 and 101, respectively). This result indicates that the foreign language German, facilitated the production of this type of cognate. This can be interpreted as an effect of the differences between the linguistic system of the bilingual and multilingual speakers who took part in the present study, since only the participants of the L3G had knowledge of the foreign language German.

Regarding the other cognate types (cognate English- Portuguese (CGEP) and cognate English- German- Portuguese (CGEGP)), the results are equivalent between groups. The L3G produced the same amount of cognates English- Portuguese (CGEP) as the L2G (42), and for the cognates English- German- Portuguese (CGEGP), the L2G produced 20 cognates whereas the L3G produced 21. Therefore, it seems that for the L3G, there was an effect of the foreign language German in the production of the cognate words.

In order to confirm if there was indeed an effect of the foreign language German in the production of the cognates words of the L3G, as shown by the results of Table 4, another analysis was carried out. The number of cognate words produced by participants of the two groups was divided by the total amount of words of their narratives. Table 5 shows the proportion of cognates per total of words produced by each participant.

Table 5. Rate of number of cognates per words produced

L2G	Cognates/ total number of words	L3G	Cognates/ total number of words
P01	5,45	P08	8,45
P03	7,99	P10	7,14
P04	11,60	P11	7,37
P05	7,14	P13	8,45
P06	6,13	P16	6,25
P07	10,00	P21	10,63
P09	6,43	P42	6,10
P12	8,43	P44	7,01
P20	10,19	P49	11,54
P24	8,05	P50	8,61
P28	12,39	P51	2,82
P41	7,14	P52	8,54
		P53	7,47
		P54	10,27
		P55	5,26
		P56	13,33
Mean	8,41		8,08
Minimum	5,45		2,82
Maximum	12,39		13,33
Standard deviation	2,20		2,55

N= 28; L2G: 12; L3G: 16
Note: N= number of participants
Source: Own authorship

The results presented in Table 5 show that the proportion of cognates English- German (CGEG) produced in the narratives by the two groups is the same. That is, there was practically no difference in the comparison of the number of cognate words divided by the total number of words produced by the L2G and L3G. These are important results because

they indicate that the higher number of cognates English- German produced by the L3G as compared to the L2G (according to Table 4) may indeed indicate an effect of the foreign language German.

The second goal of this analysis was to investigate crosslinguistic influence in the production of English as L3. The analysis showed that there were only a few instances of CLI in the narratives produced. From the 28 narratives produced, instances of CLI were found in only 4 narratives. These four participants who showed some interference from the other non-target languages in their narratives were all from the L3G. The narratives of the participants of the L2G did not show instances of CLI. The instances of CLI are presented in examples 1 to 4:

Ex. 1 (P20 – L3G): He ***depair*** to a mouse party in the cornfields...

Ex. 2 (P16 - L3G): ***Dann***, as both the boy and his dog were asleep the mouse managed to get away...

Ex. 3 (P51 – L3G): ...he wanted to take them off, ***como é que fala isso***?

Ex.4 (P54 – L3G): ...he looked for the mouse in a place with seven trees and a... ***Esqueci o nome disso aqui.***

Examples 1 to 4 show instances of CLI, that is, the influence of the non-target languages in the oral production of English. In example 1 the participant used the word form *depair* in his sentence, which is not a word in any of the trilinguals' languages. However, it can be inferred that this word form *depair* was a modification of the verb *deparar-se* from the participants' L1 – Brazilian Portuguese. This instance of CLI is very common in foreign language production; it occurs when the speaker cannot access the intended word in the target language and uses another from the non-target language instead. In the specific case of example 1, this instance of CLI had its form and/or pronunciation adapted into the target language, which can be classified as the phenomenon of foreignizing (CENOZ, 2001).

In example 2, the participant used the translation equivalent of the adverb *then* in German, which is *dann*. Even though the two words "then" and "dann" are similar, it was clear for the experimenter that the participant was producing the word "dann" in German and that this was not a case of mispronunciation. In this case, the participant might have accessed the German word faster than its English translation. This is an example of an instance of CLI classified as borrowing (CENOZ, 2001). The difference of these two phenomena, borrowing and foreignizing, is that in the former the word in the non-target language is used in its original form, whereas in the latter the word is modified in order to adapt into the target language.

In addition, whereas in examples 1 and 2 participants' influence of the non-target languages (L1 and L2) was demonstrated in a single word (*depair* – from Brazilian Portuguese, and *dann* – from German), in examples 3 and 4, the instance of CLI that occurred was code switching. Code-switching occurs when the participant changes the language being used in the middle of the sentence and may also, later, switch back to the target language (CENOZ, 2001). The phenomenon of code switching is very common between speakers of the same language. However, it has to be pointed out that the participants received clear instructions as to not interact with the experimenter during the tasks. Therefore, both examples 3 and 4 were interpreted more as an expression of participants' thought than as an attempt to interact. All of the cases of CLI mentioned in this analysis – borrowing, foreignizing, and code switching – are classified as phenomena of transfer of form, that is when the speaker is influenced by a similar word/form from the non-target language (RINGBOM, 2001).

In a previous study, Toassi and Mota (2014) applied two narrative tasks to bilingual (L1- Brazilian Portuguese, L2 – English) and trilingual participants (L1- Brazilian Portuguese, L2 – German, L3 - English), one written, based on the wordless picture book *Frog, where are you?*

(MAYER, 1969) and one oral, based on a spontaneous narrative where participants should talk about a movie they had recently seen. The results of that study showed that participants of the two groups had influence of their previous languages both in written and oral production. However, the trilingual participants demonstrated more influence of German than Brazilian Portuguese in the instances of CLI manifested. These results are in line with those related to the cognates English- German produced by the trilinguals of the present study. It seems that indeed the foreign language German exerts a strong influence in the production of the L3 English.

Different experimental tasks with the same language combinations have pointed to similar conclusions. In a cross-language priming experiment, Toassi and Mota (2018) found a strong influence of German in participants' reaction time in the oral production of English as L3. Triple cognates were also shown to have a significant facilitation effect in the reading of English as L3 (TOASSI; MOTA; TEIXEIRA, 2020).

We interpret our results as evidence in favor of the view that there is strong interconnectivity between the foreign languages of a multilingual and that all the languages of a trilingual are activated even when the intention is to use only one of these languages. In addition, our results are in line with results of other studies pointing to the influence of the L2 in the L3 (RINGBOM, 2001; ECKE, 2001; FOUSER, 2001; LLAMA; CARDOSO; COLLINS, 2007; FLYNN, 2009; SHOOSHTARI, 2009; BARDEL; FALK, 2007; CHIN, 2009; ROTHMAN; AMARO, 2010; FALK; BARDEL, 2011).

5 CONCLUSION

In this study we investigated the influence of the native and non-native language (Brazilian Portuguese and German, respectively) in the processing of English (as L2 or L3), during an oral narrative task. Regarding our first research question, participants' oral narratives showed that the trilingual speakers produced more cognates between English and German than the bilingual speakers did between Portuguese and English. Our hypothesis 1 was partially confirmed since the trilingual participants produced more cognates English-German than the bilingual participants did. However, both groups produced an equivalent number of cognates English-German-Portuguese.

Concerning our second research question, the analysis of instances of crosslinguistic influence in the narrative production of the L2 and L3G showed that for the L3G there was 1 instance of borrowing from the L2- German, 1 instance of foreignizing from the L1-Brazilian Portuguese, and 2 instances of code-switching into the L1-Brazilian Portuguese. Therefore, our second hypothesis was also only partially confirmed, since instances of transfer of form were produced but no instances of transfer of meaning were.

Together, our results show that, for trilinguals, the L2 (German) exerts a strong influence on the production of L3 English (TOASSI; MOTA, 2014; TOASSI; MOTA, 2018), demonstrated in terms of CLI and reaction time. These results add to those we found for L3 English comprehension (TOASSI; MOTA; TEIXEIRA, 2020), demonstrated in terms of fixation time.

For further research it would be interesting to test different language combinations and experimental tasks. Another suggestion would be to apply the same task to experimental groups with different proficiency levels (attested by an objective measure).

It can be concluded that the field of multilingualism offers different possibilities for the study of CLI. The present study contributed to this area with relevant data from the Brazilian scenario.

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