

Original Paper

Saliency and Learned Attention: A Study on the Perception of Uninflected Verbs by Brazilian Portuguese-English Bilinguals

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Abstract

The present study explores the potential reasons for L2 users' difficulty with inflectional morphology. We investigated the effects of saliency and learned attention on the processing of second language inflectional morphology by Brazilian Portuguese(BP)-English bilinguals. To analyze the effects of saliency, we tested L2 users' perception of past regular verbs and past irregular verbs ending with /ɔt/, which involves a more salient change in the verb root. To probe the influence of learned attention, we compared their behavior concerning regular past tense makers (-ed) and regular present tense markers (-s), as the latter occurs in a grammatical context in which Portuguese uses null morphemes. We conducted an Acceptability Judgment Task to observe L2 users' behavior in relation to sentences that were ungrammatical due to the use of uninflected verbs. The results indicate that the participants were more sensitive to the absence of regular past tense than to the absence of regular present tense marking, but the absences of regular and irregular past tense markings were perceived similarly. The study's results corroborate models that account for the effects of cross-linguistic influence on learned attention to linguistic cues and also reverberate through second language teaching practices.

Keywords

psycholinguistics of bilingualism, inflectional morphology, saliency, learned attention, cross-linguistic effect

1. Introduction

Inquiring into the factors that explain the differences between second language (L2) users and native speakers in terms of linguistic behavior is key in L2 acquisition research (Jackson, 2022). Inflectional morphology seems to be one of the constructions in which L2 users and native speakers often exhibit

different behaviors; hence, it is an interesting arena for investigation. The literature in this field indicates that mastering inflectional morphology is a daunting task even for highly proficient L2 users (Hopp, 2020; Mitsugi & Macwhinney, 2016; Gruter et al., 2012; Sabourin & Stowe, 2008; Jia & Fuse, 2007; Johnson & Newport, 1989; Schmidt, 1984). Ellis (2022, p. 36) contends that developing knowledge of this linguistic unit in L2 is a “slow, piecemeal, and often incomplete” process.

Previous studies have indicated that speakers of morphologically rich languages tend to rely more heavily on inflection markings (Ellis & Sagarra, 2013). Nevertheless, studies on Brazilian Portuguese(BP)-English L2 users consistently show that highly proficient L2 users are less sensitive than native English speakers to the absence of verbal inflectional morphemes (Fontoura et al., in press; Oliveira et al., 2020; Fontoura, 2018; Carneiro, 2017, 2008). Considering that BP has a more complex morphological system than English does, these findings illustrate an interesting situation in which the lack of complexity in the L2 morphological system mismatches the psycholinguistic complexity of the L2 learning process.

It is not yet clear what exactly causes this difficulty: whether it is a construction-related factor such as salience, redundancy, frequency, contingency, or prototypicality, and/or a learner-related factor such as learned attention, transfer, or blocking. Our study aims to add to this literature by investigating the role that two of these factors play in L2 users’ behavior towards different types of inflectional morphemes. More specifically, we compared how BP-English L2 users perceive sentences with missing morphemes in third-person present regular verbs, past regular verbs, and past irregular verbs in an Acceptability Judgment Task to shed light on the influence of salience and learned attention. Low salience and first language(L1)-tuned automatized strategies to allocate attention during language processing are factors that make L2 construction less learnable (Ellis, 2022).

The remainder of this paper is organized as follows. The next section discusses two factors that are possibly responsible for L2 users’ behavior towards L2 morphology. Section 3 presents the experiment conducted to investigate the role of these factors in BP-English bilingual acquisition of English inflectional morphology. Section 4 reports the results of the experiment. Section 5 discusses our findings regarding a model of language acquisition and teaching practices. Finally, the conclusion reflects our final remarks.

2. Inflectional Morphology in the L2

Frequency of use is one of the most important, if not the most important, factors that drive the learnability of a construction; the more frequent it is, the more entrenched that construction is likely to become according to a cognitive approach to L2 acquisition (Ellis & Wulff, 2019). However, frequency alone does not explain the full picture of construction learnability, as there are frequent constructions that impose difficulties on L2 users during the process of L2 acquisition, even at high levels of proficiency. Inflectional morphology is one such constructions. Hopp (2020) pointed out that there is a plethora of studies on L2 processing that have indicated that L2 users have difficulties integrating this linguistic unit

in real-time sentence processing. These findings have been interpreted as evidence that L2 users either under-use morphosyntactic cues or fail to recruit grammatical representations.

Ellis and Wulff (2019) argued that understanding why closed-class constructions are more difficult than open-class constructions is a key challenge for research in second-language acquisition. Previous studies on this issue have analyzed the role of the semantic complexity of overt morphemes, input frequency, and L1-to-L2 influence (Kwon, 2005). However, according to the authors, usage-based theories attribute this learnability issue to salience, contingency of form-function, and learned attention to linguistic cues. In the present study, we aimed to investigate two of these factors that influence the behavior of BP-English L2 users vis-à-vis English verbal inflectional morphemes.

In this section, we describe each of these factors and present how they influence the L2 acquisition process in the aforementioned bilingual group.

2.1 Salience

Salience is the concept used to describe a linguistic stimulus that stands out from others in a given group. The salient parts of a linguistic stimulus are likely to be noticed and processed. We can say that constructions are more salient in terms of acoustic clarity in spoken language or size in written language. More specifically, physical salience can be determined by factors such as the duration of speech, prosodic stress, position in a string, or the length of the characters (Sagarra & Ellis, 2013).

Salience effects are often investigated with studies that analyze the processing differences between verbal inflectional morphemes and adverbs that also indicate the time or completeness of actions (Cintrón-Valentín & Ellis, 2016; Ellis & Sagarra, 2010; Sagarra, 2008). Sagarra and Ellis (2013) analyzed the behavior of Spanish learners with different L1 backgrounds towards sentences, such as (1), in which verbs and adverbs alternate their position in congruent and incongruent sentences. Compared to morphemes for tense marking, adverbs are easier to learn to recognize and interpret in a sentence because they are typically more salient and have a clearer semantic function. Inflectional morphemes are usually one of the most frequent constructions in a language; the higher the frequency of a construction, the more likely it is to be reduced and unstressed (Cutler & Carter, 1987). In other words, frequency reduces the salience of grammatical functors, making it difficult to perceive them in a purely bottom-up process. According to Ellis (2022), top-down processes are of paramount importance in supporting the perception of these constructions, but they are what L2 users lack. The author argues that L2 users do not have sufficient experience with the construction to develop knowledge capable of offering the same levels of top-down support as L1 users.

- (1) a. Creen que **ayer** el chico **cocinó** algo para la fiesta.
 (They) believe that **yesterday** the boy **cooked** something for the party
'They believe that yesterday the boy cooked something for the party.'
- b. Creen que **ayer** el chico **cocina** algo para la fiesta.
 (They) believe that **yesterday** the boy **cooks** something for the party
'They believe that yesterday the boy cooks something for the party.'

- c. Creen que el chico **cocinó** algo **ayer** para la fiesta.
 (They) believe that the boy **cooked** something **yesterday** for the party
 ‘They believe that the boy cooked something yesterday for the party.’
- d. Creen que el chico **cocina** algo **ayer** para la fiesta.
 (They) believe that the boy **cooks** something **yesterday** for the party
 ‘They believe that the boy cooks something yesterday for the party.’

(Adapted from Sagarra & Ellis, 2013)

In this study, we investigated the influence of the length in characters of tense marking. We probe whether salience can play a role at the lexical level by analyzing the difference between the two types of past inflections in L2 users’ perceptions of ungrammatical past sentences. More specifically, we tested whether L2 users exhibit distinct behaviors towards regular and irregular verbs in past sentences that are ungrammatical because of the use of uninflected verbs. In this case, all the irregular verbs end with the /ɔt/ sound (e.g., taught and thought). We understand that the incorrect use of an uninflected verb is more salient for irregular verbs (e.g., teach instead of taught or think instead of thought) than for regular verbs (e.g., play instead of played or love instead of loved). Therefore, the ungrammaticality of sentences with irregular verbs, as in (2), may be more noticeable than that of sentences with regular verbs, as in (3).

(2) In 2019 Terry **teach** English lessons

(3) In the past, Haley **contract** an infection

2.2 Learned Attention to Linguistic Cues

Learning a language implies the development of attentional biases towards linguistic processing. In the case of L2 users, the L1 may have a considerable influence on attentional bias during L2 use. Learning certain stimulus-outcome associations in the L1 may facilitate the acquisition of the same pattern in the L2 or hinder the acquisition of a different one. In other words, the learned attention effects may result in both positive and negative transfers. This negative transfer is referred to as blocking because previously learned associations block the acquisition of new associations (Ellis & Wulff, 2019).

The use of object pronouns in Brazilian Portuguese and English illustrates this attentional bias. As discussed by Souza (2021), despite having case marking for pronouns, this language seems to rely more on syntactic positions to mark direct objects. Consequently, it is common to hear sentences in Brazilian Portuguese where subject, dative, null, or accusative pronouns are used with accusative functions (4). This optionality phenomenon suggests that native speakers of BP direct their attention to word order (postverbal) more than to case marking to assign the accusative function to pronouns. English, in contrast, relies on both syntactic position and case marking. Thus, if the blocking hypothesis is correct, BP-English L2 users will have an easier time relying on syntactic position, compared to case marking, to assign accusative meanings to pronouns. Consequently, they may be more sensitive to word-order mistakes, as in (5), than case-marking mistakes, as in (6), whereas native English speakers probably exhibit the same level of sensitivity to both types of ungrammaticalities. It is important to

note that the Portuguese counterparts of these examples, illustrated in (7) and (8), are both grammatical and well-accepted in this language (Oliveira et al., 2022; Oliveira & Weissheimer, 2023). Thus, the possible effect on an L2 user's perception is the result of the attentional bias that comes from their experience with the L1.

- (4) Gabriel passou a roupa e vestiu (-a, **ela**, **lhe**, or \emptyset) quente.
 Gabriel ironed the shirt_i and wore (ACC, NOM, DAT, or \emptyset)_i warm
 'Gabriel ironed the shirt and wore it warm.'

(adapted from Oliveira et al., 2022)

- (5) *They **her** love.
 (6) *They love **she**.
 (7) Eles **a** amam.
 They her love
 'They love her.'
 (8) Eles amam **ela**.
 They love she
 'They love her.'

L2 user behavior in relation to the (-s) and (-ed) morphemes can potentially reveal the effects of learned attention to linguistic cues. In English, the simple present tense is overtly marked (-s) in third-person singular sentences (9a). Sentences with other person agreement are marked with null morphemes, as in (9b). BP has the opposite picture: third-person singular present sentences are marked with a null morpheme (10a), whereas other person agreement is marked with different overt morphemes (10b-d). Thus, it is possible to assume that English requires attention to morphological marking in a context that BP does not; consequently, L2 users may transfer these learned attention patterns to English. In other words, the attentional bias to morphological marking learned in BP may block the development of the attentional bias to morphological marking expected in English. This cross-linguistic contrast is not perceived in the simple past tense, in which both languages tend to overtly mark their verbs for tense (11-12). Therefore, learned attention to past-tense markings can result in positive transfers for L2 users.

- (9) a. She **loves** music.
 b. I/you/they/we **love** music.
 (10) a. Ela **ama** música.
 She love \emptyset music
 'She loves music.'
 b. Eu **amo** música.
 I love.1stp.sing music
 'I love music.'
 c. Nós **amamos** música.
 We love.1stp.pl music

- 'We love music.'*
- d. Eles **amam** música.
They love.3rdp.pl music
'They love music.'
- (11) I/you/she/we/they **loved** the song
- (12) a. Eu **amei** a música.
I loved.1stp.sing.pst the song
'I loved the song.'
- b. Ele **amou** a música.
He love3rdp.pl.pst the song
'He loved the song.'
- c. Nós **amamos** a música.
We loved.1stp.pl.pst the song
'We loved the song.'
- d. Eles **amaram** a música.
They loved.3rdp.pl.pst the song
'They loved the song.'

In the next section, we describe the experiment conducted to test our two hypotheses regarding the influence of salience and learned attention to linguistic cues on L2 users' behavior towards English verbal inflectional morphemes.

3. Methodology and Data Analysis

In this section, we present the method adopted for this investigation and the obtained results. This study assumes the two following hypotheses based on the previously introduced bibliography: (i) L2 users will present greater acceptability for (ungrammatical) sentences without present tense marking than for sentences without past tense marking; (ii) L2 users will show greater acceptability for ungrammatical sentences containing regular verbs than for ungrammatical sentences containing irregular verbs (ending with the /ɔt/ sound). The first hypothesis considers the effects of salience, and the second considers the effects of learned attention.

3.1 Acceptability Judgment Task

The Acceptability Judgment Task is an offline method (Sá et al., 2022; Schütze & Sprouse, 2014), in which the participant faces a series of sentences and evaluates, with a Likert scale or similar metric, whether they are acceptable or not. In other words, participants analyze how natural each linguistic item sounds, not what they necessarily think of as grammatical structures. We opted for a 6-point scale, which requires the participant to position themselves by marking "1" for totally unacceptable sentences, "2" for very unacceptable sentences, "3" for unacceptable sentences, "4" for acceptable sentences, "5" for very acceptable sentences and "6" for completely acceptable sentences.

3.1.1 Participants

We analyzed data obtained from 19 highly proficient L2 users, ten women and nine men, with an average age of 25.57 years (minimum age: 19 years; maximum age: 30 years). All participants signed the Free and Informed Consent Form (TCLE). Proficiency was measured using a Vocabulary Levels Test (VLT). The VLT (Nation, 1990), created based on the Brown Corpus, is a test that measures, through the synonymic relationship of two or more words, the lexical knowledge that an individual has specifically about the English language (Souza & Soares-Silva, 2015). The VLT has 90 questions organized into five levels. Each level comprises 18 questions. To be considered highly proficient, participants were required to complete at least 12 points on all levels. Souza et al. (2015) validated the cut-off points of a timed version of the VLT among L2 users.

Figure 1 illustrates the distribution of ratings for the Acceptability Judgment Task for each participant. On the right side, grammatical sentences have the highest ratings. On the left are the ungrammatical sentences with a predominance of lower ratings. Each box in this figure illustrates a high-proficiency participant (the numbering represents the position at which the participant was cataloged). On the Y-axis, we have the acceptability ratings used by each participant and on the X-axis we have the target structures we analyzed: ungrammatical past sentences with uninflected regular verbs (UngPastReg), ungrammatical past sentences with uninflected irregular verbs with /ɔt/ (UngPastIrreg), ungrammatical present sentences with uninflected verbs (-s) (UngPres), grammatical past sentences with inflected regular verbs (-ed) (GrPast) and grammatical present sentences with inflected verbs (-s) (GrPres).

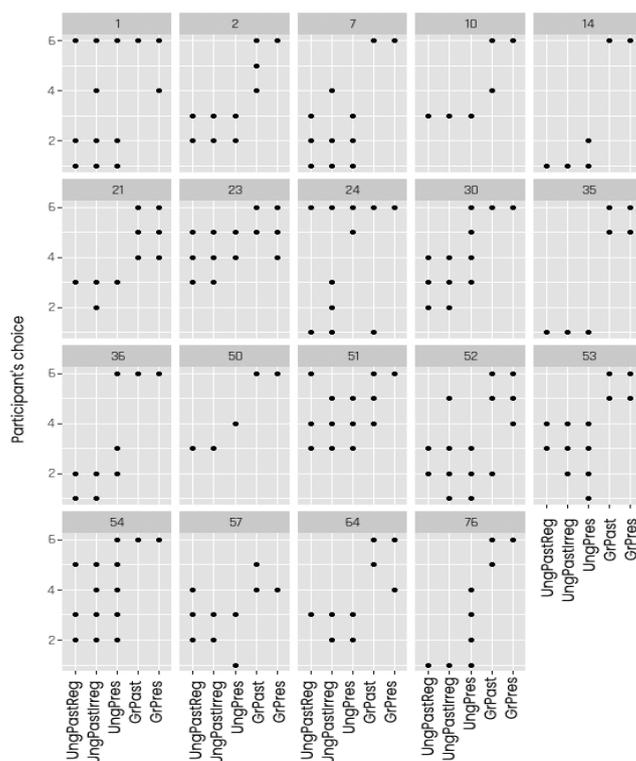


Figure 1. Distribution on the Likert Scale by Each Participant

3.1.2 Materials

One hundred and thirty sentences were elaborated for the application of the experiment, ten of them for the training phase (which was carried out in the same round as the official experiment), 80 distractors (to prevent participants from being aware of what was being tested), and eight for each of the five target (ungrammatical sentences) and control conditions (grammatical sentences): UngPastReg, UngPastIrreg, UngPres, GrPast, and GrPres.

Below, we list examples of sentence structures found in the experiment and provide a brief explanation of the choice of sentence control.

(i) Present tense (GrPres and UngPres)

(13) In the morning, Richie feeds his animals.

(14) *On Saturday, Claire study Greek music.

In (i), the verbs “to feed” and “to study” are regular verbs, therefore, when they are inflected in the third-person simple present, there is no significant structural change, the change is only in the inflectional morpheme. This is a non-corresponding structure/time marking in BP.

(ii) Regular past tense (GrPast and UngPastReg)

(15) Last week, Mel studied English pronouns.

(16) *Last night, Lilly paint her bathroom.

In (ii), the verbs “to study” and “to paint” are regular verbs, therefore, when they are inflected in the past, there is no significant structural change, the change is only in the inflectional tense morpheme, and this is a corresponding structure/time marking in BP.

(iii) Irregular past tense (UngPastIrreg)

(17) *The other night, Lexie bring red wine.

In (iii), the verb “to bring” is an irregular verb, so when it is inflected in the past, there is a more salient structural change in the whole verb (bring → brought).

All of these sentences have adverbial or prepositional phrases at the beginning to establish, in a certain way, a double marking of the past or present tense. The phrases had between 30 and 33 characters and between 6 and 8 words, and the variation was concentrated in the phrases that started the sentences. The corpus comprised 50% grammatical and 50% ungrammatical sentences.

3.1.3 Procedures

With the advent of COVID-19, a health crisis caused by the spread of the coronavirus (SARS-CoV-2), the application of the VLT, the first step of data collection for this research, and the execution of the Acceptability Judgment Task were carried out virtually. The entire experiment was conducted in monolingual mode (Grosjean, 2013). In other words, the experiment was conducted entirely in English; therefore, it did not encourage the use or activation of Portuguese. The VLT was applied using the ClassMarker platform and was programmed to be self-explanatory for the participant; that is, before starting the leveling test, which lasted 10 minutes, the participant had access to a succinct text with instructions and examples of how the marking between synonyms should be done.

Then, we collected the Acceptability Judgment Task data through the Cognition platform on the same data collection link. Before the participant received the target sentences as input, a training session with 10 questions was performed so that the participant became familiar with the platform and with the experimental model itself. Of these, five were grammatical, as in (18), and 5 ungrammatical, as in (19).

(18) Chris will take the test tomorrow.

(19) Brian must be careful with the highways.

4. Results

In this subsection, we present the results of our investigation. First, it is worth remembering that we seek to understand how participants perceive ungrammaticalities involving the past and present tense markings. Table 1 presents a compilation of the means and medians for the five conditions tested in the Acceptability Judgment Task. It is noticeable that there is low acceptability for ungrammatical conditions and high acceptability for grammatical conditions. Furthermore, although the median for the three ungrammatical conditions is the same, the average of UngPres (3.19) suggests a difference between this condition and the others (2.60 - 2.66).

Table 1. Mean and Median in the Acceptability Judgment Task

Condition	Mean	Median
UngPastReg	2.60	3
UngPastIrreg	2.66	3
UngPres	3.19	3
GrPast	5.68	6
GrPres	5.76	6

Figure 2 illustrates the distribution of the ratings assigned by L2 users to each condition in the Acceptability Judgment Task. Participants used mostly the number 3 (unacceptable) to evaluate the ungrammatical sentences and the number 6 (completely acceptable) for grammatical sentences. It is important to note that the acceptability judgment ratings of the studied inflectional morphemes vary across the entire scale, particularly in the ungrammatical conditions, which suggests differences in perception among (and/or within) participants in relation to these sentences. The behavior towards grammatical sentences was considerably steadier.

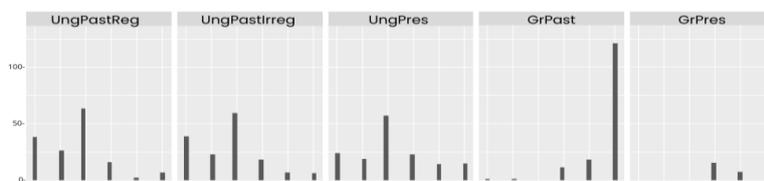


Figure 2. Quantity and Choice in the Acceptability Judgment Task

In Figure 3, we compare how the high-proficiency group performed with regard to each condition. The color continuum illustrates the distribution of acceptability ratings with the 6-point Likert scale ranging from “totally unacceptable” (darkest color) to “completely acceptable” (lightest color). There was a clear prevalence of higher ratings for grammatical sentences and lower ratings for ungrammatical sentences. Most importantly, we can see that the differences between the ungrammatical sentences seem to be only partially in the expected direction: as we hypothesized, ungrammatical present sentences (UngPres) received higher acceptability ratings than the ungrammatical past sentences conditions (UngPastReg and UngPastIrreg). However, different from what we expected, ungrammatical past sentences with irregular verbs (UngPastIrreg) received slightly higher acceptability ratings than ungrammatical past sentences with regular verbs (UngPastReg). Next, we analyzed if these differences were statistically reliable.

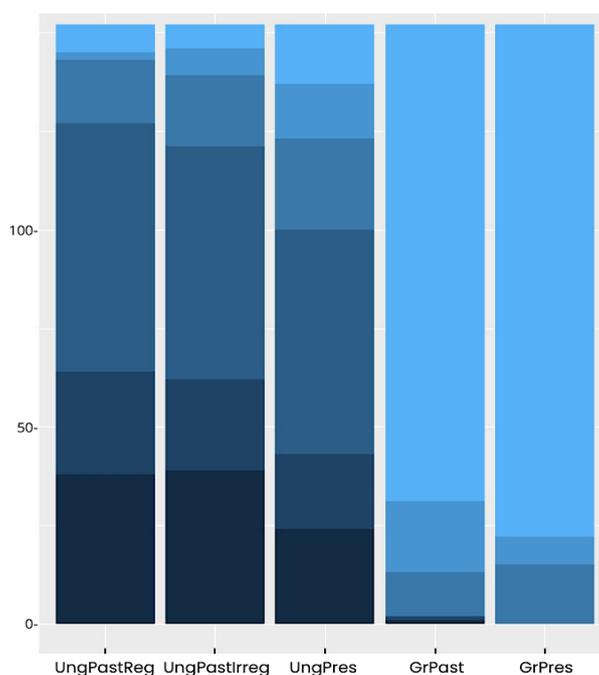


Figure 3. Conditions in the Acceptability Judgment Task

We used the RStudio platform (R-4.3.0) to perform the statistical analysis. We fitted a Mixed Linear Model using the lmer package (Bates et al., 2014) with acceptability judgments rates (six-point Likert scale) as the response variable, sentence condition as the fixed effect, and random intercepts for participants and items. The contrast of the fixed effect levels was performed using dummy coding, with the ungrammatical past sentences with uninflected regular verbs (UngPastReg) as the reference level. The UngPastReg sentences were significantly different from the control items (GrPres and GrPast) and the ungrammatical present condition (UngPres). However, there was not a significant difference between the two ungrammatical past conditions (UngPastReg and UngPastIrreg). The best model translates to `clmm(model <- lmer(Choice ~ Condition + (1 | Participant) + (1 | Sentence), data = data))` and its coefficients are presented below in Table 2.

Table 2. Coefficients for the analysis of the Acceptability Judgment Task

<i>Predictors</i>	<i>Estimates</i>	Rating	
		<i>CI</i>	<i>p</i>
(Intercept)	2.60	2.30 - 2.90	<0.001
UngPastIrreg	0.07	-0.16 - 0.29	0.562
UngPres	0.59	0.37 - 0.81	<0.001
GrPast	3.08	2.86 - 3.30	<0.001
GrPres	3.16	2.94 - 3.38	<0.001
Random Effects			
σ^2	0.98		
τ_{00} Sentence	0.00		
τ_{00} Participant	0.32		
N Participant	19		
N Sentence	40		
Observations	760		
Marginal R^2 / Conditional R^2	0.678 / NA		

5. Discussion

The application of the Acceptability Judgment Task sought to verify whether salience and learned attention influenced the perception of ungrammaticalities involving inflectional morphology in L2. As a hypothesis for this question, we estimated that (i) L2 users would show greater acceptability for ungrammatical sentences containing regular verbs than for ungrammatical sentences containing irregular verbs (ending with the /ɔt/ sound); (ii) L2 users would present greater acceptability for ungrammatical sentences without present tense marking than for sentences without past tense marking. As stated earlier, the first hypothesis considers the effects of salience and the second considers the effects of learned attention.

Regarding the first hypothesis, the results indicated that there was no salience effect; that is, regular and irregular verbs were perceived similarly, and the salience of the verbal inflection process did not seem to interfere with the perception of ungrammaticalities. We can question whether there is, in fact, an influence of salience at the lexical level, that is, beyond the visualization of salience effects through redundancy (redundancy means that in the same sentence, there is an indication of tense twice, with a prepositional or adverbial phrase, and a verb with explicit temporal marking). In other words, do saliency effects occur outside the context of double temporal marking, specifically in the verbal nucleus? This important issue must be addressed in future studies involving salience.

Considering that there is a salience effect, we can interpret the lack of an effect on our results in at least two different ways. One possible explanation is that participants' behavior reflects their attention to past

markings, which could mitigate possible salience effects. Heightened attention to the past tense in English can be attributed to an individual's experience with the past tense marking in BP. This common paradigm allows for the successful transfer of skills from L1 to L2, resulting in the allocation of sufficient attentional resources to past-tense marking, regardless of whether it is regular or irregular. An alternative interpretation is that the salience effects were not sufficiently large in the reading and writing modalities, as regular verbs also have an extra vowel (e) in these modalities. A replication of the study using the oral modality could resolve this issue.

The investigation of our second hypothesis, based on cross-linguistic effects on learned attention, indicates that L2 users are more attentive to the absence of the (-ed) morpheme than to the absence of the (-s) morpheme. This is evidenced by the fact that L2 users assigned higher acceptability ratings to sentences that were ungrammatical because they lacked the (-s) morpheme. We understand that this result corroborates the effect of blocking during the process of L2 acquisition.

L2 users show a higher tolerance of ungrammatical sentences that lack the (-s) morpheme than those lacking the (-ed) morpheme. This suggests that the L2 users' attention to this type of marking was biased by their previous experience with BP. In this language, the third-person singular present tense is marked by a null morpheme (-∅), whereas other subject pronouns are marked with overt morphemes. However, in English, the (-s) morpheme is obligatory and exclusive for verbs that agree with third-person singular inflected subjects, whereas subject pronouns other than the third-person singular are marked by the null morpheme.

Conversely, the overt marking of the regular past is an inflectional paradigm similar in BP and English because past sentences are marked in both languages. The approximation of the inflectional paradigms of the BP-English pair may have contributed to the absence of (-ed) being more easily perceived (in contrast to the lower ungrammatical perception of (-s)); that is, the similarity between the marking of the past in L1 and L2 may have been an influential factor for the greater perception of the past during the exercise of reading sentences in English in the Acceptability Judgment Task.

These linguistic differences between BP and English account for the distribution patterns of the acceptability ratings observed in our study. Specifically, the higher tolerance of ungrammatical sentences lacking the (-s) morpheme suggests that L2 users' attention to this morpheme was blocked or hindered by the bias created by their experience with BP. This phenomenon aligns with the Unified Competition Model (MacWhinney, 2012), which posits that cross-linguistic influence can shape the selective attention of L2 users towards certain linguistic features. Overall, our findings support the idea that linguistic transfer of learned attention plays a significant role in L2 learning and performance.

To conclude this section, it is crucial to consider how a lack of awareness of grammatical errors related to English inflectional morphology can have educational implications in teaching English as L2. Despite the emphasis on these linguistic units in formal education at various levels, they remain unnoticed in some contexts. Thus, it is important to consider how formal education can help participants circumvent this L1-tuned expectation and selective attention, which are at odds with the behavior expected in the L2.

Explicit instruction may help participants raise their awareness of the differences between the two languages and, in turn, tune their attention to linguistic cues in L2. According to Schmidt (2001), people learn more from things they pay attention to; hence, it is important to guide learners to the aspects on which they should focus in the L2. Ellis (2018) recommends an instructional approach called Focus on Form, which emphasizes form to address this issue, that is, literally drawing learners' attention to forms that may not be easy to pay attention to. For example, the author mentions the importance of metalinguistics as a factor that holds the learner's attention to forms so that they are studied explicitly and consciously. In addition to metalinguistics, Ellis (2018), anchored in Doughty and Williams (1998), indicates the possibility of focusing on form following a growing scheme - ranging from less to more explicit: "input flood, when texts are saturated with L2 models; input elaboration; input enhancement, when learner attention is drawn to the target through visual highlighting or auditory stress; corrective feedback on error, such as recasting; and input processing, when learners are given practice in using L2 rather than L1 cues" (Ellis, 2018, p. 32).

Precise and accurate grammatical usage is important in more formal situations, such as academic writing or standardized tests. While an individual familiar with the morphological patterns present in BP may have greater intuition for correct past tense usage in English, it is still necessary to have explicit knowledge of English's inflectional morphology to use other suffixes correctly, consistently, and reliably in all situations. It is worth mentioning that it is important to work with clear and specific knowledge about inflectional morphemes to differentiate the commonalities and differences between linguistic pairs. This certified knowledge can also assist L2 users in developing attention allocation strategies to counteract the effects of L1 experiences on the L2. By having a deep understanding of inflectional morphemes, learners can effectively grasp the nuances of the meaning and usage of words in both languages, thereby improving their language proficiency and accuracy.

6. Conclusion

This study delves into the importance of comprehending the challenges of acquiring, perceiving, and processing inflectional morphologies. Despite the ubiquity of such structures in English, L2 users still encounter difficulties recognizing grammatical errors in certain sentences. The complexity lies especially in the third-person singular of the present tense, where the suffix (-s) must be appended to the verb. However, learners sometimes fail to perceive its absence in obligatory contexts.

To shed light on the possible reasons behind L2 users' difficulties in acquiring and processing English inflectional morphology, we developed two hypotheses: whether salience influences the perception of uninflected past regular and irregular verbs, and whether learned attention influences the way uninflected present and past regular verbs are processed. To test these hypotheses, we designed an experiment that involved two tasks: a lexical-leveling task that utilized the VLT and an Acceptability Judgment Task. The objective of the lexical-leveling task was to establish participants' proficiency levels in English. The Acceptability Judgment Task required participants to evaluate the correctness of some sentences.

As indicated in the introduction to this article, it was not clear what specifically caused the difficulty in processing inflectional morphology, and the results of this study corroborate the Unified Model of Competition (MacWhinney, 2012) indicating that the processing of morphemes can be facilitated or hindered according to learned attention, which is a learner-related factor. More specifically, our study yielded findings that shed light on L2 users' behaviors and perceptions of English morphemes, specifically the (-s) and (-ed) suffixes. The results showed that participants had a greater tendency to notice the absence of the (-ed) suffix than the (-s) suffix, suggesting that they may have difficulties detecting the lack of the latter. However, the comparison between regular and irregular past tense verb conjugations did not show any significant difference in the participants' ability to discern incorrect usage, which was also interpreted as an effect of learned attention to linguistic cues resulting from their experience with L1.

In conclusion, we emphasize the importance of exploring further research directions in this field. While we worked with sentences in redundant contexts, it is crucial to extend this investigation to contexts in which redundancy is absent. This study provides a comprehensive understanding of how salience and learned attention effects operate in certain linguistic environments, but our study centered on participants' reading ability, which may not fully capture the intricacy of salience effects in other language domains such as writing and oral production. Therefore, it is necessary to conduct further studies examining these effects across different language modalities.

Furthermore, it is pivotal to identify effective pedagogical strategies that address the difficulties faced by language learners in acquiring nonequivalent morphemes such as (-s) in the BP-English language relationship. Finally, we suggest a study that delves deeper into teaching morphological forms, in general, to facilitate the broad development of L2 users in different contexts where the usage of these forms may be necessary and/or advantageous. Further research in these areas is essential for promoting effective language teaching and learning.

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