Wholesale vs. Property-by-Property Transfer in the L3 Acquisition of Portuguese

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1. Introduction

There have been various theories proposed about how adult speakers acquire a third language. This paper aims to test current theories by examining adult L3 learners of Brazilian Portuguese (BP) whose first two languages are English and Spanish. Specifically, we will be examining two linguistic properties – Differential Object Marking (DOM) and VP ellipsis. BP is assumed to be typologically closer to Spanish than to English. However, BP and English behave similarly with respect to these properties, while Spanish does not. If L3 transfer is wholesale, we expect properties from Spanish to negatively transfer to BP, as predicted by the Typological Primacy Model (TPM; Rothman, 2011). On the other hand, if L3 transfer occurs on a property-by-property basis and according to structural similarities within specific domains and structures, we expect BP L3 speakers to not solely rely on Spanish as a source of transfer, as predicted by the Linguistic Proximity Model (LPM, Mykhaylyk et al., 2015; Westergaard et al., 2017; Westergaard, 2021). Moreover, while the TPM predicts that English L1 – BP L2 speakers will outperform those with Spanish in their background, the LPM does not, since the linguistic features we selected, viz. DOM and VP ellipsis are shared between English and BP.

This study examined two target structures: Differential Object Marking (grammatical in Spanish only) and Auxiliary-VP Ellipsis (ungrammatical in Spanish only), as well as two control structures: Superfluous prepositions (ungrammatical in all three languages) and Modal-VP Ellipsis (grammatical in all three languages). Our participants consisted of BP learners, and were divided into the following categories: Heritage speakers of Spanish, L2 speakers of

Spanish, and those without any knowledge of Spanish. We separated the Spanish-speaking group into two to test the effects of age and context of acquisition in L3 learning outcomes.

Our results are most in line with the LPM. In both Spanish-speaking groups, four out of six pre-planned comparisons went in the directions that were expected under this model – they rejected DOM as much as Superfluous Ps in BP, they accepted Aux-VP ellipsis as much as Modal-VP ellipsis, and in both cases, they did so to the same extent as the group with no Spanish in their background. However, participants behaved differently from English in both test conditions, suggesting that structural transfer is not the sole factor that plays a role in the beginner stages of L3 acquisition.

This paper is organized as follows: We will first discuss prior theories proposed in L3A, followed by an introduction to the properties that we examine (i.e., Differential Object Marking, Superfluous Ps, Auxiliary-VP Ellipsis, and Modal-VP Ellipsis). Then we provide an introduction to our study, followed by our participants, materials, and procedures. In our final sections, we discuss the results, their implications, and concluding remarks.

1.1. Theories of L3 Acquisition

1.1.1. L1 Factor Hypothesis

One existing model is the L1 Factor Hypothesis, which predicts that when speakers learn a third language, they transfer properties from their L1 to facilitate their acquisition. This hypothesis was supported by Jin (2009) as well as Ranong and Leung (2009) when examining how L3 learners acquire null objects. Jin (2009) analyzed Grammaticality Judgments of null objects in main and embedded clauses among L3 Norwegian learners. Their native L1 was Chinese, while their L2 was English. Among these three languages, Chinese was the only one that permits null objects. Evidence of Chinese L1 transfer was argued for because participants rejected a higher amount of English null objects (72%) than Norwegian ones (57%). The rejection rates per sentence were comparable across the proficiency groups of Norwegian,

which were L3 Beginner, L3 Lower-Intermediate, and L3 Upper-Intermediate (Jin, 2009: 155). As a result, the authors argued that influence from the L1, which permits null objects, is privileged (Jin, 2009).

1.1.2. L2 Status Factor Model

The L2 Status Factor Model predicts that learners instead transfer properties from their L2. Bardel and Falk (2007) provided evidence for this theory by examining five L3 learners of Swedish (a V2 language) and their placement of negation. Three of the learners acquired a non-V2 language, English, as an L2 and had a V2 language, Dutch, as their L1. Meanwhile, the remaining two participants learned a V2 language, German or Dutch, as an L2, and had a non-V2 language, English or Hungarian, as an L1. Regarding negation placement, Swedish behaves like German and Dutch, and unlike English. Therefore, for the former group, the L1 shares this feature with the L3, and in the latter group, the L2 shares this feature with the L3.

The L2 Transfer Hypothesis predicts that those that acquired Dutch or German as an L2 will place negation after the verb, like in Swedish. Meanwhile, those who have acquired English as their L2 are predicted to differentiate between thematic and non-thematic verbs while deciding where to place negation. This hypothesis was supported by the data – those who acquired English as an L2 preferred placing negation before thematic verbs, but after non-thematic verbs. However, those who learned German or Dutch as the L2 produced correct structures when placing negation in Swedish (Bardel and Falk, 2007).

1.1.3. Cumulative Enhancement Model

The Cumulative Enhancement Model (CEM) argues that transfer from either language can occur, but that only positive transfer is possible. Evidence was found by Flynn et al. (2004), who examined how L1 Kazakh – L2 Russian – L3 English speakers produced restrictive relative clauses in comparison to a group of L1 Japanese – L2 English speakers and a group of L1 Spanish – L2 English speakers. English, Spanish, and Russian are head-initial languages,

whose relative clauses merge on the right of the head noun. Meanwhile, Kazakh and Japanese are head-final, and relative clauses merge on the left of the head noun. They found that the L1 Kazakh – L2 Russian – L3 English speakers were more similar to the L1 Spanish – L2 English group, and not the L1 Japanese – L2 English speakers. To explain this, Flynn et al., (2004) argued that acquiring a language that is head-initial facilitated their performance in comparison to L1 Japanese - L2 English speakers, who had not acquired a head-initial language before the L2. As a result, the success of the first two groups delineates that either language that was acquired before the L3 can facilitate the acquisition of its grammar (Flynn et al., 2004). However, Puig-Mayenco & Rothman (2018) found that its "non-facilitative claim" was disputed in 92.5% of the studies examined in their meta analysis (Puig-Mayenco & Rothman, 2018: 51).

1.1.4. The Typological Primacy Model

This model argues that speakers transfer knowledge from the language that is most typologically similar when learning an L3, regardless of whether it is their first or second language (Rothman, 2010). Rothman (2010) found evidence for the TPM when comparing the structures of polar questions in L3 BP. In English, these questions have an SVO word order, where the lexical verb remains in situ. In Spanish, however, the subject and verb invert, causing an VSO order in these questions. This phenomenon is common in Romance languages, but not for BP, which also maintains an SVO order in interrogatives (Rothman, 2010: 250). Both English and BP have the same superficial word order in interrogatives.

The study found that participants relied on Spanish word order more than English. However, it is possible that polar questions were not an appropriate feature to test this model with because English and BP only have the same structure for polar questions on the surface level. Both in English and BP, the subject precedes the lexical verb in interrogatives. However, English, like Spanish, has T-to-C movement, so inflected forms (auxiliaries, modals, and the

do-operator) precede the subject. BP does not feature T-to-C movement. Therefore, it is difficult to draw conclusions about the source of transfer. In this study, we address this potential confound by testing structures that are shared between English and BP, both superficially and structurally.

Another study that is in line with the predictions of the TPM is Montrul (2011). She investigated the degree of L1 versus L2 transfer in L3 adult acquisition by researching object expression and clitic positioning. L1 English - L2 Spanish speakers learning BP as an L3 were compared to L1 Spanish - L2 English learners. Both spoken and formal BP were examined (Montrul, 2011: 31). While examining variables related to objects — namely clitic doubling, DOM, and clitic climbing — it was found for both groups that if a mistake was made, it related to a property of Spanish. In addition, each group predominantly placed clitics postverbally, attaching onto an infinitival verb in both written and spoken contexts. This is an option available in Spanish, but not BP.

Regarding DOM, 15 L1 Spanish participants produced errors in BP at a rate of 11.7% on average, while eight L1 English participants did this at an average rate of 9.9% (Montrul, 2011: 39). This was not interpreted to be a significant difference (Montrul, 2011: 52). While these errors are less than 12% and 10%, influence from Spanish cannot be excluded; since both groups had Spanish in their linguistic repertoire, these mistakes could still be due to Spanish influence (Montrul, 2011: 39). The authors described the errors with the DOM as "Spanish-based," implying that these mistakes involved extending the DOM property of Spanish to BP, even though BP does not allow DOM (Montrul, 2011: 39). However, they only assessed DOM knowledge through a production-based task and not a receptive task, which may be better able to assess the grammatical competence of L3 speakers.

Montrul (2011) also acknowledges that the results of this study are limited given that only properties that are similar between Spanish and BP are examined, which may bias the

results towards influence from Spanish (Montrul, 2011: 33). Moreover, the results may also be compatible with the Linguistic Proximity Model (Westergaard, 2023), which we will further discuss, and predicts that clitics would be transferred from Spanish, since English does not have them. Therefore, it is necessary to conduct a study that also incorporates an additional property that BP and English share, but Spanish lacks.

Puig-Mayenco & Rothman (2018) provide further evidence for the TPM. The goal of this paper was to investigate prior studies to assess the role of prior languages on transfer for adults learning a third or further language. Overall, they researched 71 studies from 2004 to 2017. They first coded their data in accordance with five "macro-variables" to identify the source and type of transfer: L1 transfer, L2 transfer, Typological transfer (as Rothman has previously defined), hybrid transfer (transfer from the L1 and L2), and non-facilitative transfer. Studies were allowed to receive multiple "Yes (+)" or "No (-)" marks. The authors also coded for an additional five factors regarding the methodology of each study to see if there was an association between methods and the type of transfer. These five additional factors were L3 proficiency, the languages in the study, methodology (production or comprehension tasks), whether mirror-image groups[1] were tested, and how related each L3 was to the prior two languages. Going variable by variable, it was found that 14.1% of the studies only indicated L1 transfer. Meanwhile, 28.2% of the studies delineated transfer solely from the L2. 60.1% of them assessed transfer as a result of typological relatedness. Lastly, 92.5% of these studies provided evidence for non-facilitative transfer.

To interpret these results, the authors first discussed the methodologies utilized. They found a significant correlation between either comprehension or production methods with both L2 only transfer and Hybrid transfer. The authors acknowledge the L2 might be more readily

[1] Mirror image groups can be seen in groups whereby the languages of the participants mirror each other. For example, testing L1 French - L2 English speakers in comparison to L1 English - L2 French speakers.

accessed during production tasks in the L3 because since it is not the native language, it could have a different mental representation than the L1. In addition, it is likely that the L3 was acquired more similarly to the L2 than the L1, making it easier to call upon. As for the hybrid modality, the authors posit that their results may be explained by the fact that comprehension may be beneficial when parsing L3 sentences, while production may strengthen "other questions within L3 development and ultimate attainment" (Puig-Mayenco & Rothman, 2018: 49). However, this does not account for other studies.

Moving on to mirror-image groups, there was a correlation found with L1 transfer, L2 transfer and Typological transfer. For the former two, studies concerning these macro-variables do not utilize mirror-image groups in their analyses. Meanwhile, studies that found evidence for Typological transfer, tended to incorporate these groups. The authors argue that studies concerning L1 and L2 transfer could benefit from using mirror-image groups because it would be harder to distinguish order of acquisition from other variables that may affect L3 acquisition. Furthermore, 40% of studies that support L1 transfer can also be explained by Typological transfer. Overall, only six of the 71 studies that show L1 transfer that are not accounted for by Typological transfer, and are considered "relative noise" by the authors, who state the "otherwise clearer signal" would be typological transfer (Puig-Mayenco & Rothman, 2018: 49). A similar trend applies to L2 transfer, whereby 16 of 20 studies explained by it can also be explained by Typological transfer. Thus overall, an overwhelming amount of support was found in favor of the Typological transfer macro-variable.

1.1.5. The Linguistic Proximity Model

The *Linguistic Proximity Model* (LPM; Mykhaylyk et al., 2015; Westergaard et al., 2017; Westergaard, 2021) argues that learners do not transfer from just one language. Instead, transfer depends on individual properties of the structure of the language. Transfer thus happens property-by-property, and can be both facilitative and non-facilitative, either helping or hurting

the L3A process. Facilitative transfer involves learners making accurate predictions by utilizing the patterns permitted in their previous languages, while non-facilitative transfer sees learners mistaking an L3 property to be shared by one or both of the previous languages. Such misanalysis may be attributed to either a limited input of the L3, or misinterpreting what has already been learned.

Properties are acquired due to cross-linguistic influence when one property in the new language indicates "abstract structural similarity" to similar properties in one of the prior languages (Westergaard et al., 2017: 670). In other words, superficial similarities, such as the word order differences explored by Rothman (2010), are also incorporated as possible properties to transfer from either language. Westergaard (2017) found evidence for this argument by comparing L1 Norwegian speakers and L1 Russian speakers to bilingual 2L1 Norwegian-Russian speakers, all acquiring English as an L2 or L3. Among these three languages, Norwegian and English are more typologically similar since they are both Germanic, while Russian is less related to English in terms of lexical and morphosyntactic properties. Westergaard (2017) examined properties that have to do with the V2 word order in Norwegian and subject-auxiliary inversion in English. English, though typologically more distant from Russian, is more akin to Russian by not having V2 word order and instead using the Adv-V order. This is opposed to Norwegian, which has V2 and utilizes V-Adv word order. However, English demonstrates more similarity to Norwegian by inverting the subject and finite verb while forming questions (albeit only with auxiliaries, modals, and the *do* operator, since English lacks V-to-T), unlike Russian.

Through a grammaticality judgment task, they found that the simultaneous bilingual speakers predominantly transferred to the L3 English from Russian, even though it is typologically further from English than Norwegian. In Adv-V word order acquisition, both the simultaneous bilinguals and the L1 Russian speakers scored higher than the L1 Norwegian

group. In a sentence such as, “Emma often eats sweets,” which was compared to *“Emma eats often sweets,” L1 Russian speakers were 83% accurate, the bilingual group was 65% accurate, and the L1 Norwegian group was 55% accurate. As for the second condition, involving the placement of auxiliary verbs in relation to subjects, no noticeable differences were found across the groups. The authors theorize that this is likely because the learners have already acquired this property in Russian.

For subject-auxiliary inversion, the 2L1 group obtained an average of 80% accuracy, and the L1 Norwegian group 81%. They outperformed L1 Russian speakers (72%) in this aspect, which was anticipated, but not as statistically significant. The authors credited this to the high proficiency of the L1 Russian group in English. The results partially align with the CEM because Russian provides a facilitating effect in the acquisition of English Adv-V. However, they do not fully align with the CEM because Norwegian provided a non-facilitative effect on English. Such a non-facilitative effect occurred because the L1 Norwegian group transferred verb movement (V2) from Norwegian, causing them to assess ungrammatical utterances as acceptable, and vice versa, more often than the other two groups. In addition, the group of simultaneous 2L1 bilinguals also indicates the presence of non-facilitative transfer from Norwegian during the early stages of L3A, given that the L1 Russian group outperforms them by an almost 20% difference in accuracy.

Bardel (2019) used these results to conclude that superficial structural similarities also hold weight in the L3A process. Even though structural typology plays a role too, this theory distinguishes itself from the TPM by arguing that it is not the sole indicator, given that transfer from the typologically more distant language, Russian, occurred too.

1.1.6. The Scalpel Model

The Scalpel Model, Slabakova (2017), also argues that the grammars of both the L1 and L2 can be called upon in L3 acquisition, but that speakers can single out applicable features

from each language to transfer to the L3, as opposed to applying wholesale transfer from one language. This model also theorizes that transfer can both help and hurt the process of L3 acquisition. Crucially, according to this model, dominance of one language over the other may be an influential factor in 3LA. Slabakova (2017) uses Fallah, Jabbari, and Fazilatfar (2016) as an example to support this. This study examined three groups of teenage males. In two groups, Mazandarani was the L1, with them acquiring Persian as the L2 to an advanced degree. In one of these two groups, Mazandarani was used over 90% of the time at home and in social contexts. Slabakova (2017) called this group the Mazandarani users. The other group, however, used Persian over 90% of the time across all contexts, and was thus called the Persian users. That said, both groups are bilingual in both languages, they merely differ by the frequency of usage by the speakers. The third and final group, the control group, had a linguistic profile of L1 Persian and L2 Mazandarani, and was dominant in Persian in social, academic, and domestic settings. Unlike the other two groups, members of this group acquired Persian as their first language, and Mazandarani as their second.

Both English (the L3) and Mazandarani place possessives before nouns, but Persian places them afterwards. Through an untimed grammaticality judgment task, a rearrangement task, and an oral task, it was found that the Mazandarani-dominant group was 80% accurate about the placement of English possessives, while the Persian-dominant experimental group was 15% accurate. Slabakova (2017) thus uses this as reason to argue against wholesale typology-based transfer because in this study, Mazandarani and Persian are typologically equidistant from English, given that they are both descendents of Western Iranian in the Indo-Iranian language family. Rather, the difference is due to the amount of time each language is used. The group that uses Mazandarani, a language that is structurally more similar to English, outscored those that used Persian more often by 65%. Therefore, Slabakova (2017) argues that using typology alone may not be a sufficient explanation for 3LA. Slabakova (2017) also uses

this as evidence to argue against exclusively facilitative transfer, likely because if transfer had been solely facilitative, the Mazandarani-dominant group would have shown complete accuracy in possessive placement.

In addition to what has already been discussed by Slabakova (2017), Bardel and Falk (2007) examined dominance of one language during the initial stages of L3A in a classroom setting. As aforementioned, it was found that the L2, the more dominant language, transferred more than the L1 in sentence negation. Similar evidence was also found in Bardel and Falk (2011) while examining how object pronouns were placed in L3 German. The only difference was that the former study examined beginners in an early lesson, while the second examined those who were in intermediate classes. Nonetheless, both studies examined learners before they became advanced enough in their L3 to abandon potential transfer from their L1 or L2.

1.1.7. Summary

To summarize this section, prior studies have proposed various theories for 3LA. One is the L1 Factor Hypothesis, Jin (2009) and Ranong & Leung (2009), which theorizes that speakers learn a third language by using the properties of their L1. However, the L2 Status Factor Model, Bardel and Falk (2007), asserts that 3LA is facilitated by transferring properties from the L2. Meanwhile, the CEM, Flynn et al. (2004), believes that either language is transferable in this acquisition process, but only positive transfer can occur. Differently, the TPM, Rothman (2010), argues that whichever language is more typologically similar will be transferred, in a wholesale fashion, to assist L3A. This is independent of the order in which it was learned. The LPM (Mykhaylyk et al., 2015; Westergaard et al., 2017; Westergaard, 2021) states that transfer is not confined to one sole language; it relies on individual properties, even superficial ones, within the structure of the languages in question. Such property-by-property transfer can both help or harm accuracy in L3A, and goes against wholesale transfer. Lastly, the Scalpel Model, Slabakova (2017), also predicts transfer is possible from both prior

languages. This model also defies wholesale transfer, and believes that transfer can be both facilitative and non-facilitative. This model distinguishes itself from the LPM in that dominance in one language may also be an influential variable in 3LA.

1.2. Background on Properties Examined

We will examine two linguistic properties whose acceptability varies between English and BP on the one hand, and Spanish on the other. These include Differential Object Marking (DOM) and VP Ellipsis.

1.2.1. Differential Object Marking and Superfluous Prepositions

In Spanish, if direct objects are [+animate] and [+specific], they must be preceded by the marker *a*, which is homophonous with the dative marker and preposition *a* 'to'.

(1) a. *Busco* *a* *una* *secretaria.*
search-PRS.1SG to a secretary
'I am looking for a (specific) secretary.'

b. *Busco* *una* *secretaria.*
search-PRS.1SG a secretary
'I am looking for a (non-specific) secretary.'

c. *Busco* *(*a)* *una* *llave.*
search-PRS.1SG (to) a key
'I am looking for a key.'

This phenomenon is called Differential Object Marking, and is a property that both BP and English lack (Guijarro-Fuentes, 2012: 703). It has widely been studied among L1 English — L2 Spanish speakers, and the complexity of its features has proven difficult for them to acquire. In a study conducted by Guijarro-Fuentes (2012), 49 L1 English — L2 Spanish speakers participated alongside sixteen L1 Spanish speakers. Among the L2 Spanish speakers, there were three groups: an advanced group with eight years of learning Spanish, a high

intermediate group with five, and a low intermediate group with one. All participants learned Spanish in a classroom setting, with a textbook, and had not been immersed in a Spanish-speaking environment (Guijarro-Fuentes, 2012: 707). They all partook in a Cloze Task as well as an Acceptability Judgment Task. The former asked participants to fill in a gap in sentences, but were not explicitly asked to consider DOM. In the latter, participants read a story that gave context to experimental sentences that followed, some of which had to do with incorporating the DOM *a*. They then had to judge 42 sentences on a scale from one to four.

Overall, they found that L2 speakers learned to acquire the distribution of DOM gradually, depending on the featural complexity. These features include animacy, specificity, agentivity, and aspectual class of the predicate (Guijarro-Fuentes, 2012: 704). The more human and specific an object was, the more likely *a* would be used. Thus, proper names and personal pronouns were marked with it more often than other nouns, whether they be definite, specific and indefinite, or non-specific and indefinite. The results showed that all types of L2 learners of Spanish were more accurate at incorporating the personal *a* when there was only one feature involved, animacy, but more variability if more than one feature was incorporated. The author concluded that how these existing features of their L1 English are bundled inhibit the acquisition of DOM in the Spanish L2 (Guijarro-Fuentes, 2012: 714).

As previously noted, in English and BP, direct objects are not preceded by the indirect object marker or a preposition, even if they are specific and animate objects, as seen in the examples below:

(2) a. **I see **to** Maria.*

b. **Paul pets **to** his cats.*

(3) a. **A* *Inés* *ama* ***a***

DEF.DET.FSG Inés love-IND.PRS.3SG PREP

o *João*.

DEF.DET.MSG João

'The Inés loves to João.'

Intended meaning: 'Inés loves João.'

b. **A avó beija **a***

DEF.DET.FSG grandma-FSG kiss-IND.PRS.3SG PREP

o seu neto.

DEF.DET.MSG POSS.M.3SG grandson-MSG

'The grandma kisses to her grandson.'

Intended meaning: The grandma kisses her grandson.

Nevertheless, all three languages have verbs that select for a PP complement, such as the examples below:

(4) a. EN: *I go to school.*

b. SP: *Me siento en la silla.*

1SG= sit-IND.PRS.1SG in DEF.DET.FSG chair

'I sit on the chair.'

c. PORT: *Danço com os meus*

dance.IND.PRS.1SG with DEF.DET.MPL POSS.M.1PL

amigos.

friend-MPL

'I dance with my friends.'

Although Spanish incorporates the preposition 'a' in DOM, all three languages reject prepositions when they precede a [-animate, -specific] direct object DP theme/patient. This can be seen in the following sentences that are included in this study:

(5) EN: **The shopkeeper closed **to** some doors at night.*

(6) SP: **La turista visitó **a***

DEF.DET.FSG tourist-FSG visit-PST.PRET.3SG PREP

unas *catedrales* *antiguas.*

some-INDF.FPL cathedrals old

'The tourist visited **to** some old cathedrals.'

(7) PORT: **O* *professor* *acendeu* ***a***

DEF.DET.MSG professor turn on-PST.PRET.3SG PREP

umas *luzes* *na* *aula.*

some-INDF.F.PL lights-FPL PREP-DEF.DET.FSG classroom.

'The professor turned on **to** some lights in the classroom.'

Thus, this condition will serve as a control – all speakers should reject these sentences in each language. Such prepositions in this control condition will henceforth be referred to as Superfluous Ps.

1.2.2. VP Ellipsis

The second experimental construction that we will be examining is VP Ellipsis. As seen in (8), Spanish does not allow for VP-ellipsis licensed by auxiliary verbs (Dagnac, 2008: 157). However, both BP and English do. In English, elliding the VP while leaving the auxiliary verb behind is acceptable in a sentence such as (9):

(8) **Tom* *ha* *visto* *a* *Lee*

Tom have-AUX.PRS.3SG see-PST.PTCP PREP Lee

pero *María* *no* *ha__.*

PREP Maria NEG have-AUX.PRS.3SG

'Tom has seen Lee but Maria has not.'

(9) *Mary has traveled the world, but Tina has not __.*

In BP, however, such a phenomenon is allowed to occur (Wetzels, 2020: 308):

(10) *Nós* *temos* *posto* *o* *carro*

We have-PRS.1PL put-PST.PTCP DEF.DET.MSG car.MSG
na *garagem,* *embora* *ele*
PREP-DEF.DET.FSG garage-FSG although he
ainda *não* *tenha__*
yet NEG have-PRS.AUX.SBJV__
'We have put the car in the garage, although he has not, yet.'

(11) *O* *João* *tem* *comido*
DEF.DET.MSG João have-PRS3 eaten-PST.PTCP
demasiado *e* *a* *Ana* *disse*
too much and DEF.DET.FSG Ana say-IND.PST.3SG
que *(ela)* *também* *tinha__*
that-COMP she also have-IMP.PST.3SG
'João has been eating too much and Ana said that she has too.'

Dagnac (2008) asserts that English modals select a vP/VP and delete at the VP level. Meanwhile, in Spanish, they select a TP and target it for ellison. Nonetheless, Dagnac (2008) states that both allow for ellipsis after modal verbs (Dagnac, 2008: 162). Ellipsis following modals is also permitted in BP (Cyrino, 2016: 1). The first two sentences below are from Dagnac (2008: 162) while the latter one is a translation into BP.

(12) a. *Tom* *pudo* *ver* *a* *Lee* *pero*
Tom can.PST.PRET.3SG see.INF PREP Lee PREP
María *no* *pudo__.*
Maria NEG can.PST.PRET.3SG
'Tom could see Lee but Mary couldn't.

b. *'Tom could see Lee but Mary couldn't__.'*

c. *O* *Tom* *pôde* *ver*

DEF.DET.MSG	Tom	can.PST.PRET.3SG	see-INF
o	*Lee,*	*mas*	*a*
DEF.DET.MSG	Lee	PREP	DEF.DET.FSG
Maria	*não*	*pôde __.*	
Maria	NEG	can.PST.PRET.3SG	

'Tom could see Lee but Marya couldn't.'

1.3.1. This Study

In this study we examine the L3 acquisition of BP by L1/L2 speakers of English and Spanish. BP and Spanish are assumed to be typologically more related to one another than to English. However, we examine two features that are shared (superficially and structurally) between English and BP, but not Spanish: the lack of DOM and the availability of Aux-VP ellipsis. The goal of this study is to assess whether BP L3 learners follow the patterns predicted by the TPM or the LPM in an Acceptability Judgment Task.

Recall that the TPM predicts that participants will use wholesale transfer from the language that is typologically more similar to the L3. Here that would be Spanish, which allows for DOM but not Aux-VP ellipsis. However, BP demonstrates the inverse by not allowing for DOM while permitting Aux-VP ellipsis. Therefore, the TPM expects participants to deem sentences in BP that incorrectly have a DOM as grammatical, and those that have a grammatical Aux-VP ellipsis structure as ungrammatical. On the other hand, the LPM predicts that learners will transfer from either language, depending on which one has the structural rules that are more applicable to a certain property in the L3. Thus, the LPM predicts that participants will correctly reject sentences in BP with DOM, and correctly accept those with Aux-VP ellipsis.

If trilingual participants align more with what English predicts than Spanish, i.e., (i) they reject Superfluous Ps to the same degree (whether it's a DOM-like P or not) as they do in English, and significantly more so than they do in Spanish for DOM cases, and (ii) they accept

Aux-VP ellipsis as much as modal-VP ellipsis, as they do in English, and much more so than they do for Spanish Aux-VP ellipsis, we may infer positive transfer from English, disproving the TPM.[2]

Moreover, to properly test the TPM and the LPM, we will incorporate one more group: L1 English — L2 BP speakers. The TPM predicts the L3 BP group will perform worse than the L1 English — L2 BP group due to Spanish negative influence. Specifically, it predicts that the L2 BP group will correctly reject structures in BP with DOM and incorrectly placed Ps, while correctly accepting structures with both auxiliary and modal ellipsis, aligning with the properties of English.

A summary our predictions by model and condition can be found in Table 1 for the trilingual groups:

Table 1. Predictions by property for L3 BP for Spanish-speakers

Conditions	TPM	LPM
DOM	Incorrectly accept in BP - DOM in BP > Superfluous P in BP - DOM in BP = DOM in Sp - L3BP DOM > NoSp DOM	Correctly reject in BP - DOM in BP = Superfluous P in BP - DOM in BP = DOM in En - L3BP DOM = NoSp DOM
Superfluous Prepositions	Correctly reject in BP	Correctly reject in BP
Aux-VP Ellipsis	Incorrectly reject in BP - Aux-VP Ellipsis in BP < Modal VP Ellipsis in BP - Aux-VP Ellipsis in BP = Auxiliary VP Ellipsis in Sp - L3BP Aux-VP Ellipsis < NoSp Aux-VP Ellipsis	Correctly accept in BP - Aux-VP ellipsis in BP = Modal VP ellipsis in BP - Auxiliary VP Ellipsis in BP = Aux-VP Ellipsis in En - L3BP Aux-VP Ellipsis = NoSp Aux-VP Ellipsis
Modal-VP Ellipsis	Correctly accept in BP	Correctly accept in BP

[2] It is worth noting that this may also be due to learners having already acquired the properties. Nonetheless, we exclude this as a possibility because our participants, as outlined in further sections, are beginning learners of BP.

Additionally, we also examine the effects of language use. Recall that Slabakova (2017) argued that language experience, including linguistic dominance, may influence which language is more likely to transfer to the L3. If this is true, then participants that have used more English in their daily lives may do better in the BP Acceptability Judgment Task than those who have used Spanish more.

2. Materials and Procedure

2.1. Participants

In total, we had 29 participants, but 12 were excluded due to either being too advanced in BP, or failing our English control conditions. The control conditions ensured that participants paid attention to the sentences, and could assess the sentences as ungrammatical or grammatical as needed. Participants that did not perform as expected (i.e. they rated a grammatical sentence as 1, 2, or 3, or an ungrammatical sentence as 3, 4, or 5) in three or more of the five trials within a sub-condition they were excluded from the study. For example, if they marked sentences such as, *"The shopkeeper closed to some doors at night," as 3, 4, or 5, the trial was marked as an "unexpected response". Three or more unexpected responses in English led to exclusion. The meaning of numbers 1-5 is explained in *2.2. Materials*.

After exclusions, we could include 17 participants total. Six grew up speaking both English and Spanish, but are heritage speakers of Spanish that are English-dominant. Seven were raised as English monolinguals, then learned Spanish, and ultimately BP. Lastly, four spoke English, then started learning BP without any Spanish background. These groups will henceforth be referred to as the Heritage Spanish (HSp), L2 Spanish (L2Sp), and No Spanish groups (NoSp). These groups took an average of 3.83, 2.43, and 2.00 BP language classes, and had studied the language for an average of 25.17, 42.71, and 19.50 months respectively. As a

result, they were beginning and beginning-intermediate students of BP. A summary of these profiles can be found below in Table 2.

Table 2. Experience with BP, by group

	Heritage Spanish	Non-Native Spanish	No Spanish
Number of BP Classes	3.83	2.43	2.00
Months of BP Classes	25.17	42.71	19.50

The participants in this study were all English-dominant. On average, they used English 68.33% (HSp), 81.43% (L2Sp), and 92.00% (NoSp) of the time. For the participants of the Spanish-speaking groups, participants currently use Spanish less than English, with self-reports claiming that it is used 28.00% (HSp) and 14.71% (L2Sp) of the time.

It is also worth mentioning that in the group with no Spanish, two participants also spoke French and German. However, they were included in this study in part due to limited participation, but also due to the properties of these languages. With our control conditions, French behaves the same by disallowing Superfluous Ps and allowing Modal-VP Ellipsis (Dagnac, 2008: 158). As for the experimental ones, like English, it lacks DOM. However, like Spanish, it does not allow Aux-VP Ellipsis (Dagnac, 2008: 157). The participant was included because among the two experimental conditions, one aligns with English, and one with Spanish. Thus, the participant may not be as biased as they would be if French aligned with both in one language and neither of the other.

As for German, it behaves differently from both Spanish and English with regards to DOM. While it does mark some direct objects, like Spanish, whether or not an object is marked depends on the declension class of the noun, thereby differentiating itself from Spanish (Neuburger et al., 2018: 1). Similarly to Spanish, it does not allow Aux-VP Ellipsis, for it has been phased out (Breitbarth, 2004: 1). As for Modal-VP Ellipsis, in our sentences that have

ellison after negation, it would be expected for both the modal and lexical verb to elide in German (Menzel, 2016: 188). As a result, German differs from all three languages in this respect. Overall, it seems different enough from all three languages that we would not predict it to bias our German-speaking participant in one direction or the other.

2.2. *Materials*

To conduct this study, participants were given a Google form to complete remotely on their own time. They were asked to assess how natural sentences sounded on a scale of one to five. One meant "unnatural" while five meant "natural". Among the sixty sentences we created, there were 20 per language. Participants first started with the BP sentences, so as to minimize priming from either language, then moved on to the ones in Spanish (if they had Spanish in their background), and finished with the ones in English. At the start of each language section, instructions and background questions were given in the language of the sentences that followed them in order to prime the participants in that language. Within the 20 sentences per language, there were five sentences per condition, and all sentences were randomly ordered. Each of the three tasks consisted of four conditions (see Table 1), two that related to DOM/Superfluous Ps and two that related to ellipsis. Examples of each sentence per condition can be found below in English, Spanish, and BP.

2.2.1. Differential Object Marking

Participants assessed the naturalness of sentences with DOM, which is only allowed in Spanish. Examples of this condition can be found below. We selected indefinite DPs as themes because in BP, 'a' can also be used as a determiner for singular, feminine nouns. Therefore, if we put the preposition 'a' next to the singular, feminine determiner 'a,' it would raise the possibility of participants accidentally reading the sentence with one 'a' and/or assume that the sentences referred to the determiner, not the preposition. Thus, by using the indefinite

determiner for feminine, plural nouns, “umas,” we inferred that this would remedy that concern.

(13) **The principal supported **to** some Kindergarten teachers.*

(14) *El* *enfermero* *ayudó* ***a***

DEF.DET.MSG nurse help-PST.PRET.3SG PREP

unas *pacientes* *en* *el* *hospital.*

INDF.DET.FPL patients PREP DEF.DET.MSG hospital

‘The nurse helped some (female) patients in the hospital.’

(15) **A* *presidenta* *viu* ***a***

DEF.DET.FSG president see-PST.PRET.3SG PREP

umas *jornalistas* *conhecidas.*

INDF.DET.FPL journalists famous

‘The journalist saw to some journalists.’

2.2.2. Superfluous Prepositions

Participants also evaluated the naturalness of sentences with verbs that select a DP theme, and not a PP, and therefore had Superfluous Ps. This is disallowed by all the languages in question, as seen below.

(16) **The man drank **to** some bubbly drinks.*

(17) **El* *secretario* *abrió* ***a***

DEF.DET.MSG secretary open-PST.PRET.3SG PREP

unas *cartas* *importantes.*

INDF.DET.FPL letters important

‘The secretary opened some important letters.’

(18) **A* *cozinheira* *preparou* ***a***

DEF.DET.FSG cook prepare-PST.PRET.3SG PREP

umas *comidas* *deliciosas.*

INDF.DET.FPL meals delicious

'The cook prepared to some delicious meals.'

2.2.3. Aux-VP Ellipsis

The second experimental condition that participants judged was Aux-VP ellipsis which, unlike Spanish, is allowed by BP and English. Examples of what they examined can be found below.

(19) *The orchestra has already arrived, but the conductor has not.*

(20) **El* *crítico* *ya* *ha* *leído*

DEF.DET.MSG critic already have-AUX.PRS.3SG read-PST.PTCP

el *libro* *pero* *la* *editora*

DEF.DET.MSG book PREP DEF.DET.FSG editor

no *ha*

NEG have-AUX.PRS.3SG

'The critic has already read the book, but the editor has not.'

(21) *O* *Congresso* *já* *tinha*

DEF.DET.MSG Congress already have-AUX.PST.3SG

aprovado *a* *lei,* *mas* *o*

pass-PST.PTCP DEF.DET.FSG law PREP DEF.DET.MSG

Senate *não* *tinha*

Senate NEG have-AUX.PST.3SG

'The Congress has already passed the law, but the Senate has not.'

2.2.4. Modal-VP Ellipsis

Recall that our second control condition involved Modal-VP ellipsis, which all three languages permit. Various sentences in the task, as seen in the examples below, were constituted by this phenomenon.

(22) *The maid can find the vase, but the butler cannot.*

(23) *La* *chica* *puede* *ir* *al*
DEF.DET.FSG girl can-PRS.3SG go-INF PREP-DEF.DET.MSG
concierto, *pero* *la* *amiga* *no* *puede.*
concert PREP DEF.DET.FSG friend NEG can-PRS.3SG
'The girl can go to the concert, but the friend cannot.'

(24) *O* *diplomado* *pode* *conseguir* *um*
DEF.DET.MSG diplomat can-PRS.3SG get-INF INDF.DET.MSG
emprego, *mas* *o* *desistente* *não*
job PREP DEF.DET.MSG drop out-N NEG
pode
can-PRS.3SG
'The diplomat can get a job, but the drop out cannot.'

3. Results

The results can be seen in Table 3. They indicate the averages of the ratings of each group across the conditions in BP, Spanish, and English. Recall that there were five trials in each condition. We first summarize the raw data, then make comparisons between the conditions by group in the following subsections.

Table 3. Results of each condition in the three languages, by group

	Heritage Spanish			L2 Spanish			No Spanish	
	En	Sp	BP	En	Sp	BP	En	BP
DOM	1	4.23	2.97	1	4.43	3.23	1.15	2.6
Superfluous P	1	2.07	2.4	1	2.54	3.2	1.45	2.7
Aux Ellipsis	4.97	1.4	3.03	4.94	2.06	3.4	4.7	3.65
Modal Ellipsis	4.9	4.27	4.53	4.94	3.77	3.83	4.7	4

3.1. DOM and Superfluous P Results

First, we looked at the control condition of Superfluous Ps before inanimate direct objects. We expected this to be rejected in all three languages, and thus receive low ratings. This was the case, as the groups gave sentences with this condition an average of 1.00 (HSp), 1.00 (L2Sp), and 1.45 (NoSp) in English. The ratings in Spanish and BP are higher than we expected. In Spanish, the heritage group gave it an average of 2.07, and the non-native group gave it an average of 2.54. These higher numbers are likely due to participants neither being native nor dominant in Spanish. In BP, the groups gave this condition an average rating of 2.40 (HSp), 3.20 (L2Sp), and 2.70 (NoSp).

Crucially, for DOM, we found that participants rejected this in English as expected, with ratings of 1.00 (HSp), 1.00 (L2Sp), and 1.15 (NoSp) across all three groups. In Spanish, the Spanish-speaking groups rated it higher, with scores of 4.23 (HSp) and 4.43 (L2Sp), which was expected since Spanish requires this. In BP, the average scores were neither as low as in English, nor as high as in Spanish: 2.97 (HSp), 3.23 (L2Sp), and 2.60 (NoSp).

3.1.1. Heritage Spanish Speakers

When comparing the DOM in BP to Superfluous Ps in BP, the student's t-tests showed there was no significant difference in this group ($p = 0.37$). In comparison to Spanish DOM, we find that the Heritage Spanish group rated BP DOM at 2.97, over a full point lower than in Spanish (4.23), however this difference did not reach significance ($p = 0.1$). This means that the speakers are not behaving differently in these conditions between the two languages. When comparing the DOM in BP to DOM in English, however, the difference was significant ($p = 0.01$). Thus, they were behaving differently between English and BP, but not Spanish and BP. Lastly, the No Spanish group did not rate these BP DOM sentences significantly lower than the HS group, as their score was 2.60 ($p = 0.48$).

The following table organizes these results by prediction for both the TPM and LPM, indicating whether the results align with one of the models.

Table 4. DOM and Results by Condition for Heritage Speakers Under Each Model

DOM Conditions	TPM Incorrectly accept in BP	LPM Correctly reject in BP
DOM vs. Superfluous Ps	DOM in BP (2.97) > Superfluous Ps in BP (2.40) $p = 0.37$ No significant difference X	DOM in BP (2.97) = Superfluous Ps in BP (2.40) $p = 0.37$ No significant difference ✓
DOM in BP vs. DOM in Sp/En	DOM in BP (2.97) = DOM in Sp (4.23) $p = 0.10$ No significant difference ✓	DOM in BP (2.97) = DOM in En (1.00) $p < 0.01$ Significant difference X
L3BP DOM vs. NoSp DOM	L3BP DOM (2.97) > NoSp DOM (2.60) $p = 0.48$ No significant difference X	L3BP DOM (2.97) = NoSp DOM (2.60) $p = 0.48$ No significant difference ✓

3.1.2. L2 Spanish Speakers

When comparing the DOM in BP to Superfluous Ps in BP, the student's t-tests showed no significant difference ($p = 0.96$) between the two conditions. When comparing DOM in BP to DOM in Spanish, however, there was a significant difference ($p < 0.01$). The participants rated BP DOM at 3.23, more than a point below Spanish DOM (4.43). Lastly, when comparing the BP DOM of this group to the BP DOM in the NoSp group, there was no

significant difference ($p = 0.24$). Thus, these two groups are not behaving differently, even though one of them has Spanish in their linguistic profile.

The following table organizes these results by prediction for both the TPM and LPM, indicating whether the results align with one of the models for the L2Sp group.

Table 5. DOM and Results by Condition for L2 Spanish Speakers Under Each Model

DOM Conditions	TPM Incorrectly accept in BP	LPM Correctly reject in BP
DOM vs. Superfluous Ps	DOM in BP (3.23) > Superfluous Ps in BP (3.20) $p = 0.96$ No significant difference X	DOM in BP (3.23) = Superfluous Ps in BP (3.20) $p = 0.96$ No significant difference ✓
DOM in BP vs. DOM in Sp/En	DOM in BP (3.23) = DOM in Sp (4.23) $p < 0.01$ Significant difference X	DOM in BP (3.23) = DOM in En (1.00) $p < 0.01$ Significant difference X
L3BP DOM vs. NoSp DOM	L3BP DOM (3.23) > NoSp DOM (2.60) $p = 0.24$ No significant difference X	L3BP DOM (3.23) = NoSp DOM (2.60) $p = 0.24$ No significant difference ✓

3.2. Ellipsis Results

Turning towards ellipsis, our control condition was modal ellipsis. We expected high ratings in all three languages among the groups because it is permitted in all three languages.

This was seen in English, with average ratings of 4.90 (HSp), 4.94 (L2Sp), and 4.70 (NoSp). In Spanish, the average was 4.27 (HSp) and 3.77 (L2Sp) for the Spanish-speaking groups. The results for the L2Sp group are slightly lower than expected in Spanish and BP, but this may be attributed to the fact that they are L2 speakers of Spanish and L3 speakers of BP. In BP, the averages were 4.53 (HSp), 3.83 (L2Sp), and 4.00 (NoSp).

Crucially, for our experimental condition, Aux-VP Ellipsis, all groups accepted this in English as expected, with values of 4.97 (HSp), 4.94 (L2Sp), and 4.70 (NoSp). The Spanish-speaking groups rated sentences with this condition lower in Spanish, with an average score of 1.40 for the heritage group, and 2.06 for the L2 group. This was also expected because this is not permitted in Spanish. In BP, the average scores were 3.03 (HSp), 3.40 (L2Sp), and 3.65 (NoSp).

3.2.1. Heritage Spanish Speakers

When comparing how this group treated Aux-VPE in BP in comparison to Modal VPE in BP, there was not a significant difference found ($p = 0.08$). However, when comparing how this group performed with Aux-VPE in BP in comparison to Spanish, a significant difference was found ($p = 0.04$). In comparison to English, there was also a significant difference ($p = 0.02$), meaning that this group behaved differently both from Spanish and English in this condition. Lastly, when comparing how this group rated Aux-VPE in BP in comparison to the NoSp group, no significant difference was found ($p = 0.32$), showing that they are not behaving differently from each other.

Table 6 organizes these results by prediction for both the TPM and LPM, indicating whether the results align with one of the models.

Table 6. Auxiliary VPE and Results by Condition for Heritage Speakers Under Each Model

Aux-VPE Conditions	TPM Incorrectly Reject in BP	LPM Correctly Accept in BP
Aux-VPE vs. Modal-VPE	Aux-VP Ellipsis in BP (3.03) < Modal VP Ellipsis in BP (4.53) $p = 0.08$ No significant difference X	Aux-VP ellipsis in BP (3.03) = Modal VP ellipsis in BP (4.53) $p = 0.08$ No significant difference ✓
Aux-VPE in BP vs. Aux-VPE in Sp/En	Aux-VP Ellipsis in BP (3.03) = Auxiliary VP Ellipsis in Sp (1.40) $p = 0.04$ Significant difference X	Auxiliary VP Ellipsis in BP (3.03) = Aux-VP Ellipsis in En (4.97) $p = 0.02$ Significant difference X
L3 Aux-VPE in BP vs. L2 Aux-VPE in BP	L3BP Aux-VP Ellipsis (3.03) < NoSp Aux-VP Ellipsis (3.65) $p = 0.32$ No significant difference X	L3BP Aux-VP Ellipsis (3.03) = NoSp Aux-VP Ellipsis (3.65) $p = 0.32$ No significant difference ✓

3.2.2. L2 Spanish Speakers

When comparing how this group treated Aux-VPE in BP in comparison to Modal VPE in BP, a significant difference was not found ($p = 0.24$). They were thus not treating these two ellipses differently in BP. However, when comparing how this group performed with Aux-VPE in BP in comparison to Spanish, there was a significant difference found ($p = 0.04$), showing that they behaved differently from each other. In comparison to English, a significant difference

was found ($p < 0.01$), meaning that this group behaved differently both from Spanish and English in this condition. Lastly, when comparing how this group rated Aux-VPE in BP in comparison to the NoSp group, no significant difference was found ($p = 0.61$), indicating that they are not behaving differently.

The following table organizes these results by prediction for both the TPM and LPM, indicating whether the results align with one of the models for the L2Sp group.

Table 7. Auxiliary VPE and Results by Condition for L2 Spanish Speakers Under Each Model

Aux-VPE Conditions	TPM Incorrectly Reject in BP	LPM Correctly Accept in BP
Aux-VPE vs. Modal-VPE	Aux-VP Ellipsis in BP (3.40) < Modal VP Ellipsis in BP (3.83) $p = 0.24$ No significant difference X	Aux-VP ellipsis in BP (3.40) = Modal VP ellipsis in BP (3.83) $p = 0.24$ No significant difference ✓
Aux-VPE in BP vs. Aux-VPE in Sp/En	Aux-VP Ellipsis in BP (3.40) = Auxiliary VP Ellipsis in Sp (2.06) $p = 0.04$ Significant difference X	Auxiliary VP Ellipsis in BP (3.40) = Aux-VP Ellipsis in En (4.94) $p = 0.01$ Significant difference X
L3 Aux-VPE in BP vs. L2 Aux-VPE in BP	L3BP Aux-VP Ellipsis (3.40) < NoSp Aux-VP Ellipsis (3.65) $p = 0.61$ No significant difference X	L3BP Aux-VP Ellipsis (3.40) = NoSp Aux-VP Ellipsis (3.65) $p = 0.61$ No significant difference ✓

4. Discussion

By examining the results from the two experimental conditions, Differential Object Marking and Auxiliary Ellipsis, we can make the following inferences:

First, when looking at DOM in Heritage Speakers (see Table 4), we found that there was no significant difference between how they evaluated DOM in BP and superfluous prepositions in BP. Therefore, we can conclude that the participants do not differentiate between these two conditions. As a result, we can corroborate the LPM with this comparison, as it predicted that there would not be a difference in how this group treated the two conditions. We reach a similar conclusion when comparing how this group rated DOM in BP in comparison to the NoSp group. We found that there was no significant difference between how each of these groups treated this condition. Thus, we can again corroborate the LPM. We cannot say the same for the TPM because this model would have predicted that those with Spanish in their background would perform differently than those without it, by being more likely to accept it, but our results do not indicate a significant difference.

However, within this HSp group and DOM condition, we cannot fully corroborate the LPM. When comparing how this group treated DOM in BP to DOM in Spanish, we found that there was no significant difference. However, when comparing their DOM in BP to DOM in English, they were behaving quite differently between English and BP. Therefore, with this specific sub-condition, the results are in line with the TPM; it predicts similar behaviors between BP and Spanish. However, we cannot corroborate the LPM here, for we do not see similar approaches between English and BP.

Therefore, for the DOM, we cannot infer that the reason why the Spanish-speaking groups did not show a distinction between the DOM and Superfluous Ps was because they were transferring English. This is due to the fact that they were found to behave differently between

English and BP. Instead, it may be possible that they already knew that the DOM does not exist in BP. However, they behaved similarly in Spanish and BP, so it may also be possible that they were at least partially transferring from Spanish to permit DOM in BP.

When examining the L2Sp group, we can make similar inferences. When comparing how they rated DOM in BP in comparison to the Superfluous Ps in BP, no significant difference was found between the two conditions. Thus, we again see evidence for the LPM because we do not see a difference in how these participants approached the two conditions, rather than accepting the former then rejecting the latter due to Spanish transfer. Then, upon examining how this group assessed DOM in BP in comparison to the NoSp group, there was not a significant difference between them either. Therefore, these two groups do not approach the DOM condition in BP differently, despite one of them having Spanish in their background. Therefore, we again see support for the LPM, as the TPM would have predicted that those with Spanish would perform differently than those without it, but our results do not reflect this.

However, when comparing the L2Sp approach to DOM in BP to DOM in Spanish, then in English, we again cannot provide evidence for the LPM. There was a significant difference found between how they treat DOM in BP in comparison to English, meaning that unlike the LPM's predictions, they are not using the same strategy in BP as in English. However, differently from the HSp group, we cannot attest to the TPM either. There was a significant difference between the DOM in BP versus Spanish as well, indicating that again, they are not using the same strategy between Spanish and English in this condition.

Once again, we cannot infer that the reason why the Spanish-speaking groups did not show a distinction between the DOM and PP was because of English. Recall that they performed differently in English and BP. Instead, it may be possible that they already knew that the DOM does not exist in BP. This may also explain why they behaved similarly to the NoSp group too, as well as why they behaved differently when assessing DOM in Spanish. In

comparison to the Montrul (2011) study, recall that there was a certain degree of Spanish-based transfer regarding the DOM in both participant groups. In the present study, the DOM was accepted in BP to a certain extent by both Spanish-speaking groups. This can possibly be due to some transfer from Spanish, especially because the HSp group did not have a significant difference between their treatment of the DOM in BP versus the DOM in Spanish. However, perhaps another explanation is necessary because within the L2Sp group, neither English nor Spanish appeared to transfer in the DOM condition. Not to mention that the NoSp group also accepted the DOM in BP to a certain extent, even though they do not have Spanish in their background. Thus, wholesale transfer cannot be supported by this study.

However, a couple notes must be made. First, even though all of our speakers are English-dominant, the difference between HSp and L2Sp groups for DOM may not be a matter of current dominance, but dominance during childhood, given that the HSp group spent more time speaking Spanish in their childhood than the L2Sp group. Alternatively, it could be a matter of relative dominance, as opposed to dominance treated as a binary variable (English-dominant or Spanish-dominant), given that the HSp group used Spanish more often (28%) than the L2Sp group (14.71%). Thus, we can still not exclude the possibility that dominance has an effect, even if it is not current, as predicted by Slabakova (2017). Second, all three groups rated the control condition of superfluous prepositions in BP as more natural than in English. Then, with our second experimental condition (discussed below), they all rated modal verb ellipsis as sounding less natural in BP than in English. In both of these cases, transfer from Spanish cannot be used as an explanation, as Spanish also disallows superfluous prepositions and allows modal verb ellipsis. Therefore, the differences analyzed within our experimental conditions must be approached acknowledging that even the control conditions have these differences.

Turning towards the next experimental condition, Auxiliary-VPE, we can make the same comparisons for the HSp and L2Sp groups. We once again see a strong, but not exclusive, alignment with the LPM. When we compare how the Spanish-speaking participants treated Auxiliary-VPE in BP in comparison to Modal VPE in BP, there was not a significant difference found between the ratings of the two ellipses. Therefore, this is more in accordance with the LPM; unlike the TPM, this model predicted that there would not be a difference in how this group treated the two ellipses (because both are acceptable in English). Then, when comparing how this group interpreted Aux-VPE in BP in comparison to the NoSp group, we again did not find a significant difference. This signifies that these two groups did not approach Aux-VPE differently, despite one of the groups having Spanish in their background. This aligns with the LPM because it predicted that participants would rely on the properties from English in this condition, given that English (not Spanish) permits Aux-VPE. The results are against TPM because if it held, there would have been a significant difference between these two groups, likely from the Spanish-speaking groups using Spanish to disallow Aux-VPE in BP.

Nonetheless, we cannot attest to the LPM entirely in this group and condition. When we compare how the Spanish-speaking groups interpreted Aux-VPE in BP in comparison to how they did in Spanish, then in English, we saw a significant difference in both comparisons. This means that they treated Aux-VPE in BP differently from that of both Spanish and English. As a result, we can neither confirm the TPM nor the LPM here because their behavior was distinct from both Spanish and English.

It is possible that we obtained these results because the participants interpreted this condition without the influence of neither Spanish nor English, given that there was a significant difference found across all three languages. Conversely, it could be that they were being affected by both simultaneously, hence the intermediate ratings. This would support a model that allows for transfer from both prior languages. Lastly, it could be that even in the

initial stages of L3 acquisition, transfer from a previously acquired language is not total, but rather partial. Regardless, they aligned with the LPM in comparison to the NoSp group and modals because they did not behave differently from each other. Therefore, Spanish does not seem to have influenced the L3 groups in great measure.

Regarding our original research question, which sought to compare the TPM and the LPM, we can conclude that our results mostly corroborate the LPM, but not entirely. The LPM can be attested in various scenarios. First, when comparing the HSp group with the NoSp group in their assessments of both DOM and Aux-VPE in BP, we did not find a significant difference. The same applied when comparing the L2Sp and NoSp groups. These go against the TPM because it predicted that the groups with Spanish would perform differently than the group without, by incorrectly accepting DOM and incorrectly rejecting Aux-VPE in BP. Our results are thus more generally in line with the LPM because it predicted that, due to their knowledge of English, those that spoke Spanish would reject the DOM and accept the Aux-VPE, which they did to a similar extent as the NoSp group. However, we cannot support the LPM entirely because across these two speaker groups and conditions, there was a significant difference found between their strategies in BP and English. Therefore, we cannot conclude that they are solely using their knowledge in English to influence their assessments in BP. That said, we still see more evidence for the LPM than the TPM. We only found some support for the TPM once: when the heritage speakers analyzed DOM in BP. We found that there was no significant difference between their approach in BP and Spanish. Thus, they may be using the same strategy between the two. This may adhere to the predictions of the Scalpel Model, Slabakova (2017), if dominance is assessed in comparison to the L2Sp group. In other words, since the HSp group uses Spanish in their daily lives more than the L2Sp group, current differences in dominance remains as a possible explanation, even if neither group is currently dominant in

Spanish. However, this nonetheless did not hold in the Aux-VPE condition, nor in either condition for the L2Sp group.

5. Conclusion

In sum, we aimed to compare the TPM and LPM in the context of learning BP as an L3. After participants assessed four conditions (DOM, Superfluous Prepositions, Aux-VP Ellipsis, and Modal-VP Ellipsis) through an Acceptability Judgment Task, we concluded that our results did not align with the predictions of the TPM overall. We were only able to corroborate it in one condition: DOM for Heritage Spanish speakers. Here, we found that there was not a significant difference between how they treated DOM in BP versus DOM in Spanish. As stated, this may introduce the role of childhood dominance. Therefore, for future studies, it may be worthwhile to implement a continuum of dominance scores for different periods of the participants' lives. Perhaps a more complete assessment, such as the BLP, can provide a more detailed representation of their linguistic profile. This would allow us to classify participants on such a continuum.

Our results instead provided more, but not complete, support for the LPM. When comparing the Spanish-speaking groups with the NoSp group in our experimental conditions, significant differences were not found. Furthermore, significant differences were also not found when their assessment of experimental conditions was compared to those of the control conditions. Nonetheless, this paper cannot serve as an irrefutable corroboration of the LPM because in both the approaches to DOM and Aux-VPE, both Spanish-speaking groups showed a difference between their assessments in BP versus English.

It is worth acknowledging that these findings are based on a limited sample size, and with more participants, we would be able to make these conclusions with more certainty. Furthermore, by having the assessments made in a Google form, participants are given more

time to think about their answers than they would have had the sentences been timed, and flashed across a screen. Perhaps this method would be worth exploring for future studies so as to capture a more instant, and perhaps more authentic, judgment of their intuitions.

Nonetheless, this study may contribute to 3LA, especially when the third language is related to, or has similar structural properties with, prior languages. It may also contribute to language teaching because prior languages will have different impacts on how students learn their third language, which teachers can account for accordingly. For future studies, it may be worthwhile to investigate ellipsis further in the 3LA of BP. Specifically, whether certain auxiliary or modal verbs are more likely than others to be accepted in their elided forms, why that is the case, and the extent to which transfer is at play. Another suggestion for future exploration is to add a condition that is only shared between Spanish and BP among these three languages, and adding a group that speaks Spanish and BP without English in their linguistic profile. That way, we could further investigate whether participants with Spanish would outperform groups that do not speak it.

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