L3 ACQUISITION OF THE PORTUGUESE PRESENT PERFECT BY ENGLISH-SPANISH BILINGUALS

by

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(Under the Direction of Timothy Gupton)

ABSTRACT

The Portuguese present perfect (P-PP) is an understudied topic in the field of generative language acquisition. In the past decade, Third Language Acquisition (L3A) has enjoyed special attention in studying how multilingualism works. Researchers have concentrated on the examination of the source of transfer at the initial stages. However, there is a research gap in tense-acquisition studies in Portuguese and the analysis of the developmental stages in L3A. English, Spanish and Portuguese have a temporal-aspectual construction named present perfect (PP) that refers to a past event presented as pragmatically relevant to the present. In this study, I put forward a new proposal of the syntax of the PP, arguing that the past system is composed of two features – [±continuative, ±perfective] –, whose interactions result in four aspects: perfective, imperfective, continuative, and anterior. English and Spanish PP output the anterior aspect by default, but also license continuativity. In turn, Portuguese only allows the continuative aspect with the PP and maps anteriority on the preterit morphology. This study examined the acquisition of functional features of the Present Perfect in L3 Portuguese by bilinguals of English and Spanish; investigating access to the universal grammar (UG) in adulthood and what factors drive L3A. 72 participants completed an online questionnaire testing their

knowledge of the syntax, morphology, and semantics of the P-PP. Results indicate that the different distribution of meaning-to-form among these languages poses difficulty for learners, who generally only start to demonstrate representation of the semantics of the obligatoriness of continuative P-PP at the advanced level. Data corroborates that UG-access remains possible in adulthood and that typology plays a significant role both at the initial stages and across the developmental stages, since Spanish, the most closely related language, is chosen as the source of transfer by both English and Spanish natives.

INDEX WORDS: L3 Acquisition, Present Perfect, Morphosyntax, Aspect, Portuguese, Spanish, English

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DEDICATION

I dedicate this study to my family, who have always supported me and were the first ones to challenge me to always try to be a better human being. To all the teachers and professors in my life, who I owe so much of what I am and have accomplished. To all the loved ones in Athens, GA, over all my years there, who became my second family, and embraced me on the brightest, and the coldest days. To myself for finding resilience.

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CHAPTER 1

INTRODUCTION

The field of Second Language Acquisition (SLA) has largely investigated cross-linguistic influence and to what extent this can be overcome. Nevertheless, Third Language Acquisition (L3A) remains relatively unexplored. There has been an increasing interest in the sub-field of acquisition of languages subsequent to a second language (Ln), or third language (L3) acquisition. Most of the studies to date (Bardel & Falk 2007, 2012; Chin 2008; Flynn, Foley & Vinnitskaya 2004; Leung 2005, 2006; Montrul, Dias & Santos 2011; Rothman, 2010, 2011, 2013, 2015; Salaberry 2005) have focused on determining the initial stages (IS) to examine the possible source(s) of linguistic transfer and what variables are involved in the selection of previous grammars for transfer. Frequently, studies observe the effect of typology and order of acquisition, but some authors (Cenoz 2001; Odlin 2003) have indicated recency and proficiency as other factors of significance.

Acquisition of aspect has also enjoyed attention, since it can shed light on if adults continue to have access to UG. Previous literature (Seliger 1978, Montrul and Slabakova 2003) has discussed if tense and aspect are prime candidates for fossilization in SLA. In this dissertation, I contribute to bringing this discussion to L3A. The objective of this dissertation is to examine to what extent Spanish-English bilinguals acquiring Portuguese as their L3 have access to the

aspectual features of the present perfect (PP) and if such syntactic-semantic features are acquirable despite L3 acquirers not always accurately producing or comprehending PP morphology. I center my investigation in the developmental stages (DS) of L3A with a secondary analysis of the IS.

The most direct difference between SLA and L3A is that, assuming successful acquisition of a second language, speakers will have two previous grammars in their IS. Thereby, tracking possible transfer from one or both previously acquired languages has been present in the methodology of much of the research on L3/Ln Acquisition. There are three models and one hypothesis that attempt to predict the cognitive process of acquiring a third language. They attempt to control for crosslinguistic influence in the IS, considering factors like typology, order of acquisition and modularity. Typology has to do with how historically and structurally similar languages are. For instance, it is easy to assume having a background with Romance languages like French, Portuguese and Spanish makes it easier for someone learning L3 Italian because, after all, Italian is also a Romance language and all of them have strong verbal systems, overt manifestation of subjunctive, and morphological differentiation for the preterit/imperfect aspectual values. If we compare an L3 Italian acquirer with two previously-acquired Romance languages to an L3 Italian learner who speaks Japanese natively and English as a second language, we can assume more differences will arise, since Italian, Japanese and English all come from different groups of language – respectively, Romance, Japonic, and Germanic –, hence, they have less promptly-ready transferrable facilitative information. Order of acquisition refers to the influence of the first language vs. the second language. For instance, can we see differences in a L1 Spanish-L2 French learner of L3 Italian versus an L1 French-L2 Spanish learner of L3 Italian?

Finally, modularity is about the ability of a learner to acquire languages in modules, that is, of perceiving sub-parts of languages and transferring knowledge on a property-by-property basis instead of in a wholesale manner. When learning a cognate in an additional language we tend to assume that other values, e.g., pronunciation and regency, are the same. English native speakers tend to preferentially apply the structure of English verbs such as *like* and *love* to the experiential Spanish verbs *gustar* and *encantar;* because their meanings are transferrable, they assume that their syntax will be too, leading to ungrammatical English-like structures in Spanish, such as **yo gusto el rock* 'I like rock' instead of *me gusta el rock* 'rock pleases me (lit.)'. Another example of carrying L1 syntactic values to L2 cognates is the case of the verb *depender*, which in Spanish takes the preposition *de* 'of' instead of *en* 'on'. Upon noticing *to depend* is *depender* in Spanish, learners often also apply the same regency from English (*to depend on*), which results in the ungrammatical **depender en* instead of *depender de*. In theory, by having successfully acquired a second language, L3 acquirers are exceptional learners. Modularity, then, observes their capacity of analyzing language specificities.

There are currently 5 formalized models that make predictions related to transfer in L3A. Such models can be categorized by focusing on one of the three variables we just reviewed: order of acquisition, typology, and modularity. Let us first address the L2 Status Factor (Bardel & Falk 2007), a model that presupposes that order of acquisition is the most influential variable in L3A, since it claims that the L2 has a privileged status. Relying on Paradis' (2004) declarative-procedural memory dichotomy, Bardel & Falk (2007) assert that the L2 is stored in the declarative memory and is more easily accessed than the L1, which remains in the procedural memory. Since the L2 and L3 are stored in the same place, they are of a more similar nature, the L2 is predicted

to overpower the influence of the L1 in the IS. In addition to that model, we have the L1 Factor Hypothesis, a model never proposed, but referred to in studies (Hermas 2010; Jin 2009; Leung 2005; Na Ranong & Leung 2009) in which the L1 has a privileged role. Both the L2 model and the L1 hypothesis base their prediction upon order of acquisition being the most prominent variable. The two other models have to do with typology. The Cumulative Enhancement Model (CEM) (Berkes & Flynn, 2012; Flynn, Foley, & Vinnitskaya 2004) proposes that both previous grammars can be a source of transfer during the IS and DS. Such transfer only occurs if it is facilitative, that is, if either the L1 or L2 is typologically similar and have contributing linguistic information to help with acquiring an L3. That means transfer happens property-by-property and negative transfer remains neutral. Languages that are alike will transfer, whereas languages that are not will probably remain neutral since they might not offer facilitative transfer. In the same group of typology, we have Rothman's (2010, 2011, 2013, 2015) Typological Primacy Model (TPM), which follows the CEM in the sense that transfer can come from either the L1 or the L2, but it depends on perceived structural similarities. Transfer is not necessarily guided by the language that is actually more typologically close to the L3, but the one the learner believes to be more similar. Rothman names this phenomenon *psychotypology*. Moreover, according to the TPM, transfer happens in a wholesale manner. Once the acquirer has enough experience with their L3 to decide whether their L1 or L2 is more typologically close, the grammar of the winning language will transfer as a whole in the IS.

Among these models, the CEM is the only one that makes predictions for the DS. Studies, however, have focused on comparing these models to observe their predictive power in the IS. Recently, some authors (Slabakova 2017; Westergaard et al. 2017) have suggested it is time we

push our efforts towards the analysis of the DS as well, providing us with two new models for how L3 acquisition takes place. These two more recent models suggest that it is modularity that drives L3A. This claim is a direct critique to the wholesale transfer (WT) hypothesis. Thus, modularity here must be understood as the acquirer's ability to analyze each structure of a previously acquired language (e.g., subject expression, object marking, tense-aspect morphology, etc.) and compare them to structures in the target language so that they can decide what can be transferred on a property-by-property basis.

The Linguistic Proximity Model (LPM) by Westergaard, Mitrofanova, Mykhaylyk & Rodina (2017) opposes the idea that general typological proximity is the decisive factor. Rather, similarity of abstract linguistic properties is the main cause of cross linguistic influence. Both facilitative and non-facilitative influence can occur. Their claim comes from works on executive control in bilinguals (Bialystok 2011), which show that languages in use remain active at all times and must typically be inhibited when another language is being spoken. Learners have access to all previously acquired linguistic knowledge and no part of previous linguistic competence is blocked at any stage of the process. Non-facilitative influence occurs when learners misanalyze L3 input (and/or have not had sufficient L3 input), and mistakenly assume that a property is shared between the L3 and either or both previously acquired languages. In the same direction, Slabakova (2017) proposes the Scalpel Model, which also goes against WT. Multilingual competence comes from all previously acquired languages and such knowledge is interconnected. In this sense, she compares the combination of the L1 and L2 activated grammatical possibilities to a scalpel, saying the acquirer can parse their L3 with the same precision of a scalpel to extract the enhancing, or facilitative, options of L1 or L2 parameter

values. Thus, the potential for wholesale initial transfer is rendered unnecessary because the scalpel can successfully single out the uniquely relevant features and properties. Both the LPM and the Scalpel Model predict L3A to happen in a modular manner. Because all languages are always active, learners can make use of both to analyze specific characteristics in their L3 in their subconscious search for facilitative transfer.

As mentioned, despite making predictions relevant to DS as well, most of the literature used the CEM to predict L3ers' behavior in the IS, especially comparing it to the TPM with regards to non-facilitative transfer, given that if negative transfer occurred, it would support psychotypological influence and prove TPM to be a better candidate. Assuming the ability of L3 acquirers to parse languages modularly, Slabakova (2017) and Westergaard et al. (2017) propose the field of L3A should move on from the exclusive study of the IS to also examining how L3 learners behave in the DS. Nonetheless, Alonso and Rothman (2017) claim that it is too early for us to be examining the DS and more studies on the IS are needed; there are simply still too many questions related to what knowledge makes up the IS. The authors claim that only once these questions have been answered, can we move forward to examining the DS. Nonetheless, a variety of studies on L3 Portuguese morphosyntax have examined the IS, concluding that psychotypology is the primary factor since Romance languages (frequently Spanish) serve as the source of transfer. The data indicate that transfer in the IS occurs in a wholesale manner and that TPM is the model that best predicts acquisition in the IS. Considering the literature already available on L3 IS (especially Portuguese) and considering the direction towards which a part of L3 studies (Slabakova 2017; Westergaard et al. 2017) is going due to the lack of studies on DS, I will focus my analysis on how different stages, viz., beginner, intermediate, and advanced

learners, behave before the need to access UG to re-map functional features for the acquisition of the Portuguese present perfect (P-PP). Indeed, Schwartz & Sprouse (2021: 24) address the lack of attention to UG-access:

> On our reading of the generative L3 acquisition literature, virtually all attention thus far has been devoted to transfer or CLI, while the role of UG in L3 development has essentially been ignored. We find this rather curious. The defining characteristic of generative acquisition research, in juxtaposition to other acquisition research focusing on grammatical phenomena, is the concept of UG.

Notwithstanding, focusing on the DS vs. the IS do not need to be not mutually exclusive. I agree with the points made by Alonso and Rothman (2017) regarding the need of more knowledge on the IS. Thus, in this dissertation I will make some remarks in a secondary observation of the IS. The decision of investigating both the IS and DS creates the chance to examine how modularity works when compared to typological influences from Spanish to the very similar language Portuguese. The implication from the modular models is that L3ers – who by nature have experience and high competence in acquiring languages – should be able to perceive language-specific characteristics so that acquisition can occur more economically, instead of in a wholesale manner. If modularity allows the L3 acquirer to overcome order of acquisition and typology, comparing groups in the IS and DS (beginner, intermediate and advanced levels) will allow us to observe when multilingual acquisition is carried out modularly. In other words, how early learners can successfully analyze specific characteristics of an acquiring language. Additionally, by having this language grouping (Spanish, English, and Portuguese), I will

be able to contribute to the already existing data on the acquisition of morphosyntax and help answer questions related to the IS, such as source of transfer among two typologically similar languages from the same family and one from a different one, and order of acquisition.

Portuguese has become an important and useful object of study in the L3/Ln field, especially in the US, due to the typological proximity to Spanish and to its popularity in U.S. institutions among Portuguese L3 acquirers (L3ers) with a Spanish background as either their L1 or L2 in American universities. Because of that, several studies have been conducted with the pairing of two Romance languages and English. L1/L2 Spanish-English speakers acquiring L3 Portuguese are a common combinatory resource to test both order of acquisition and (psycho)typology. A frequently used methodology is the identification of a shared structure between the L3 and one of the previous languages, so one can attempt to trace a possible source of transfer. For instance, Salaberry (2005) carried out a study on the preterit-imperfect morphology dichotomy in Romance languages in a L1 English-L2 Spanish-L3 Portuguese group. Carvalho and Silva (2006) on present and future subjunctive, Rothman (2010) on adjective placement, and Montrul, Dias and Santos (2010) on verb complements. All these studies supported TPM since the (psycho)typological proximity between Spanish and Portuguese was the decisive factor of transfer. While the data is very important to the field, it is somewhat limiting that studies primarily examined a facilitative structure from a previously acquired grammar. After all, what happens when, for a given linguistic phenomenon, neither the L1 nor the L2 have facilitative information? In other words, what data will we get and what can we conclude from a study in which the L3 is overall very similar to the L1 and L2, but differs significantly in a structural false cognate?

Intending to answer those questions, I will address another topic of interest in L3/Ln Acquisition, a debate with a long history inherited from generative approaches to Second Language Acquisition dealing with the question of whether L2 acquirers have access to Universal Grammar in adult acquisition. For years, researchers have provided diverging data related to the discussion. On one side of the debate (Bley-Vroman 1990; Meisel 1997), there are those that believe adults can no longer rely on UG in L2 acquisition. Thereby, access to UG knowledge is constrained and functional categories can only be acquired in an additional language if these categories are already instantiated in their L1: the Partial Access Hypothesis (Hawkins & Chan 1997). Contrastively, there is the other side that claims access to UG in adulthood is possible: the Full Transfer/Full Access Hypothesis (e.g., Schwartz & Sprouse 1996). Within this latter group, Prevost & White (2000) proposed the Missing Surface Inflection Hypothesis (MSIH), which asserts that access to UG takes place despite some level of non-target production by learners. This implies that knowledge of functional features might be available even when appropriate morphology might be missing in production due to performance limitations or difficulties.

To the extent of my knowledge, this will be the second study on the acquisition of the P-PP and the first study on the L3 acquisition of the PP. It is also the only L3 study that examines the acquisition of aspect with this grouping of languages. In fact, the PP is an understudied topic in acquisition; possibly because there is variation in meaning within and across languages. Laca (2010) reviewed three formal theories on the PP and she concluded that none of them are singularly able to account for the different readings (meanings) associated with the morphology of the PP. Hence, in my dissertation, I propose a new syntactic model in chapter 4 that accounts for the semantic differences among English, Spanish, and Portuguese. It is based on the intuitive

definition (Algeo 1976; Akerberg 2006; Bybee et. al 1994; Comrie 1976, 1985; Dahl 1985) that the PP expresses an eventuality that occurs prior to the reference time and is relevant to the present: a past action with current relevance. My model accounts for the different aspectual meanings in the past associated with the imperfect, preterit (perfective) and perfect with two features [±perfective, ±continuative].

Portuguese and Spanish are Romance languages and, hence, are very closely related. English, in turn, is not part of the same language group. Nevertheless, its syntax and lexicon often share some similarities with both. In fact, I have chosen to examine the acquisition of the Portuguese present perfect because it has parallels with Spanish and English morphologically and syntactically but differs semantically from both. Semantic differences are evident in the different combinatorial possibilities of morphology and the inherent aspect of verbs and types of adverbials for each language. In examples (1-3), PP expresses an action that took place in the past, but its results have some sort of relevance to the present, thus producing an experiential or resultative reading.

[Experiential Reading]

(1) The boy **has finished** his homework (ENG. Present Perfect)

(2) El niño **ha terminado** su tarea de casa (SPAN. Present Perfect)

(3) O menino **já** **terminou** sua tarefa de casa (PORT. Preterit + Adverb)

The.M boy already end-PRET his.F task of home

'The boy has finished his homework'

In Portuguese (3), this experiential reading is manifested overtly through the combination of the preterit and an adverbial ("já" *already*, "nunca" *never,* or "ainda não" *not yet*) and is ungrammatical with the PP in Portuguese. In turn, the P-PP obligatorily and exclusively expresses a past action protracted up to the moment of speech and, sometimes, perhaps further: a continuative reading (4).

[Continuative Reading]

(4) O menino não **tem** **feito** a tarefa de casa (PORT. Present Perfect)
The.M boy NEG have.PRS.3SG do.PTCP the task of home
'The boy hasn't been doing his homework'

(5) a. The boy **hasn't been doing** his homework (ENG. Present Perfect Continuous)
b. The homework **has been** incomplete **for days** (ENG. Present Perfect + Adverb)

English may manifest the same through either the present perfect continuous (5a) or the present perfect with stative verbs and a durational adverbial (5b). Likewise, Spanish can generate a continuative reading by using the present perfect continuous (6a) or the present perfect and a durational adverbial (6b).

(6) a. El niño no **ha estado haciendo** las tareas (SPAN. Present Perfect Continuous)
b. El niño no **ha hecho** las tareas **hace días** (SPAN. Present Perfect + Adverb)

This means that, despite all three languages having a structural PP with very little variation, neither the L1 nor the L2 provide direct facilitative information. On the contrary, typology and psychotypology would be misleading and cause negative transfer. In order to successfully acquire the P-PP, learners would need be able to analyze their L3 modularly and figure out this specific mismatch. Once they parse it, they would have to access UG to reset aspectual values on the PP morphology in Portuguese. Therefore, in this particular case, neither order of acquisition nor typology can be facilitative. At this point, we can predict that, if L3ers transfer from their L1 or L2 exclusively, either the L1 hypothesis or L2 Status Factor will be corroborated. If subjects only transfer from Spanish, TPM will be supported. So will CEM, if and only if L3ers transfer continuative readings and block experiential PP. If participants demonstrate knowledge of the semantic differences among their previously-acquired grammars and the L3 even at the IS and beginner stage, we can conclude that modularity can override typology and order of acquisition. The research questions related to L3 Acquisition that I intend to answer in this dissertation are:

1) Do both languages serve as source of transfer or does one have a privileged role? In this case, which will transfer?

2) Which of the current L3/Ln Acquisition models best predicts how acquisition occurs? That is, what influences L3A the most: order of acquisition, (psycho)typology, or modularity?

While all three languages present for the PP a verbal construction with an auxiliary verb of possession in the present and a main verb in the participle form, the semantic features, i.e.,

inherent lexical aspect, associated with each construction vary across languages. By examining how lexical and grammatical aspects are interpretable in the three languages under study, I will be able to contribute to the discussion of access to UG in adulthood. Under the Minimalist Program (Chomsky 1995 *et sequens*), functional categories and their feature specifications are the locus of all cross-linguistic differences. In this sense, if learners have acquired a specific functional projection, they will have knowledge both of the inflectional morphology and the semantics associated with this projection (Slabakova & Montrul 2002). Following this line, acquisition of the semantics comes for free once the acquisition of morphosyntax occurs. Therefore, successful remapping of functional features onto different morphology, which is the acquisition task under study, should point towards access to UG.

Cabrelli Amaro, Flynn and Rothman (2013) observed that L3 studies lack some standardization and methodological precautions. According to them, researchers need to a) determine which variables we should include or exclude when selecting participants; b) solve some problems regarding the comparative fallacy (Bley-Vroman 1983; Sorace 2011) with control groups; and c) create independent linguistic competence exams for L3/Ln acquisition. Rothman (2013) points out that even among researchers who study multilingualism, the criteria used to determine what constitutes a third language are not unambiguously defined. Montrul, Dias and Santos (2010) remind us that, if level of development matters for the timing and extent of transfer in L3 acquisition, then studies should also control for proficiency levels in the L2, and, according to them, that is hardly done. This dissertation does not intend to resolve all the methodological needs mentioned above, but to take into consideration such arguments to advance to a more coherent methodology in the field. Bearing those points, in my study subjects

participated in a two-step online survey. Adding a primary screening helped control for the characteristics of each group. Their proficiency was measured in their L3, and their knowledge of the PP was tested in their L2. Sorace (2011) asserts that using monolinguals as a control group would cause a comparative fallacy (Bley-Vroman 1983) due to how the brains of bilinguals differ from monolinguals because of the constant linguistic suppression bilingual brains go through. An alternative that has been put forth (Cabrelli Amaro et al. 2012; Rothman 2013; Alonso and Rothman 2017) to avoid the comparative fallacy is to use a mirror-image group to compare results. Indeed, my experimental groups are a) L1 English-L2 Spanish-L3 Portuguese and b) L1 Spanish-L2 English-L3 Portuguese. A further measure I took was to have a group of bilingual/trilingual Portuguese native speakers. The second part was a 30-minute questionnaire with 4 tasks: one syntax, one morphology and two semantics tests.

The object under study is the temporal-aspectual construction PP. This dissertation will examine the acquisition of morphosyntax of L3 Portuguese by Spanish-English bilinguals and will test the predictions of 3 groups of L3 Acquisition models: order of acquisition, typology and modularity, in order to observe what variables influence L3A. This study will contribute to the field of L3/Ln Acquisition and the discussion of UG-Continuity (the possibility of acquiring linguistic functional features in adulthood) and will provide data to studies on Tense and Aspect Acquisition. The distinguishing factor of this research resides in the methodology because the PP in Spanish and English are very similar and have morphological and semantic overlaps with Portuguese as well. However, there is a semantic mismatch: English (5) and Spanish (6) license both an experiential (anterior) reading and continuative reading, while Portuguese (4) can only generate the latter. Experiential readings, as we saw in (1-3), manifest themselves in Portuguese

through the combination of the preterit and an experiential adverb (*já, nunca, ainda não*). Most studies on L3/Ln Acquisition examine the influence of previous languages in the cognitive process of acquiring a new one. They do it by attempting to trace a possible source of transfer from a shared structure between the L3 and one of the previous two languages. The key of my study is that it will observe what happens when the L3 has a property with overall typological proximity to the L1 and L2 but differs significantly in a specific context, rendering typology and order of acquisition non-facilitative. In my case, the PP in Portuguese is a structural false cognate even though Portuguese and Spanish are closely related languages[1]. Thus, I will investigate a) how well L3 acquirers can identify in the languages they already know which linguistic information is facilitative and which is not; b) the cognitive ability to transfer or block such information; c) if choosing what to transfer or block is possible, how early it is. For that, I will compare participants in the IS of acquiring Portuguese to those with longer exposure to the language (developmental stages groups). Whereas for L1 children it is assumed that UG is the initial state, it is less clear what the initial state is for adult L2 learners. Rothman (2013) assumes that the FT/FA model (Schwartz & Sprouse 1996), which claims that the L1 system in its entirety constitutes the L2 initial state, is correct. He does not define what the initial state is exactly, but he highlights that the initial state itself is not analogous to beginner stages of acquisition; rather, it is what the learner brings to the task of starting to acquire a target language and the period during which the decision of which language to transfer takes place. In this study, I will assume that participants who are in their first six months of exposure to Portuguese—either formally or informally—are in the IS. Comparison to the first developmental stage (novice/beginners) will shed light on how

[1] It is presumed that Portuguese and Spanish share around 85% of their vocabulary (Ulsh 1971; Green 1988).

fluid the IS can be. That is, whether the IS can take more than months, if it should be limited to a shorter period, or if it should be a separate category at all.

Let us recall that some authors believe adults can no longer rely on UG in L2 acquisition (Hawkins & Chan 1997; Beck 1998; Meisel 1997), while others think there is partial access (Schacter 1990; Bley-Vroman 1990) – UG knowledge is constrained, and functional categories can only be acquired in an additional language if these categories are already instantiated in the L1. Given that there is a mismatch between aspectual features and morphology of English and Spanish PP compared to Portuguese PP, if learners demonstrate knowledge of acquisition of Portuguese PP, that data will support access to UG in adulthood, since it cannot be transferred from any previous language. In sum, the questions concerning acquisition of functional features that guide this research are: 1) do English-Spanish bilinguals demonstrate evidence of acquiring the PP in Portuguese? 2) Does acquisition of abstract functional features, such as aspect, take place before, after or simultaneous to the acquisition of functional morphology? 3) Does resetting preterit to both perfectivity and anteriority and the PP to always output continuative readings in Portuguese take place simultaneously, or is there the emergence of one phenomenon prior to the other?

The goal of my study is to provide data for a better understanding of how L3 acquisition takes place and to contribute to the field of acquisition of formal features in adulthood. Moreover, Portuguese has become an important and useful object of study in the L3/Ln acquisition field, given the high number of students with a Spanish background either natively or sequentially taking Portuguese as their third language in American universities. Hence, my dissertation contributes to Applied Linguistics and Language Teaching, providing data of

particular relevance to Portuguese programs in the US, whose student demographics are, in large part, similar to the participants in this study.

In the next chapter, I will review the literature regarding the distribution of the PP in English, Spanish and Portuguese as well as the problematic labels associated with the perfect. Still in chapter 2, I address previous studies related to acquisition of functional features, and second language and third language studies on Spanish and Portuguese tense-aspect. Chapter 3 brings theoretical accounts for the PP and the shortcomings of each, motivating the need for a new approach. This leads to chapter 4, where I propose my model that demonstrates the syntax of the perfect in the three languages and that motivates the durative vs. iterative readings in the P-PP.

CHAPTER 2

LITERATURE REVIEW AND THEORETICAL ACCOUNTS

2.1 Terminology and Background on the Perfect and the Present Perfect

The term *perfect* has been a confusing concept in the literature, being sometimes confused as a synonym to *perfective*. Contributing to the confusion, it is sometimes used to refer to tense, other times to aspect, or even both. Thus, before moving forward to the distribution of the PP in English, Spanish and Portuguese, it is important to clarify the differences among the labels *perfective*, *imperfect,* and *perfect* in terms of formal features and morphology, especially as they will be used in this dissertation. To do so, let us first observe Bhat's (1999) definitions of tense and aspect. Tense is an inflectional marker of the verb which is used to denote the temporal location of an event. It is necessary to make use of some other event which occurs before, simultaneous to, or after the event as a reference point to indicate its temporal location. While tense indicates the temporal location of an event, aspect indicates the temporal structure of such event, i.e., the way in which the event occurs in time (i.e., ongoing, or complete, beginning, continuing, or ending). In accordance with Comrie (1976) and Dahl (1985), Bhat (1999) defines the perfective as the aspect that provides the view of an event as a whole from outside. It is unconcerned with the internal temporal structure of the event and views the situation as bounded, and as forming a unified entity. Meanwhile, the imperfective provides the view from inside and is crucially concerned with the structure of the event. It views the situation as on-going

or habitual. This distinction is better understood in the past tense, where Romance languages have two different morphologies for each aspect: the perfect preterit and imperfect preterit, which have evolved in English to the simplified terms *preterit* (bounded past) and *imperfect* (unbounded past).

(7) Comí un flan la semana pasada
eat.1SG.PRET a flan the.F week last
'I ate a flan last week'

(8) Comía flan todos los fines de semana
Ate.1SG.IMP flan all.M.PL the.M.PL ends of week
'I ate/used to eat flan every weekend'

The preterit in (7) focuses on the end of the event: the eating of the flan is over. Meanwhile, the imperfect does not make any assertions to either the beginning or the end of the event but focuses on the internal structure of the event even though we can easily infer that the action in (8) is completed and the eating of those flans are finished. The assertion being made has the value of repetitiveness inside an interval in the past, denoting a past habit of eating flans, and without any overt indication of when it ended. English marks this distinction in a more complex manner, better exemplified in Slabakova's (2012) representation, reproduced here in figure 1. The imperfect is a morphology in the Romance languages with [-perfective] features, whereas the preterit is [+perfective] (e.g., Giorgi & Pianesi 1997). Thereby, perfective is an aspect whose

internal structure is seen as closed and completed. This functional feature can also be associated with the present and the future. However, in this dissertation, I will focus on the past only.

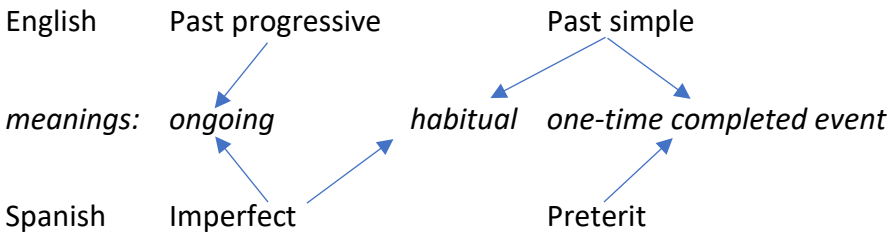


Figure 1. Slabakova's (2012) imperfect vs. preterit in English and Spanish

Now let us move to the *perfect* vs. *perfective*. In both Spanish (10), and Portuguese (11), the (past) perfective is expressed overtly by the preterit morphology. In English (9), it is manifested with the simple past. In these sentences, the event of sleeping is regarded as a past action that started in the past and is also finished, without the possibility of perceiving the event continuing up to the utterance time. The situation is reported for its own sake and independent of its relevance to other situations (Bybee et al. 1994). Here, we are simply reporting an event in the past.

(9) Carlos slept after dinner

(10) Carlos durmió después de la cena

(11) Carlos dormiu depois da janta

Perfect is also an aspect. Again, it can be associated with other tenses. But we will focus on past situations here. Thus, broadly speaking, the perfect describes a past event that maintains some

type of relation to the present, whether by pragmatic current relevance or continuity of the event. In English (12), Spanish (13), and Portuguese (14) the perfect is manifested morphologically by a periphrastic temporal-aspectual construction usually defined as present perfect.

(12) Carlos has slept a lot

(13) Carlos ha dormido mucho

(14) Carlos tem dormido muito

The English present perfect (E-PP) in (12), Spanish present perfect (S-PP) in (13) and Portuguese present perfect in (14) express that the event of sleeping started somewhere in a non-specific past, and that event or the effects of that event are protracted up to the moment of speech. Unlike *the perfective* (9-11) that simply reports the event for its own sake, the *perfect* (12-14) tends to have a pragmatic value: it may implicate, for example in (12) and (13), that because Carlos has slept a lot, he has recovered from a long trip, or that he is well-rested now; in (14), however, Carlos has been sleeping a lot lately, perhaps because of an illness.

One important commonly mentioned difference between the perfective and the perfect is the "present perfect puzzle" (Klein 1992). Although PP makes reference to the past, it is unable to take specific past adverbials (15). Additionally, the perfect does not express sequences of past actions[2] (16) – a function of the perfective (17).

[2] Some authors have shown uses of the Spanish Present Perfect in American varieties with a perfective value (Hernandez 2004, 2006a, 2008; Howe and Schwenter 2003; Kempas 2006; Schwenter 1994a; Schwenter y Torres-Cacoullos 2008)

(15) *Carlos has eaten his dinner last night

(16) *Carlos has cooked his dinner. Then, he has eaten it. Later, he has washed the dishes.

(17) Carlos cooked his dinner. Then he ate it. Later, he washed the dishes.

Such perfective-perfect distinctions are valuable to comprehend different shades of manifesting past events, but saying what the perfect isn't does not define what it is. Bybee et al. (1994) claim that the definition generally agreed upon is "a past action with current relevance". The goal is not to locate a situation at some definite point in the past, but only to offer it as relevant to the current moment; thus, it is also called *indefinite past*. This definition is the logical conclusion from the evidence the present perfect puzzle brings: the inability of taking definite past adverbials. Nonetheless, if we accept it, we are left with explaining what "current relevance" is, particularly, if we take Gricean Maxims in consideration. According to Grice (1975), to achieve effective communication, speakers follow certain cooperative principles. One of them – the Maxim of Relation – is to only say information pertinent to the conversation. In that sense, any sentence uttered, regardless of a specific tense and aspect, is relevant to the current moment of speech. For now, this is an intuitive definition that suffices to categorize the perfect to its own. It is also in accordance with other authors (Comrie 1976, Bhat 1999), who defend the use of the term *perfect* as the concept of "present relevance of a previous event". I will elaborate on this matter further in Chapter 4, nevertheless, let us work with this definition for now since it is enough to comprehend the aspectual readings commonly associated with the PP, the object of study in this dissertation. The first reading is said to be the prototypical use of a perfect: anteriority. The anterior reading points out to an event prior to the moment of speech (18):

(18) I have been here (before)

As a subtype of the prototypical/anterior reading, we also have the experiential reading, in which certain qualities or knowledge are attributable to the agent due to past experiences. These have pragmatic value, often causing implicatures.

(19) Clark has taken a class in statistics

+> So he can help us with this project

(20) I've just eaten dinner

+> I do not want any more food

The *resultative,* which denotes a state that was brought about by some action in the past, is similar to the one of an anterior, which indicates that a past action has relevance in the present:

(21) He has opened the door (the result of his action is that the door is now open)

Next, we have the aspectual value of *continuing* (sometimes labeled as *persistent* or *universal*) reading, in which a past action continues into present time. This can happen as a single event – durativity (22) –, or a repetition of the same event throughout time – iterativity (23):

(22) I have waited my whole life for this

(23) I have painted this house every day since last week

So far, we have discussed several labels of morphology and aspect related to the past tense. Some of these labels overlap at naming aspectual values and morphological expression. Table 1 summarizes which morphology the broad aspect nomenclature describes.

Table 1. Summary of Aspect and Morphology in the Past

	ENG Morphology	SPAN Morphology	PORT Morphology
Imperfect Aspect	Simple Past	Imperfect	Imperfect
Perfective Aspect	Simple Past	Preterit	Preterit
Perfect Aspect	Present Perfect	Present Perfect	Present Perfect

Now that we have covered the perfect in detail, it is time for us to move to the temporal-aspectual construction of the PP.

Dahl (1985) and Bybee (1985) noted some crosslinguistic patterns of the PP. They often come from expressions with a copula or possession verb plus a past participle. The PP tends to evolve from the resultative reading to the anterior, which, in turn, develops into perfective. In French and Italian, the perfect morphology evolved to express the perfective aspect by default. This evolutionary path (resultative > anterior > perfective) has been more specifically analyzed in the Romance languages (Harris 1982; Squartini and Bertinetto 2000; Louro and Howe 2010), which came to be named as the "Aoristic Drift". Harris (1982) proposes four stages of evolution and shows which Romance languages are in each (Table 2):

Table 2. Summary of Harris' (1982) Approach (Adapted from Louro and Howe 2010)

Stage – Reading	**Languages**
I. Original Static *Resultative*: Present States resulting from past situations	Calabrian, Sicilian
II. Durative/Iterative: *Continuing* situations extending into the present time	Portuguese and some varieties of Latin American Spanish
III. Prototypical/*Experiential*: Past situations with current relevance	Catalan, Peninsular Spanish
IV. Neutralization with Preterit: default marker for all past situations	French, Northern Italian

In terms of morphology, English, Spanish and Portuguese follow the crosslinguistic pattern of verbal construction for the Present perfect, for in all three languages, it is composed of an auxiliary verb of possession in the present tense and a main verb in the past participle. The difference is that Portuguese uses the verb *ter* (Sp. *tener*) as its auxiliary instead of *haver* (Sp. *haber*). In addition to these morpho-phonological distinctions, the semantics also differ since experiential readings manifest differently in Portuguese. As pointed out by Akerberg (2006), these stages can be seen as a kind of hierarchy: if a language has reached a further stage, then it also licenses the readings from previous stages. Much like described in Table 2, Spanish and English can express Experiential (Stage III), Continuing (Stage II) and Resultative (Stage I). Meanwhile, Portuguese expresses with the Present perfect only Continuing and Resultative. While Harris' proposal is mostly based on the observation of the evolution of French and Italian and does not necessarily predict that all other languages will follow the same path, it can help us understand the current semantic differences among languages.

At the beginning of this section, I mentioned that in the literature the label *perfect* overlaps with perfective and is inconsistently used to address aspect, tense, or both. While we reviewed the readings accompanied by the perfect, the reader might have noted that there are

many other labels that can refer to the same thing. For example, the terms *experiential, existential,* and *prototypical* are used interchangeably. Even worse is the case of *persistent*, which can be described too as *continuing*, *durative,* or *universal*. For now, the *perfect* is an aspect that brings the continuity of an event or its effects up at least to the moment of speech. How this event or its effects occur through time may result in different readings, which I summarize in two aspects: anterior and continuative (see Chapter 3). The first consists of experiential and resultative readings, since these focus on the event having happened and ended before the moment of speech and only its results are brought to the present. Continuative refers to both iterative and durative readings, which take place when an event started in the past and continues up to the present. All those readings comprise the perfect aspect (see Table 3). The term *present perfect* represents the morphology, which in English, Spanish and Portuguese is represented by the structure <*have/haber/ter* + past participle>. As we will see in the following sections, English and Spanish have a more structured aspect-to-morphology distribution. Portuguese, however, differs semantically, as its PP does not encompass all readings.

Table 3. Summary of Perfect Aspect Readings

ANTERIOR Event happens prior to present. Its effects linger.	Experiential Resultative	I have been here (before) I have closed the door
CONTINUATIVE Event starts in the past and continues to the present.	Durative Iterative	I have waited for this my whole life I have painted this house every day since last week

Now that we have reviewed the terms *perfect* and *present perfect*, let us move to the detailed semantic distribution for each of the languages and see how Portuguese seems to be an outlier to Harris' approach, which can cause difficulties for Portuguese learners.

2.2 The English Present Perfect

The E-PP is composed of a present conjugation of the verb *have* (e.g., have or has) as the auxiliary and a main verb in the participle form. The default semantic output is an experiential or resultative reading. The first means that an agent has gone through a prior experience and is presenting its effect to the present. For instance, if we consider a group of Spanish students talking about their classmate, David, having a distinctive accent, (24) E-PP would be an example of an experiential reading. By saying that David has been to Spain, we would be implying that this prior experience of his caused the effect of him having a distinctive accent in the present. Note that a time adverbial would lead to ungrammaticality, since the PP's focus is on the experience, not when it happened (cf. simple past).

(24) David has been to Spain (*two years ago)

(25) John has read the book

Moving to the resultative, we have a classic example of this reading in (25). In this case, there is a book, and John did the action of reading it. The result of that event is that the book is read. Note that the same sentence can also express experientiality. Let us imagine that a group of friends goes to a theater to watch a cinematographic adaptation of a book. The movie was

confusing to all of them, but John, we can say, was not confused because he had the previous experience of having read the book. Remember that since both readings assert that an action took place before the present, I will be referring to them as *anterior*. Furthermore, English can generate durativity through the E-PP with atelic verbs (mainly with statives, and marginally with activities), and the durational adverbials "since" and "for" often accompanying the durative PP:

(26) Carla has been sad (since her grandfather's death)

Example (26) expresses that Carla started being sad in the past and continues with this state up to the present. Finally, English produces iterativity with the addition of a progressive to the PP. That is the case of the English present perfect continuous (E-PPC).

(27) a. Ricardo has been arriving late

b. Ricardo has arrived late many times this week

c. Ricardo has eaten apples every day this week

In (27a) we have Ricardo, who usually arrives early at work, but in the past week arrived late multiple times. Perhaps he will continue arriving late. We can have iterativity, too, without the continuous morphology in more specific cases if we quantify the event with a quantity or frequency adverb (27b) or a pluralized object (27c). In such cases, iterativity is created by inference since it would be quite odd to think Ricardo has been in the same non-stop state of eating apples the whole week.

Michaelis (1994) argues that there is ambiguity in readings in the E-PP. In her example in (28), she claims some cases can have either a continuative or existential (anterior) reading. Note that her example contains a quantifier of duration (*for two days*):

(28) Harry has been to Bali for two days

Continuative: Harry's presence in Bali obtains for all times within a present-inclusive time span whose lower bound is two days ago.

Existential: There were one or more visits to Bali by Harry within a present-inclusive time span; each of these visits lasted two days.

In addition to the perfect puzzle, licensing of E-PP depends on the presupposition of repeatability (Inoue 1979; Smith 1997; Molsing 2006). Felicitous use requires that the event is repeatable, and the referents exist at the time of utterance (Smith 1997). The famous example in (29) shows that E-PP is unacceptable since Einstein can no longer visit Princeton again since he is dead. The sentence in (30), however, is acceptable if it meets the requirements of the museum exhibit still being open and the interlocutor to whom the question is being asked having physical capabilities of visiting the museum exhibit.

(29) ?? Einstein has visited Princeton

(30) Have you visited the Money exhibit?

Bybee et al. (1994) demonstrate another use of the E-PP apart from resultative, experiential, durative, and iterative readings. It is the case of the "new situation" or "hot news", exemplified in (31) and (32).

(31) Nixon has resigned

(32) Mt St. Helens has erupted again!

These are subtypes of the anterior since they focus on the effects of a past event on the present. Table 4 summarizes all types of readings generated by the E-PP.

Table 4. English Present Perfect

Anterior	Experiential	Present Perfect
	Resultative	Present Perfect
Continuative	Durative	Present Perfect + Atelic Verb
	Iterative	Present Perfect Continuous Present Perfect + Frequency Adverb Present Perfect + Pluralized Object

2.3 The Spanish Present Perfect

The S-PP is composed of the auxiliary present conjugation of *haber* (e.g., *he, has, ha, hemos, habéis, han*) and the main verb in the past participle form. Very much like English, the S-PP outputs anteriority by default: (33) exemplifies an experiential reading and (34) a resultative/experiential one.

(33) David ha ido a España

(34) John ha leído el libro

Like the English sentence exemplified in (24), the Spanish sentence shown in (33) means that sometime in the past David went to Spain and, because of that experience, he has some attribute or knowledge that is relevant to the present, let us say, that is the reason why his accent in Spanish is peculiar. Likewise, if we needed someone to give a talk on going abroad, (33) would represent an utterance with the pragmatic meaning of "David has been to Spain, therefore he can talk about going abroad." The example of S-PP in (34), similarly to the E-PP shown in (25), can have a resultative reading of John's activity; that is, he has a book that is read now, thus he has read the book. This can also have an experiential meaning if, again, we take the case of a group of friends confused about the plot of a movie, which was based on a book. John is the only one who understood it, because in (34) he has had the experience of reading the book and acquired the relevant knowledge.

Although anteriority is the default output, S-PP can generate continuative readings as well. Durativity can be produced with the use of atelic verbs and durational adverbials. Consider the following examples:

(35) Carla ha estado triste (desde la muerte de su abuelo)

(36) a. Ricardo ha llegado tarde (muchas veces esta semana)

b. Ricardo ha estado llegando tarde

c. Ricardo ha comido manzanas (todos los días) esta semana

In (35), Carla got sad when her granddad passed away and continues with the state of sadness up to the present; this reading is possible because of the durational adverbial *desde* (since), which extends the right temporal boundary of the event to at least the moment of speech. In turn, iterativity manifests through the insertion of a frequency adverbial (e.g. *muchas veces* in 36a), which makes the eventuality heterogeneous and forces us to perceive the event as a frequent repetition of arriving late within the time frame of somewhere in the past (somewhere this week) and now. Like the E-PP (27), iterativity can be produced too by the addition of the gerund within the Spanish present perfect continuous (S-PPC) (36b). As already shown in the E-PP (27c), there is yet another way to generate iterativity. The telicity of the verb *eat* (*comer*) changes when we pluralize the object. By quantifying the predicate, especially with the help of a frequency adverb, iterativity is created by inference. Once again, the event of eating apples must be understood as heterogeneous, since it would be odd to think Ricardo has been in a homogeneous event of eating apples constantly for a week.

The pragmatic influence that the PP has often makes the selection of a specific reading depending on context. Imagine a family who recently got groceries and had a fruit bowl full of apples on the kitchen table. A week later someone passes by it and is surprised by seeing the bowl a lot emptier. Someone, then, utters (36c). In such case, the reading would be the default anterior with the effects of its event lingering in the present. The implicature would be that Ricardo ate apples, therefore the fruit bowl is emptier.

The examples above, which are almost direct translations from the English ones, demonstrate how similar the E-PP and S-PP are morphosyntactically and semantically. However, we can find significant differences in some varieties of Spanish. Generally, Spanish and English

have the prototypical perfect: anteriority. If we recall, the "Aoristic Drift" (Harris 1982; Squartini and Bertinetto 2000; Louro and Howe 2010) addressed in the introduction had some Latin American varieties of Spanish in the second stage, the same as Portuguese. According to Akerberg (2006), the different varieties of Spanish have resultative and experiential uses of the perfect, some more extended to one than the other. Mexican (Lope Blanch 1972; Moreno de Alba 1978, 2003; Colombo 2003, 2004), Colombian (Berschin 1975) and Argentine Spanish (Kubarth 1999) are the ones that show a preference for the use of the perfect for continuative readings. Indeed, Akerberg (2006) demonstrates that in Mexican Spanish, PP is favored for continuative readings or for repeatable events. There is a tendency for Mexican Spanish to use preterit with *ya* (already) for anteriority – which is exactly how it is expressed in Portuguese. Her examples are reproduced below:

(37) He vivido toda mi vida en este pueblo (Continuative = PP)
'I have lived in this town all my life'

(38) Ya fui a Europa (Anterior = Preterit).
'I've already been to Europe'

Another variety that needs attention is the case of Peninsular Spanish, which exhibits a unique use of the PP for recent past events, usually within a 24-hour time frame: the hodiernal perfect. Thereby, (39) means that sometime today Veronica bought some food. A striking difference is that it can be combined with very specific time adverbials, such as *hoy* 'today' or *esta mañana* 'this morning' (40).

(39) Verónica ha comprado comida

'Veronica bought food today'

(40) He bebido mucho café esta mañana

'I had a lot of coffee this morning'

(41) ?I have had a lot of coffee this morning

Dahl (1985) comments on the evolution of a prototypical perfect to the hodiernal perfect as a natural one. Perfects present the effects of a past event as relevant to the present. Hence, a recent event is more likely to have a persistent result than a distant one. Louro and Howe (2010) found that, in addition to accepting specific time adverbials and expressing recent past, Peninsular Spanish also indicates overt temporal sequence with events narrated within the same day as the speech event. This is intriguing because a) sequence of events is a function widely attributed to perfectives, such as preterit (Portuguese and Spanish) and simple past (English); b) it points to the possibility that Peninsular Spanish might be moving towards the neutralization between perfectives and perfects. Lindstedt (2002) claims that when a perfect converts into a tense of narration, then it is no longer a perfect both functionally and semantically. Such cases have happened in French *passé compose* and Italian *passato prossimo* (see Table 2). Despite attested particular uses of the perfect in the Mexican and Peninsular variety, it is important to keep in mind that they manifest anterior and continuative readings, with the PP like all other varieties and that such a distribution has very strong parallels with the E-PP. A summary of the S-PP is below in Table 5:

Table 5. Spanish Present Perfect

General Spanish		
Anterior	Experiential	Present Perfect
	Resultative	Present Perfect
Continuative	Durative	Present Perfect + Atelic Verb
	Iterative	Present Perfect Continuous Present Perfect + Frequency Adverb Present Perfect + Pluralized Object
Dialectal Variation		
• Mexican Spanish prefers *Preterit + Ya* for Anterior • Peninsular Spanish produces (narrative) hodiernal perfects		

2.4 The Portuguese Present Perfect

The structure of the P-PP consists of the combination of a possessive verb as the auxiliary and a main verb in the past perfect. However, unlike Spanish, Portuguese does not use the verb *haver* (Sp. *haber*). Instead, the P-PP employs the present conjugation of the auxiliary *ter*[3] (e.g. *tenho, tens, tem, temos, têm*). At first glance, morphosyntactically, Portuguese seems to be the same as the other two languages. Nevertheless, the default semantic output of the P-PP is not an anterior reading, but a continuative one. In fact, P-PP is so peculiar that within the continuative reading, durativity requires a specific context. The very default semantic output then is an iterative reading.

(42) John tem ido a Espanha
John have.PRS.3SG go.PTCP to Spain
'John has been going to Spain'

[3] S-PP uses auxiliary *haber* (Pt. *haver*). P-PP uses *ter* (Sp. *tener*).

A sentence like (42) expresses that John has had multiple instances of going to Spain; the same reading one can get from the E-PPC and S-PPC. It cannot have an anterior value of John having already been to Spain. In fact, Portuguese does not license sentences in which the event cannot be iterated, like one's dying (43). Compare this structure to the examples in English (44) and in Spanish (45) where such sentences are grammatical, but with an intrinsic value of anteriority.

(43) *John tem morrido
John have.PRS.3SG die.PTCP
'John has been dying'

(44) John has died

(45) John ha muerto

The unavailability of the anterior reading can also be evidenced by the inability of combining the P-PP with the adverbials commonly associated with an anterior PP, such as *já* (En. *already*; Sp. *ya*), *nunca* (En. *never*; Sp. *nunca*) and *ainda não* (En. *not yet/still not*; Sp. *todavía no/aún no*). Example (46) shows these adverbials cannot accompany the P-PP, as they offer a meaning of experientiality. Observe that this is very different from English and Spanish, as these adverbials are grammatical in E-PP (47) and S-PP (48):

(46) a. *Marcos **já** tem ido a um estádio de futebol
b. *Marcos **nunca** tem ido a um estádio de futebol
c. *Marcos **ainda não** tem ido a um estádio de futebol

(47) a. Marcos has **already** been to a soccer stadium

b. Marcos has **never** been to a soccer stadium

c. Marcos has **not** been to a soccer stadium **yet**

d. Marcos has **still not** been to a soccer stadium

(48) a. Marcos **ya** ha ido a un estadio de fútbol

b. Marcos **nunca** ha ido a un estadio de fútbol

c. Marcos **todavía/aún no** ha ido a un estadio de fútbol

We now know two things about Portuguese PP. First, the default output is continuative (especially, iterative). Second, the aspectual value of anteriority is not mapped onto the P-PP morphology. Then, how does the anterior reading manifest in Portuguese? Grammatical experiential and resultative utterances take place with the combination of experiential adverbials (*já*, *nunca* and *ainda não*) and the preterit. Ungrammatical anterior P-PPs in (46) can be grammatically and felicitously expressed in Portuguese with the preterit as in (49):

(49) a. Marcos **já** **foi** a um estádio de futebol

Marcos already go.PRET.3SG to a stadium of soccer

'Marcos has already been to a soccer stadium"

b. Marcos **nunca** **foi** a um estádio de futebol

Marcos never go.PRET.3SG to a stadium of soccer

'Marcos has never been to a soccer stadium"

c. Marcos **ainda não foi** a um estádio de futebol

Marcos yet NEG go.PRET.3SG to a stadium of soccer

'Marcos has not been to a soccer stadium yet"

The previous section on Spanish examined Akerberg's (2006) study that compared some uses of the Mexican Spanish perfect to the P-PP in two instances. Mexican Spanish PP favors a continuative reading, and anteriority is often produced with preterit + *ya*. Although these two cases are very similar to Portuguese, saying that Mexican Spanish and Portuguese are the same is an incorrect, hasty conclusion. Mexican Spanish tends to use the PP for continuative readings, but it is still grammatical to use PP for anteriority, especially with experiential adverbials. In contrast, Portuguese does not license anteriority with PP in any context. Preterit is the obligatory morphology for anterior readings. Whereas in Mexican Spanish it is the preferred one when the event cannot be repeatable, as shown in Akerberg's examples (50), such a distinction is not possible in Portuguese (51):

(50) a. No lo he visto [pero tal vez lo vea]

'I haven't seen him [but maybe I will]'

b. No lo vi [en esa ocasión especial]

'I didn't see him [in that especial occasion]'

(51) a. *Não o tenho visto [mas talvez o veja]

b. Não o vi [naquela ocasião especial]

According to the Aoristic Drift account, Portuguese is in the second stage with the 'persistent perfect', which means it comprehends continuative readings but not anterior ones. Algeo (1976) asserts that the P-PP is part of the present tense system and, as such, refers primarily to the present. The event designated is protracted from the past to the present and the length of the extension is indeterminate. If the event extends into the present, such extension is perceived by inference. Algeo also claims that if the event is non-terminal (the main verb lexical aspect is atelic), it is perceived as durative; if it is terminal (the main verb's lexical aspect is telic), it is perceived as iterative. For Algeo, durativity then would always occur with verbs like *ser/estar* (be), *parecer* (seem), *viver* (live), etc. His examples are shown below:

(52) O Sr. tem sido muito simpático
The you-sir have.PRS.3SG be.PTCP very nice
'You (sir) have been very nice'

(53) Ele tem vivido bem
He have.PRS.3SG live.PTCP well
'He has lived well"

Algeo points out that when an event does not actually extend into the present, it can be alternatively expressed in the preterit (54b) with little attendant change in meaning (cf. 54a). However, if the event is continuous at the present moment, the preterit cannot be used (55b):

(54) a. Tenho estado doente, mas agora estou bem

'I have been sick, but now I'm ok'

b. Estive doente, mas agora estou bem

'I was sick, but now I'm ok'

(55) a. Tenho estado doente e ainda estou

'I have been sick, and I still am'

b. *Estive doente e ainda estou

'I was sick, and I still am'

Algeo presents a very clear distinction of when iterativity and durativity are the output of the P-PP. Nonetheless, some authors (Schmitt 2006; Laca 2010) have suggested that, for some speakers, the durative reading is not available in the P-PP. Table 6 summarizes the perfect aspect in Portuguese.

Table 6. The Perfect in Portuguese: P-PP and Preterit

Anterior	Experiential	Preterit + Experiential Adverbs
	Resultative	Preterit + Experiential Adverbs
Continuative	Durative	Present Perfect
	Iterative	Present Perfect

More studies on the P-PP are needed to help us understand why some speakers accept durativity, while iterativity is the default output for the majority. In both readings, the event starts in the past and continues up to the present or further. That is the main difference between the P-PP and both the E-PP and S-PP. Given the discussion is around grammatical aspect, the next

section will review what the literature has to say about the acquisition of functional features and their morphosyntactic realization. I will return to the PP in English, Spanish and Portuguese in chapter 4, where I present my syntactic model for its realization in the three languages and the different readings.

2.5 Acquisition of Functional Features

Research in SLA has not yet reached a consensus regarding whether functional categories and their features are acquirable. Meisel (1997) asserts that because L2 acquisition is not constrained by UG, L2ers cannot acquire functional categories or features. For some other authors, access to them is possible, but severely restricted. In other words, there is partial access to UG; thus, L2ers can only acquire features already available in the L1 (Hawkins & Chan 1997; Smith & Tsimpli 1995; Tsimpli & Roussou 1991) or, due to a local impairment, features are acquirable, but remain permanently valueless (Beck 1998; Eubank, Bischof, Huffstutler, Leek & West 1997). What this implies for the acquisition of grammatical aspect is that, when overt morphology is present in the production of L2ers, this does not necessarily mean they have knowledge of formal features. A third side in this discussion consists of those who claim that full acquisition of new functional categories and features is possible (Epstein, Flynn & Martohardjono 1996; Grondin & White 1996; Haznedar & Schwartz 1997; Lakshmanan & Selinker 1996; Lardiere 1998; Schwartz & Sprouse 1994, 1996). This is the case of the Full Transfer/Full Access Hypothesis (FT/FA) (Schwartz & Sprouse 1996). According to the FT/FA, upon starting the acquisition process of a second language, learners will transfer all the abstract syntactic properties of their L1 as a starting point for their interlanguage. As they have more experience with the target language

and become aware of negative transfer from their L1, the L2 grammar is restructured, by accessing the options available from Universal Grammar, thus performing full transfer at first, and having full access to UG at all stages of acquisition. The Missing Surface Inflection Hypothesis (MSIH) (Prévost and White 2000) builds on the FT/FA and proposes that L2ers know the abstract properties of functional categories even when they may lack knowledge of how they are realized morphophonologically. That is, despite the fact that abstract feature specifications transfer, inflectional morphology does not. Evidence for this can also be found in a previous study done by Lardiere (1998) that showed the case of a subject who lacked knowledge of inflectional morphology, but whose grammar demonstrated functional categories, such as [±finite] distinction.

In SLA, there is a vast body of work examining aspect. Many of them focus on the acquisition of the preterit/imperfect distinction in Spanish by English natives. Outside of the generative approach, a great number of the studies have examined the interaction of lexical aspect and verbal morphology, following the Primacy of Aspect Hypothesis (Andersen 1986), which asserts that, in developing grammars, lexical aspect guides or determines the acquisition of verbal morphology. The majority of the findings under this hypothesis point to preterit tense being the default marker (Liskin-Gasparro, 1997; Salaberry, 1999). It is acquired first and appears mostly with telic events. Only later in the acquisition the imperfect appears and is usually mapped to stative predicates. A different hypothesis, still within a form-oriented approach, is the Discourse Hypothesis (Bergström 1995, Kumpf 1984, Reid 1980, Wallace 1982). Here, narrative structure controls morphological realization. Thereby, telic events marked with preterit are mapped on the foreground and atelic events marked with imperfect on the background. As

pointed out by Slabakova & Montrul (1999), the problem with these results comes from the link they make between overt morphology and aspectual class of verbs. Additionally, they are confined to production data, which is unreliable to make inferences upon about the acquisition of functional categories. Morpho-phonological production does not necessarily entail acquisition of functional categories and their semantic implications. In the same study, Slabakova & Montrul (1999) assumed that the acquisition of the preterit/imperfect contrast falls within the range of UG phenomena due to two reasons. First, because both their individual and group results showed that English native speakers are capable of acquiring the semantic contrast between the Spanish aspectual tenses and, thus, are capable of acquiring features of functional categories that are not instantiated in their native language. Second, because in a later study (Montrul and Slabakova 2002), by using a morphology test and a sentence conjunction judgment task to examine semantic implications of the preterit/imperfect, they showed that English-speaking L2 learners successfully acquire the morphosyntactic and interpretative properties of the preterit and imperfect in Spanish, and that there is a strong connection between the acquisition of the inflectional morphology and the semantic interpretation of these aspectual tenses.

Goodin-Mayeda & Rothman (2005) had similar results with a group of L1 English and L2 Spanish or Portuguese. Their data demonstrate that native-like adult L2 ultimate attainment is possible in the domain of [+/-perfective] contrast. Features not selected from UG in L1 acquisition – in this case the [-perfective] feature associated with higher AspP in Portuguese and Spanish – can be acquired in adult L2 acquisition. More support for the Full Access Hypothesis and UG-continuity can be found in Rothman (2008), where he studies the role that pedagogical rules of L1/L2 grammar contrasts play in the L2 variation of preterit/imperfect morphological use at the

level of performance in advanced learner from two groups: highly advanced classroom learners, and highly advanced naturalistic learners of L2 Spanish. In line with the predictions of his Competing Systems Hypothesis, tutored L2 learners demonstrated variation in selecting between the preterit and imperfect. This was due to pedagogical simplifications that formed a separate system of learned knowledge. This system can override linguistic competence (the generative system) of the L2 learner at the level of performance. Alternatively, the naturalistic learners performed like the NSs on both tasks.

Still in functional categories, but not in aspect, we find Prévost & White's (2000) study, which examined spontaneous production data obtained longitudinally from four adults learning L2 French and L2 German in naturalistic environments, questioning if finite and non-finite forms alternate freely, while agreement morphology is often inaccurate. They found that L2ers' treatment of finite morphology is not arbitrary, because when a verb is finite, the relevant syntactic reflexes are found, as well as appropriate agreement. Although L1 acquisition differs from L2 in the sense that normal L1ers always acquire the appropriate inflectional morphology and use it consistently, L2ers often do not. Nonetheless, in spite of lack of consistent use of verbal morphology, when it occurs, it is systematic, which suggests that there is no impairment at an abstract level. This is support for the Missing Surface Inflection Hypothesis (MSIH) and suggests UG-continuity.

Very little research has been done on the acquisition of the PP of Spanish and Portuguese. Here I will present two studies, which, although not within the generative approach – therefore not formally addressing functional features– can shed some light on the topic. Kanwit, Geeslin & Fafulas (2015) researched a group of 44 English-speaking learners of Spanish who participated in

intensive seven-week immersion programs in two distinct locations, Valencia (Spain) and San Luis Potosí (Mexico). The PP in the Peninsular variety functions as a hodiernal perfective (used for a past situation that occurred within the same day as speech time). In Mexico, it is the prototypical perfect, in which past situations are relevant to the present and may be viewed as still ongoing at speech time. They found that learners were able to move toward target-like frequency and predictors, but had not completely acquired the site-specific regional norms by the end of their stay abroad. Akerberg (2006) examined 110 Mexican Spanish speakers in the acquisition of PP vs. preterit in L2 Portuguese. She first hypothesized that there would be a progression according to their level of study and that the adverbial *ainda não* (*not yet*) would help them perceive the specificity of the Portuguese preterit, but her data showed otherwise. There was a strong influence of their Spanish L1. The translation instrument and interview with participants showed that a large part of the subjects did not consider using the Portuguese preterit for some Mexican PP cases, even though they had been exposed to these forms in the previous tasks. In her findings, explicit instruction was the key factor for acquisition. Participants at none of the levels could acquire it without formal instruction but had a noticeable change in performance after realizing the differences that exist between the two languages through exposure in classes.

2.6 L3 Acquisition

The field of L3 Acquisition has received a lot of interest in the past decade for bringing to the table the means for a better understanding of the psycho-cognitive dimension of multilinguals. L3A differs from L2A in the sense that the learner has not only one, but two previous grammars that may transfer and influence the process of acquiring a new language. The

main question is around the two potential sources of crosslinguistic influence—more precisely, whether both previous grammars are transferred, or if one of them is chosen as the primary or sole source. Within formal linguistics, some models have been proposed to predict how transfer occurs. Some of them are based on order of acquisition being the most influential factor, while some others focus on structural factors or typology (either perceived or actual similar typology at the structural level). Recently, two more models have come forth focusing on modularity.

2.6.1 Order of Acquisition Models: The L1 Factor and L2 Status Factor

According to the L1 Factor Hypothesis, one's native language has the most decisive weight when acquiring a third (or additional) language. This hypothesis has never been formalized as a model. It came to be due to the data from multiple studies (Hermas 2014a, 2014b; Jin 2009; Leung 2005; Na Ranong & Leung 2009), in which the L1 had a privileged role in transfer. Jin (2009) studied the acquisition of null objects in L3 Norwegian and found negative influence of L1 Chinese over L2 English. Na Ranong & Leung (2009) also examined null objects and concluded that for L3 Mandarin, L1 Thai was the source of transfer instead of L2 English. Hermas (2014a, 2014b) investigated null subject parameter and restrictive relative clauses, their study indicated L1 Arabic in lieu of L2 French was the selected previously acquired grammar for transfer in the IS of L3 English. However, none of the studies showed the influence of the L1 to the exclusion of L2 influence.

Similarly, The L2 Status Factor Model (Bardel & Falk 2007; Falk & Bardel 2011) claims the L2 has a privileged status. Adopting the declarative-procedural memory dichotomy (Paradis 2004), they assert the L1 and L2 are stored in different memory systems: the native language

being in procedural memory, while the L2 and L3 would be in declarative memory. This cognitive similarity between L2 and L3 makes the connection between L2 and L3 stronger and more easily accessible. Bardel and Falk (2007) studied L3 Swedish V2 acquisition. One of the groups had L1 Dutch (also a V2 language) and L2 English. The other group had either English or Hungarian as the L1, and their L2 were V2 languages (German or Dutch). They found that learners whose L2s were V2 languages performed better than those whose V2 languages were their L1s. In a different study (Bardel and Falk 2011), they investigated syntactic transfer of object placement from L1/L2 to the interlanguage of learners at the intermediate level of L3 German. There were two groups: L1 French-L2 English and L1 English-L2 French. The two groups behaved differently, indicating that L2 was the source for both negative and positive transfer. Although this model is relevant to the IS, it cannot make strong predictions about the DS, since at later stages, this strict divide between the memory systems does not remain.

2.6.2 Typology Models: The Cumulative Enhancement Model (CEM) & The Typological Primacy Model (TPM)

Differently from the previous models, the CEM (Flynn, Foley, & Vinnitskaya 2004) proposes that all previous grammars can be a source of transfer for both the IS and DS. Acquisition works on a property-by-property basis, whereby only facilitative information will transfer, therefore enhancing acquisition. Any type of negative information remains neutral. This implies that acquirers are able to evaluate both previous grammars in terms of similarities. Slabakova (2017) mentions that the CEM claims that this property-by-property influence will only happen when at least one of the previous grammars instantiates the property like the L3, thus

transfer is not only developmentally incremental, but indeed only facilitative. Support for this model comes from Flynn et al. (2004), who examined restrictive clauses in L1 Kazakh L2 Russian L3 English. L2 Russian and L3 English are head-initial languages, whereas L1 Kazakh is head-final. Trilingual learners leaned on L2 Russian, indicating facilitative transfer.

It is important to note that the TPM (Rothman 2010, 2011, 2013, 2015) has some similarities to the CEM when it comes to the possibility of transfer from either the L1 or the L2. Initially (Rothman 2010, 2011), this model hypothesized that the learner's perception of the language more psychotypologically similar to the L3 would be the source of transfer. That is, not necessarily the language that is *actually* more similar, but the one the parser believes to be so after enough input to make a subconscious decision. Following installments (Rothman 2013, 2015) presented more details of how such decision is carried out. Learners compare the limited input of the L3 to the previous grammar in a hierarchy of factors. First, they observe the lexicon. If they can conclude if either their L1 or L2 share sufficient amount of lexical items with the target language, then one of these grammars is transferred. If a decision cannot be made, they move to the next item of the hierarchy list: phonological/phonotactic cues, which is followed by functional morphology, and finally syntactic structure. Given that the TPM proposes transfer occurs in a wholesale manner, an implication of this model is that non-facilitative transfer can occur. Another very important point is that the TPM, couched within a Full Transfer/Full Access approach (Schwartz and Sprouse 1996), claims that, in order for transfer to be cognitively economical, transfer happens in a wholesale manner. At the earliest possible moment, the learner will transfer all of one of their languages to serve as the IS of the L3. This is analogous to what happens in L2 acquisition according to the FT/FA approach: upon acquiring a second

language, the L1 is fully transferred to the L2. Therefore, the TPM can only make predictions relating to the IS. Many studies corroborate the TPM's predictability, many of them pairing English and a Romance language as the first two grammars with another Romance language as L3. These will be discussed in more details in section 2.7.

2.6.3 Beyond the Initial State - Modular Models: The Linguistic Proximity Model (LPM) and the Scalpel Model

As a response to the CEM and (primordially) to the TPM, two other recent models have been proposed. The Linguistic Proximity Model (LPM) by Westergaard, Mitrofanova, Mykhaylyk & Rodina (2017) is in accordance with the CEM and TPM that none of the previously acquired grammars has prominence over the other, that is, both the L1 and L2 are readily available for transfer and order of acquisition is not a key factor. However, The LPM is against the CEM's and TPM's idea that general typological proximity is the decisive factor. Their critique is that typology-based models do not account for data that have shown influence from typologically more distant languages in the L3, which is the case of Jin's (2009) study in which L2 English is more similar to L3 Norwegian, but cross-linguistic influence came from L1 Chinese. Likewise, Hermas (2014) showed L1 Arabic transfer to L3 English instead of the more structurally similar L2 French. Instead of typology, the LPM claims that similarity of abstract linguistic properties is the main cause of cross-linguistic influence (CLI). The model believes CLI can be of facilitative and non-facilitative nature. Learners consult their previously acquired languages at all stages of acquisition. Negative transfer takes place when learners misanalyze L3 input and mistakenly assume that some abstract linguistic properties are like those from the L1 and/or L2. This notion comes from the

works on executive control in bilinguals (e.g., Bialystok 2011) that show that the language not in use remains active in bilinguals' brains and must typically be inhibited when speaking the other language. Assuming access to all acquired grammars, the LPM (along with the Scalpel Model) rejects WT of either the L1 or L2, since this would imply excluding any influence from one of the two previous languages. They argue that the notion of economy the TPM puts forward is purely conceptual. One may also see as more economical a wait-and-see approach, in which learners would parse small parts of grammar, and transfer property-by-property, so that cognitive power does not need to be employed for unlearning incorrectly transferred properties. Therefore, the LPM posits clear empirical evidence must be presented to justify such a process of WT at the IS. Evidence for their claim comes from data (Westergaard et al. 2017) on word order. They examined L3 English acquisition by 2L1 Norwegian-Russian and compared the results to monolingual Norwegian and monolingual Russian control groups. Russian is a Slavic language and more distant to the two Germanic languages Norwegian and English. Norwegian is a V2 language and English's subject-auxiliary inversion is considered a residual V2 property. However, present-day English does not have-V2 in declaratives, patterning like Russian in this case. In their results, 2L1 Norwegian-Russian speakers had facilitative influence from Russian, which is from a different typological group than L3 English. Russian is also the minority language for the bilingual participants. Therefore, typological proximity was overridden by facilitative transfer from Russian. Moreover, they found Russian helped bilinguals achieve a target-like judgment of ungrammatical sentences, but Norwegian negatively impacted the acceptance of grammatical ones, suggesting that indeed all languages are always active and that both positive and negative transfer can occur.

Slabakova's (2017) Scalpel Model rejects the TPM's argument of WT, which claims learners choose one of the previously acquired languages (the one they parse as the most closely related one) to transfer it entirely to serve as the IS of the L3. This notion comes from the full transfer approach (Schwartz & Sprouse 1996), which motivates L2 acquisition. Slabakova (2017) points out that SLA and L3A are different processes given that two languages and thus two grammars are available in the latter case. Thus, transfer may be more dynamic. She also criticizes TPM's proposal that WT occurs because of cognitive economy. Instead, Slabakova suggests that if full transfer of one language takes place, it means the other one will have to be constantly blocked. Because the bilingual brain maintains both languages active at all times, blocking off linguistic information might be more difficult than taking all grammars and checking what works as acquisition goes (e.g., Bialystok 2011). Her idea, based on Amaral & Roeper (2014), is that, from a representational point of view, multilingual linguistic competence is composed of sub-grammars coming from all previously acquired languages, where grammatical rules and lexical items are tagged for differentiation purposes. In this sense, she follows the functional picture of the multilingual brain, where all linguistic knowledge is interconnected, and the different languages of an individual are not functionally separated (Abutalebi & Green 2007; Paradis 2004). Slabakova compares the L3A process to a scalpel, saying that the activated grammatical possibilities of the L1-plus-L2 combined grammar act with scalpel-like precision, rather than as a blunt object, to extract the enhancing, or facilitative, options of L1 or L2 parameter values. There is no need for wholesale initial transfer because the scalpel can successfully single out the uniquely relevant features and properties. However, she adds that scalpels cannot cut through bone. Meaning that even though parsing may overcome unconscious psychotypology or the

wholesale influence, there are several additional factors to transfer, such as construction frequency, availability of clear unambiguous input, prevalent use, and structural linguistic complexity.

2.6.4 Wholesale Transfer vs. Property-by-Property Transfer

Up to this moment, we have reviewed six L3A models and put them in three groups based on which factor they based on to make their predictions, the groups are a) order of acquisition (L1 Status and L2 Factor Status), (psycho)typology (CEM and TPM), and modularity (Scalpel and LPM). A different categorization comes from Schwartz & Sprouse (2021), who address the implications of their Full Transfer/Full Access (FT/FA) hypothesis (Schwartz & Sprouse 1996) on L3 Acquisition. As the reader will recall, the FT/FA argues that when acquiring a (second) language, learners bring all the L1 grammar as the IS of their L2-interlanguage, and access UG whenever necessary as they are exposed to structures in the novel grammar that require re-mapping or re-setting of values. Schwartz & Sprouse (2021) divide the six models in two groups. The first one is composed of those that embrace wholesale transfer (WT), they are the L1 Status, L2 Factor Status, and the TPM. Meanwhile, the second group consists of the models that assume that transfer occurs in a property-by-property fashion (i.e., modularity). This is the property-by-property transfer (PT) group that comprises the CEM, Scalpel Model and LPM. Schwartz & Sprouse (2021) support WT approaches, mainly the TPM, since these are in close accordance with their FT/FA hypothesis. Their main critique to the PT approaches is that "[they] are concerned only with what the new grammar needs to rule in, but they afford no role to transfer in regard to what the new grammar must rule out" (Schwartz & Sprouse 2021: 6). In this sense, acquiring a

new language in a modular fashion implies that the L3-interlanguage remains under-specified for a long period of development, since learners only bring in properties as they compare the new language to their previously acquired grammars. Conversely, WT – as well as FT/FA – suggests that L3-interlanguage grammars are complete grammars from the start.

On the other hand, some critiques have arisen against the WT vs. PT categorization, and the claim that modularity would leave languages underspecified, and so, WT must happen so that there is a (complete) natural-language grammar. According to Westergaard (2021), much work in psycholinguistics has been done since the FT/FA in 1996 that has shown (e.g, Del Maschio & Abutalebi 2019) that two or more languages interact in bilingual and multilingual minds. Likewise, many studies on microvariation have demonstrated it is possible that closely related grammars differ on a single property without bringing consequences for other properties. Slabakova (2021) sustains that WT indicates that one language would be left behind. Given the IS are a short (experimental) period with a new language, it is hard to conceive that one language would be completely ignored. More so, if the L2 were transferred and the L1 would have to recede to the background without a trace. In fact, both Westergaard (2021) and Slabakova (2021) highlight that the LPM and Scalpel Model, unlike argued by Schwartz & Sprouse (2021), these models defend that transfer does occur at the IS, but no language is blocked or necessarily fully transferred. The key in this approach is a more modern idea of what (non-native) grammar is:

> A grammar is not monolithic but an assembly of separate mental representations of sounds, lexical items, formal features, morphemes with feature bundles, syntactic and semantic operations – all pieces that mix and match. As both the L1 and the L2 features

> are natural language features, there is no sense in which the new grammar is not going to be UG-sanctioned. (Slabakova 2021: 99)

While WT and PT approaches have opposing ideas of how grammars interact, both sides of the debate agree that more work on L3 DS is necessary to better understand how the multilingual brain behaves.

2.7 L3 Studies on Tense-Aspect and Portuguese

Now that we have reviewed L3 models and the main variables predicted to influence L3A, let us move our attention to findings related to the topic of this dissertation. The studies below bring data related to L3A of tense-aspect in different languages as well as morphosyntactic research on L3 Portuguese.

The first study in tense-aspect indicates difficulty in acquisition. Chin (2008) examines the acquisition of the Spanish contrast between preterit and imperfect in a L1 Chinese → L2 English → L3 Spanish setting. The L3 group initially had 32 Chinese natives, but 21 were dismissed in the final data analysis due to poor performance with the distractors. While the rest of the group performed well with the distractors, they did not distinguish the aspectual meanings between the two morphological systems, performing slightly above chance.

Foote (2009) also studies aspectual values related to perfectivity. The first group consisted of native speakers of English, who had both the L2 and the L3 as a Romance language (either French, Spanish, or Italian) (L1E --> L2R --> L3R). The second group was a mirror-image for L1 and L2 and consisted of L1R --> L2E --> L3R learners. Her hypothesis was that both groups would

transfer their knowledge of the [+/-perfective] semantic contrast from the previously acquired Romance language to their L3 Romance language. And this time, all learners demonstrated being able to distinguish aspectual implications between the two morphologies. Even though all learners relied on their knowledge of a previously acquired language and English did not play a role in transfer, the results indicated better performance by those who spoke a Romance language as a second instead of natively. According to Foote (2009), this advantage manifests itself via a heightened awareness of the semantic importance of the aspectual morphology in a second Romance language.

Salaberry (2005) conducted a study on L1 English-L2 Spanish-L3 Portuguese. The results revealed that L3ers with an advanced conceptual knowledge of past tense aspectual contrasts in a previous Romance language are fairly successful at transferring that knowledge to another Romance language, in this case from Spanish to Portuguese. It is important to note that there was no mirror-image group in this study. Both of the experimental procedures elicited production of the preterit vs. imperfect in a written narrative of the events in a cartoon and a verb-selection task. To the extent of my knowledge, this is the only L3 study that examines the acquisition of aspect with this grouping of languages.

Some other studies have analyzed the L3 Acquisition of Portuguese by English-Spanish bilinguals in a variety of morphosyntactic structures (Present and Future Subjunctive: Carvalho and Silva 2006; Adjective Placement: Rothman 2010; Verb Complements: Montrul, Dias and Santos 2010; Differential Object Marking (DOM): Giancaspro et al. 2015). They all supported TPM as the best L3A model.

2.8 Formal Approaches to the Present Perfect

The PP has been formally approached by four theories, which mainly observed how the E-PP manifests its prototypical perfect, that is, the experiential reading. In this section, I will review each of them in detail. The four groups are: a) the neo-Reichenbachian theories, built upon the three-point composition of tense-aspect (event, reference, speech); b) the extended-now theories (XN-theory), which proposes a sub-interval of the event (the "now") being indefinitely extended towards the past; c) Priorian Past theories, in Klein's theory (1992, 1994) the eventuality is located in an interval before speech time, which includes or equates the speech time; and d) post-state theories, suggesting the existence of operators that derive post-states of the eventuality. All these theories fail to account for the variability of readings the perfect can generate. After describing each group, I will propose a syntactic model that not only motivates the perfect but also demonstrates how it interacts with the other aspects in the past system, namely the imperfect(ive) and the perfective.

2.8.1 Neo-Reichenbachian theories

Reichenbach (1947) proposes a three-element configuration for the composition of the semantics in time and aspect. They are a) speech time (S), the moment an utterance is produced; b) event time (E), when the events occur in relation to the speech; and c) reference time (R), the moment about which we are making assertions. In his proposal, aspect and tense emerge from the different combinations among these three points in time. The ordering relations can be anteriority – represented with a dash (-) or underscore (_) –, or simultaneity, demonstrated with a comma (,). These two orderings can generate three temporal-aspectual categories: anterior

(E_R), when the event precedes the reference; posterior (R_E), when reference time precedes the event itself; and simple (E, R) when the moment of speech and reference overlap. Below we have the representation of the simple present, simple past and PP.

(56) Simple Present: S, R, E (He watches TV)

(57) Simple Past: E, R_S (He watched TV)

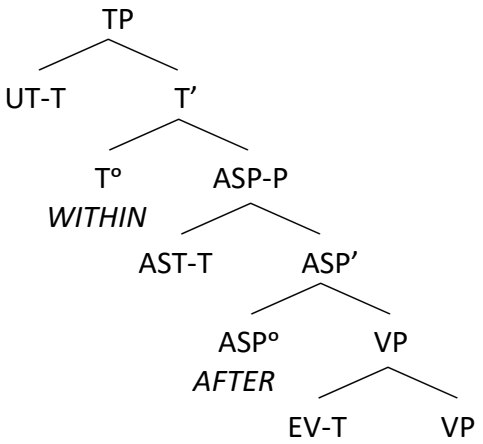
(58) Present Perfect: E_S, R (He has watched TV)

In (56) the sentence is uttered at the same time the event of watching TV is happening and the reference overlaps with event time. In (57), the speech time is the present, but the event happened in the past and the reference is also made to a moment in the past. The PP in (58) differs from the simple past, because while the event happens before the speech time in both, the reference in the PP is to the present, which explains the intuition of current relevance. Because in (58) the event precedes the reference, the PP is regarded as an anterior.

The works of Demirdache & Uribe-Etxebarria (D&UB) (2007; 2008) build on Reichenbach (1947) and propose that tense (T), aspect (ASP) and time adverbs are spatiotemporal predicates and should be treated as dyadic predicates of spatiotemporal ordering, taking time-denoting arguments within the syntax. Thereby, tense, aspect, and time project their temporal argument structure in the syntax and serve to establish ordering/topological relations between their time arguments. T and ASP order their arguments in a relation of subsequence (after), precedence (before) or inclusion (within), very similarly to Reichenbach's (1947) anterior, posterior and simple categories. From the different possibilities of ordering, we can motivate and represent

tenses (future, past, present) and aspects (retrospective/perfect, progressive/continuous, and prospective). D&UB's representation of the PP is as follows[4]:

(59) Kim has eaten

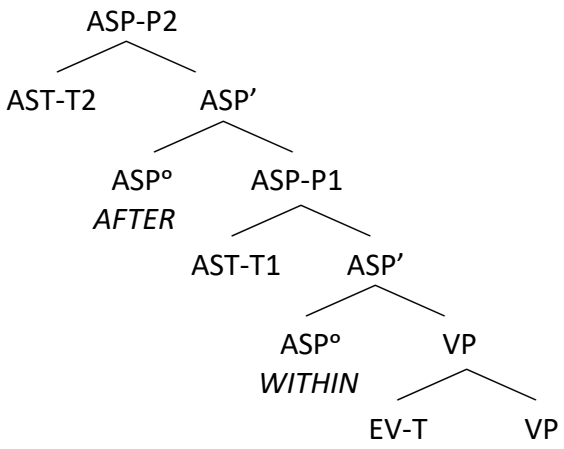


Reading (59) top down, the utterance time (UT-T) (and tense) is in the present and is within the moment we are referring to: the assertion time (AST-T). That means, the relevance of the eating that we are pointing out is included in the moment we utter that sentence (the present). Both AST-T and UT-T take place after the event itself (EV-T). Using Reichenbach's (1947) proposal, we may explain it as: the event took place before the moment of speech and the reference time (E_S,R). In both Reichenbach (1947) and D&UB, AST-T (reference) and UT-T (speech) overlap, and the event takes place before them. Laca (2010) refers to those as *anteriority theories*. She says the problem with these theories is that they do not account for continuative readings (in Laca 2010, *universal readings*), in which the event does not strictly precede Reference Time, but overlaps with it. D&UB expand on the perfect aspect, by analyzing the present perfect continuous

[4] (59) and (60) are a reproduction of D&UB's examples from their works, where lexical items are not placed in the trees.

(60) compositionally as projecting another ASP head. In this sense, we have what they call a Perfect (ASP2 = After) of a Progressive (ASP1 = Within).

(60) Kim has been working



While one must acknowledge the importance of D&UB for temporal-aspectual theories and the ability to show the interaction between tense and aspect in the syntax, their representation does not motivate how we can still have different readings using the same morphology in the same language nor does it explain how the perfect generates differently in languages other than English. Such is the case of Portuguese, which uses a non-compound morphology (preterit). For instance, the E-PP can generate experientiality, iterativity and durativity, whereas the present perfect continuous can express the two last ones. If we modify (59) as "Kim has worked a lot (lately)", we might have a similar reading to (60) despite the absence of the progressive morphology. (Neo-)Reichenbachian theories bring a reasonable explanation for the "well-behaved perfects", that is, the prototypical experiential reading, but they fall short when it comes to existential/continuative ones.

2.8.2 Priorian Past theories

Similar to the theories above, Priorian Past theories rely on Reichenbach's (1947) three-point tense-aspect framework. Nevertheless, the reference time (R) addressed above is recontextualized in the Priorian Past as *topic time* (Klein 1994). Priorian Past theories also accredit the PP as introducing an interval before speech time. In this sense, anteriority is also considered the key component of the PP. Event and speech times are understood the same way as before. However, the topic time (formerly *reference time*) gains a more robust function referring to the time for which a claim is made. Such claim can include or be equal to the speech time. According to Klein (1994) this is better understood in interrogative sentences, since questions locate the topic time. What I assume by this is that questions limit answers to only make assertions referent to the time span introduced by the question. Klein exemplifies topic time with the question/answer case, using the context in (61), in which we must suppose a witness is asked this question in court:

(61) Court: What did you notice when you checked the cellar?

Witness: The door was open

According to Klein (1992), the witness's answer cannot involve other intervals because it is limited to the question. In other words, the door might have been open for a long time or even continue being open at speech time. But the witness can only make a claim for the time he or she is asked to make a claim: the time around the topic of the conversation. Klein (1992: 535) defines topic time as the "time span to which the claim made on a given occasion is constrained."

Molsing (2010) points out that the topic time in the PP is always fixed at the present, including speech time. The topic time is what accounts for the "current relevance", since while the eventuality in the PP takes place in the past, the speaker makes a claim at a time that includes the moment of speech. Molsing's (2006) critiques are that Klein's topic time does not interact with lexical-aspectual distinctions, making formal implementation unclear. In other words, the main contribution of topic time is to explain how complete past actions can still be anchored to the present, which is the case of anterior readings. However, stative verbs in the PP often generate continuative readings. In these cases, there is no assertion made to a specific time in the past. The assertion is made to the duration of the event up to the moment of speech and perhaps further. Therefore, no topic time is introduced before speech time.

2.8.3 Extended Now (XN) theories

The Extended-Now theories (Kamp & Reyle 1993, Iatridou et al. 2003), commonly shortened in the literature to XN theories, emerge with the concern of a) accounting for both anterior (existential) (62a) and continuative (universal) (62b) readings, and b) explaining the "present perfect puzzle" – the inability of the PP to license past adverbials as in (63).

(62) a. He has finished his Master's

b. He has been nervous about his career

(63) *He has been nervous two days ago

In these theories, the perfect generates an interval that starts with the "now", meaning it is bounded to both the speech (S) and reference (R) times – given that these overlap in the perfect. In the example (62) we can see the XN-interval represented by the two brackets. The "now" located at the right boundary (the present) is then indefinitely expanded into the past (Laca 2010) until encompassing the beginning of the event time (E), generating, then, the XN-now interval. By extending a present reference towards the past, the XN-now interval attempts to represent how past events are anchored to the present, which would explain how the effect of current relevance takes place.

(64) Jessica has visited her mother

------- $[_{E(visiting)}$ $]_{R,S}$ ----------$>^{Time}$

<----------Now

In Iatridou et al. (2003), the Perfect Time Span (PTS) takes the place of the XN interval in an effort to apply this theory to cover the entire perfect system. In the XN-interval the focus is on the speech time (the now). The PTS interval starts at the left and extends rightward and necessarily including the reference time. Thereby the "now" can be replaced with another reference point to adapt the theory to the future perfect or the pluperfect (past perfect). The strength in the revised XN theory lies in its ability to explain the continuative and anterior readings, taking into consideration the intuition that continuative perfects involve states. Continuative readings occur because states can be inside the XN-interval/PTS as one single event. Given that states are homogeneous eventualities and can hold of the XN-interval if any of their

subintervals are included, not all of the eventuality needs to be part of it. What this means is that states are homogeneous, and their beginning or end are not limited within the PTS/ XN interval. A perfect makes an assertion of a past interval, but the event itself might have started before it. This would explain why continuative readings may implicate that the event will continue further into the future. Let us take Laca's (2010) sentence in (65) to exemplify that.

(65) (Él) ha vivido solo desde la muerte de su padre
(He) have.PRS.3SG live.PTCP alone since the.F death of his father
'He has lived alone since his father's death'
…_____$_E$ (Living alone) _____…
------- [_____]$_{R,S}$ ---------->
Perfect Span = since his father's death "now"

It is not a mandatory condition that the *living alone* eventuality must start within the Perfect Time Span (since his father's death), provided that it does not start later than it. For instance, we can say that the person in (65) was already living alone before his father's death and has continued living alone ever since. *Living alone* is homogeneous and unbounded, and so it can have started before and/or be extended up to the speech time and even further. On the other hand, anterior readings arise when the main verb is not stative, and therefore non-homogeneous. Heterogeneous eventualities can only be legitimate with the perfect if all their sub-intervals are included in the XN-interval. In other words, they cannot have started before nor continue further in the future. They must take place within the limits of the Perfect Span. This is clearer with cardinal adverbials, as in Laca's (2010) example (66) that I adapt:

(66) (Él) ha ido dos veces a Buenos Aires (en su vida)

(He) have.PRS.3SG go.PTCP two times to Buenos Aires (in his life)

'He has been to Buenos Aires twice (in his life)"

[$_E$ (go to BA)] [$_E$ (go to BA)]

------- [_____]$_{R,S}$ ---------->

Perfect Span = his life "now"

The *going to Buenos Aires twice* must be included in the Perfect Time Span and the first time cannot have been initiated before it, that is, all the sub-intervals of *going to Buenos Aires* must be inside the Perfect Span/XN interval. These sub-intervals (the two iterations of going to Buenos Aires) are heterogenous and bounded, not being able to extend to either direction.

Moreover, the XN theories also propose a way to understand the "present perfect puzzle" from Klein (1992), introduced in chapter 1. In sum, the puzzle relates to the fact that even though perfects make assertion to past events, they cannot take past-time adverbials. This theory interacts with this puzzle by demonstrating that perfects introduce an interval that comprises speech time. Thus, even though it is connected to the past, the perfect can only be modified by an adverb that locates the eventuality in the present, including a generic "before" with a sense of "before now"; however, it is not possible with a specific "before", such as "before last week" or "before the 2000s". Surely, all past adverbs, by nature, represent a moment before now, however "yesterday" and "last week" pinpoint a location in the past and anchor the action to it, making the past the referent point. A generic "before" maintains the notion of the present, by pinpointing now as the reference. We can see evidence of the "present perfect puzzle" in English (67a'), Spanish (67b') and Portuguese (67c').

(67) a. Jessica has traveled (before) (this week)

a'. *Jessica has traveled yesterday

a''. Jessica traveled yesterday

b. Jessica ha viajado (antes) (esta semana)

b'. *Jessica ha viajado ayer

b''. Jessica viajó ayer

c. Jessica tem viajado (recentemente) (esta semana)

c'. *Jessica tem viajado ontem

c''. *Jessica viajou ontem

In the sentences above, the PP is grammatical by itself –without any adverbials–, or with adverbials that are anchored in the present, such as a *this week* (67a)*/esta semana (67b, 67c), recentemente 'recently'* (67c) or a with generic *before* (67a,67b).[5] Nonetheless, all languages reject the use of the PP with a past time adverbial, such as *yesterday* (67a')/*ayer* (67b')/*ontem* (67c'), since locating an eventuality in the past (with specific time frame adverbials) is a function of perfectives, mapped in English on the simple past (67c'') and in Spanish (67b'') and Portuguese (67c'') on the preterit.

Whereas XN-theories picks up on what the Anteriority and Priorian Past theories could not, by giving an overall account for the continuative reading, it has some problems. As pointed out by Molsing (2006), the XN analysis infelicitously defends that continuative readings are only possible with the support of adverbials (Iatridou et al. 2003). When introducing the extended-

[5] P-PP cannot be accompanied by a generic *before* because it does not license anterior readings.

now interval to motivate continuative readings, the XN theories do so by building on the observation that these readings are more common with stative verbs. Nevertheless, anterior readings can still be generated with non-homogeneous events, such is the case of (68), if we read it as John having been sick sometime in the past. XN theories posit, then, that continuative readings are only available if supported by adverbials of duration (69), i.e., prepositional phrases headed by *since* and *for*. Such a claim is easily falsified. In fact, durational adverbials often create dubious sentences. The same example in (69) can be understood as either John being sick until now (continuative) or that he was sick for the period of two weeks (anterior) (Molsing 2006).

(68) John has been sick

(69) John has been sick for two weeks

(70) John tem estado doente (por duas semanas/recentemente)

'John has been sick (for two weeks/recently)'

Moreover, if we move our attention to Portuguese, one of the distinctive features of the P-PP is the obligatoriness of continuative readings by default (70). This can be emphasized by adverbial insertion, but it does not depend on it. Therefore, the XN theories fall short motivating how the anterior/continuative distinct readings are generated.

2.8.4 Post-State theories

An essential part of this theory that differs from the others is the proposal of perfects with operators that introduce post-states to the eventuality (Kamp and Reyle 1993, Nishiyama

and Koening 2004; de Swart 1998), meaning that while the eventuality ends somewhere in the past, it creates a consequent state that lingers up to or further than the speech time.

(71) ------- [event]$_{past}$ [post-state]$_{speech\ time}$ ------- >

Nishiyama and Koening (2004) posit that dubiousness or various meanings are part of the semantics of the perfect and the final reading is determined at the level of pragmatics. In their examples, we can see that inferences can be lexical (72a) or conversational (72b). In (72a) the state introduced is of his leg being broken, while (72b) generates the state of Ken being behind his work. However, what state could we get from (73)?

(72) Ken has broken his leg

a. His leg is broken

b. Ken is behind in his work

(73) Ken has studied in his room since lunch

Although this theory can explain resultative (non-continuative) readings, as in (72), where it exemplifies how past actions remain semantically and pragmatically relevant in the present, it fails with continuative readings (73), since in those cases the eventualities are not complete before speech time; rather, they are still active during the moment of utterance and might continue. Therefore, continuative readings do not generate a relevant post-state for the present.

2.9 Accounts for the Portuguese Present Perfect

In chapter 1, I introduced Algeo's (1976) theory for the P-PP, which presumes that the lexical aspect within the main verb plays an important role in the semantics of the perfect: atelic verbs will cause a sentential aspect of durative, whereas telic verbs generate iterative sentences. In his work, he presents a very clear distinction of when iterativity and durativity are the output of the P-PP. Nonetheless, some authors (Schmitt 2006; Laca 2010) have suggested that for some Portuguese native speakers the durative reading is not available in the P-PP.

Schmitt (2006) makes a proposal within a compositional perspective on why P-PP cannot produce resultative/experiential readings and sheds some light on the differences among Portuguese, Spanish and English. She claims iterativity is obligatory in the P-PP, but that such obligatoriness is not present in the Past Perfect. Her hypothesis, then, is that the source of iteration must be a coercion operator under T. Based on de Swart (1998), who extends the notion of semantic selection to tenses as well, Schmitt (2001) proposes that the locus of the difference is in Tense. Some tenses have selection restrictions that require that the eventuality they take as complements be of the right type. If the eventuality is not of the appropriate type, coercion applies. The coercion operator can be viewed as a macro-operator, which generalizes over a number of semantic operations. The idea is that the Present Tense head selects for homogeneous predicates in English, Italian, Spanish and Portuguese. However, languages may choose particular types of homogeneous predicates: states and/or processes. Differently from Spanish, which selects for both states and processes, Present Tense in English and Portuguese selects for stative predicates only[6]. Thus, when the complement is a state, all languages behave similarly. On the

[6] Schmitt (2001) also discusses how English and Portuguese differ from Italian

other hand, when the complement is a process, coercion must apply in Portuguese and English. Evidence for this is that (74a) and (74b) cannot take the process reading (progressive) in Portuguese and English and these events must be forced into a stative, either a habitual or property reading. This is unlike (74c) in Spanish, which licenses a progressive.

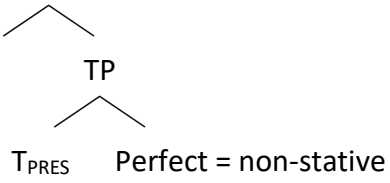
(74) a. Pedro canta (*neste momento)

b. Peter sings (*right now)

c. Pedro canta (en este momento)

Despite this similarity in T in both Portuguese and English, only in Portuguese is iterativity obligatory. Since the coercion operator will always apply, it must be the case that the output of the Perfect in Portuguese is never a state, rendering the structure below in (75) (Schmitt 2001). In her depiction of the Portuguese tense system, whenever the tense (T) is *present* and the argument is a perfect, it outputs a non-stative perfect. I assume that in her model, T is where the auxiliary *ter* moves to and is assigned [+present]. *Perfect* is where the main verb in the past particle morphology goes to and always outputs an eventive (i.e., non-stative) value.

(75) Portuguese



Schmitt (2001) proposes that the difference will then be related to the fact that the Perfect morphology outputs a homogeneous predicate in English and a non-homogeneous predicate in Portuguese. According to her, in English the perfect outputs a state and therefore coercion does not need to apply. Thereby, predicates in (76b) and (77b) are both a state in English, but in Portuguese, simple present (76a) shows that Claudia has the property of knowing French, hence, no coercion is needed, since it is itself a stative predicate.

(76) a. A Cláudia sabe francês

b. Claudia knows French

(77) a. A Cláudia tem sabido francês

b. Claudia has known French

However, in P-PP (77a), coercion applies and the predicate *tem sabido francês* is not a state, since we are not asserting that Claudia knows it; rather we are asserting that there are many events of her showing knowledge of French, which requires a special context, like her good grades in French. Thus, the perfect morphology seems to impose a boundary onto the eventuality. The only way to make this bounded state compatible with the present tense is to force a habitual reading (iterativity).

Laca (2010) reviewed three formal theories on the PP: anteriority (which we reviewed as Neo-Reichenbachian in section 2.8.1 and Priorian Past in 2.8.2), XN theories, and Post-State theories. She demonstrated that none of them can individually account for the different readings associated with the morphology of the PP. In terms of Portuguese, she examines the P-PP by

using data from one city in Brazil: Natal, capital of the state Rio Grande do Norte. Her data supports iteration being obligatory. Nonetheless, she also points out in the same study that there are less restrictive Portuguese varieties, both in Brazil and Portugal, which accept sentences like (78) with a durative reading. However, Laca (2010) does not motivate why some varieties are restrictive and some are not and how one meaning is generated over the other.

(78) O alarme tem ficado ligado

'The alarm has remained on'

The work of Molsing (2006) compares the perfects of Portuguese and English, bringing a unitary analysis of the P-PP and E-PP. She asserts that the key element of the perfect is the presupposition of repeatability. English uses the PP to express one-time occurring eventualities (anterior readings) that can be repeated. The impossibility of repetition affects the felicity of the perfect, which she demonstrates by evoking the famous examples already shown here as (29) and now reproduced as (79).

(79) ??Einstein has visited Princeton

The sentence in (79) is not acceptable because the event cannot be repeated since Einstein is dead and can no longer visit Princeton. Molsing (2006) relates this condition of repeatability to Amaral and Howe's (2005) idea that existential-type readings (experiential/resultative) are a subtype of iterative readings. Thereby, Molsing (2006) argues that it does not matter if the

perfect is continuative or not, because what constitutes the perfect is repeatability. In other words, eventualities do not have to repeat at present or any time in the future, but the possibility must be there at speech time. She corroborates this in Portuguese by showing that iterative P-PP can have their continuation canceled with the insertion of *mas não mais* (but not anymore). Despite continuation being cancelled, the repeatability still holds true. Her examples follow bellow (80):

(80) a. I have visited my parents, but I won't anymore

b. Eu tenho visitado os meus pais, mas não vou mais

I have visited the my parents, but no I-go more

Molsing (2006) adopts a perfect state framework based on Nishiyama and Koenig (2004) to explain why E-PP can generate both non-continuative and continuative readings, while P-PP forces iterative readings in most cases. E-PP's default output is an experiential (non-continuative) meaning (81a). Iteration is often available with adverb modification (81b) or pluralized NPs (81c).

(81) a. She has been sick

b. She has been sick many times this year

c. She has finished many projects

Molsing's (2006) proposal is that the meaning in the P-PP and E-PP is semantically uniform. The differences between their default output are explained by a pragmatic divergence. Given that the rest of the perfect system (past perfect and future perfect) behave similarly in English and

Portuguese, she assumes that Portuguese outputs a state in the PP just like English is theorized to do (Dowty 1979; Kamp and Reyle 1993; Michaelis 1998, de Swart 1998). Her analysis in this sense is similar to that of Smith (2001); nevertheless, instead of there being an operator that forces iteration, Molsing (2006) asserts that the divergence is on the focus that each language places on a sub-part of the state. That is, both languages output a state, but each introduces a different kind of state. English focuses on the end of the state, introducing some resulting state of the prior eventuality. In (82a), the perfect state is the result of the action: "Mary is in the room".

(82) a. Mary has entered the room

b. Maria tem entrado no quarto

Portuguese, in contrast, focuses on ongoing action leading to the final state. The perfect state projected into the post-time is one of continuation, therefore (82b) has an obligatory iteration. She argues that:

> "Both AE [American English] and BP [Brazilian Portuguese] perfects are compatible with resultative and continuous inferences, but in AE the resultative property is encoded lexically while the continuous is not, and in BP, the continuous property is encoded lexically, while the resultative is not. The AE perfect introduces the end of a perfect state and the BP perfect introduces the beginning of an iterative state." (Molsing 2006: 248)

It is not very clear how resultative readings are generated by the P-PP in her analysis. In her examples, she points out that there are conversational implicatures in the perfect in both languages. In the presence of telic verbs, the available implicatures are the opposite:

(83) John has arrived late to work

a. +> John is here and is late

b. +> #John arrives late

(84) O João tem chegado tarde.

a. +> #João is here and is late

b. +> João arrives late

In English, the result of *John having arrived late* (83a) is that he is here and is also late, but we cannot conclude that he always arrives late (83b), since E-PP denotes one-time eventualities. On the other hand, Portuguese's iteration makes us reject the first implicature (84a) and see *that John arrives late* (84b) as the lexical result. Her use of resultative is clearly different from the prototypical definition, in which an action forces a change of state (85).

(85) Ryan has prepared the dinner [resultative reading]

Action: preparing the dinner

Result: dinner is prepared

Additionally, Molsing (2006) concludes that in the P-PP, the result of (84) is the one of *that João arrives late.* However, this conclusion is not entirely felicitous. The locutory function of the P-PP

is to show recent habits or the breaking of old habits. So (84) would cause the opposite implicature: one in which John always arrives early, but recently has been arriving late for some reason.

Both Schmitt (2001) and Molsing (2006) propose that the locus of difference is in the lexical selection under T, more precisely, that the present in English and Portuguese takes states. The power in this theory is that it motivates the obligatoriness of iteration in Portuguese as well as the possibility of continuative perfect in both languages. However, one immediate implication that these proposals bring to language acquisition is that one would only need to acquire the morphosyntax of the present tense to also acquire the semantics associated with the PP. Given that the (simple) present tense is the first tense studied by learners and the most frequent input in either natural or formal language acquisition contexts, then why do learners still show optionality with the PP? Therefore, there is more to the acquisition task than the simple semantic selection under T. Another shortcoming of their proposals is that they do not show how the perfect interacts with other aspects within the past system and how they all distinguish themselves from one another.

2.10 Literature Review Summary

The PP is a temporal-aspectual construction that is available in English, Spanish and Portuguese. In this chapter, we looked at the distribution of the PP in each of these three languages. Both E-PP and S-PP license a default anterior reading, while still being capable of generating a continuative reading with stative verbs. However, the P-PP is obligatorily always continuative. Despite the fact that the morphology in these three languages is very similar, the

aspectual values do not correlate given that the P-PP is more restrictive. This may pose difficulties to learners of the PP in Portuguese.

Acquiring aspect comprises acquiring functional morphology and the functional features associated with them. In this chapter, we addressed the debate about whether functional categories and features are acquirable in languages subsequent to the first — in other words, if access to UG remains in adulthood. I assume that SLA and L3A are UG-constrained, hence, functional features remain acquirable. Since, the participants of this study are English-Spanish bilinguals, they are hypothesized to have knowledge of [±perfectivity] in the past system. I assume that subjects from the L1 English L2 Spanish group have accessed UG to acquire the Spanish preterit/imperfect distinction. Moreover, all participants will continue resorting to UG during the L3A process in order to reset values for the P-PP.

Thus, I extend the discussion of UG-continuity to the field of L3A, by examining the L3 acquisition of the P-PP by English-Spanish bilinguals and by having a mirror-image group of L1 English L2 Spanish L3 Portuguese; and L1 Spanish L2 English L3 Portuguese. In my analysis of the acquisition of the P-PP, I test the three main groups of models that predict how L3A takes place. The first group proposes that order of acquisition plays a central role. The L1 Factor (Hermas 2014a, 2014b; Jin 2009; Leung 2005; Na Ranong & Leung 2009) sustains the L1 is always the source of transfer at the IS, while the L2 Status Factor (Bardel & Falk 2007; Falk & Bardel 2011) asserts it is the L2 that has a privileged role in L3A. The second group of models bases their predictions on typology. According to the CEM (Flynn, Foley, & Vinnitskaya 2004), the mostly closely-related previously-acquired language is the one that will transfer to the L3. The caveat is that only facilitative information transfers and whatever else does not help enhance acquisition

will remain neutral. The TPM (Rothman 2010, 2011, 2013, 2015) argues that the selection of which previously-acquired grammar will be transfer in a wholesale manner to the IS of the L3 depends on which of the languages the acquirer judges as the most similar to the L3. In other words, that is not necessarily typology that drives L3A, but psychotypology, a subconscious choice prone to misjudgment and negative transfer. Finally, the third group, the modularity models, is composed of two recent models that criticize WT. Both the Scalpel Model (Slabakova 2017) and the LPM (Westergaard et. al 2017) base their ideas on works on executive control (e.g., Bialystok 2011) that demonstrate that all languages are active in bilinguals' brains. Therefore, these models assume that L3ers have access to all previously acquired languages at all stages of acquisition and can analyze the structures in the L1 and L2 and check it against those in the L3 to decide what can be transferred on a property-by-property basis.

Studies on morphosyntactic structures (Present and Future Subjunctive: Carvalho and Silva 2006; Adjective Placement: Rothman 2010; Verb Complements: Montrul, Dias and Santos 2010; Differential Object Marking (DOM): Giancaspro et al. 2015) in L3 Portuguese have corroborated TPM's predictions, indicating it as the best model for L3A. At the time of writing, I am only familiar with one study on L3 aspect acquisition in Portuguese, e.g., Salaberry (2005), who showed acquisition of preterit/imperfect in L3 Portuguese. I am unaware of any study on the L3 acquisition of the PP.

In this chapter, we also reviewed four formal approaches to the PP: 1) the neo-Reichenbachian theories and their three-point composition of tense-aspect with event, reference, speech times; 2) the Extended-Now theories, which argue that the perfect introduces a sub-interval that starts at the speech time (the "now") and that is extended towards the past

up to the beginning of the event time; 3) the Priorian Past theories, whose claim is that the eventuality is located in an interval before speech time. The perfect introduces a topic time, a past interval to which an assertion is made and that includes or equates the speech time; and 4) the Post-state theories, positing that in the perfect, a past event generates a post-state that lingers up to or further than the speech time. None of these theories can singularly account for the different readings of the PP, nor do they show in the syntax how the perfect manifests in different languages and morphologies. Likewise, the accounts for the P-PP to date (Algeo 1976; Laca 2010; Molsing 2006; Schmitt 2006) have arrived to diverging conclusions about the licensing of the continuative aspect in the P-PP. They also fail to demonstrate how the PP interacts with the past system and what features differentiate itself from other past aspects. Therefore, in the following chapter, I will introduce my proposal that sets the perfect within the past tense and motivates how its connection with the present is established. In addition to addressing the semantics of the perfect, I will demonstrate how and where in the syntax functional features associated with the perfect are.

CHAPTER 3

THE PRESENT STUDY: THE [±CONTINUATIVE] MODEL AND THE ACQUISITION TASK

Tense and aspect are independent from each other. As mentioned in chapter 1, tense situates the temporal location of an event; that is, if it occurs in the past, present, or future. Aspect has to do with the internal structure of the event. Such structure can manifest lexically or sententially. Lexical aspect (*Aktionsart*) refers to the inherent semantic value of verbs. Its categorization often comes from Vendler's (1967) four class system (state, activity, accomplishment, and achievement) and an adaption (Andersen 1991; Robinson 1990) of that system that defines these aspectual categories in terms of features, as shown in table 7.

Table 7. Semantic Features of Lexical Aspect Categories

	State (know, think)	Activity (play, run)	Accomplishment (finish, run a mile)	Achievement (jump, die)
Dynamic	–	+	+	+
Telic	–	–	+	+
Punctual	–	–	–	+

Sentential aspect refers to the boundedness of an event, in other words, the temporal limits of an event. Imperfective does not clearly define when an event starts and ends. In the perfective,

however, one will be able to define the completion of an action. Talking about sentential aspect usually entails addressing inflectional markers, since many languages mark tense morphologically.

Each formal approach that we have seen so far presents some shortcomings regarding the perfect, especially when it comes to its syntax. Although Demirdache & Uribe-Etxebarria (2007; 2008) bring a syntactic model that demonstrates the interaction between tense and aspect, their model does not motivate how the same morphology can generate different readings. Neither does it mention how and if lexical aspect influences sentential aspect. Schmitt (2001) and Molsing (2006) bring their own explanation to the obligatoriness of iterativity in the P-PP. Nevertheless, they do not account for durativity or how the perfect is distinct from the perfective and imperfective.

The model that I will be presenting here sets the PP in the past system and is based on the intuition the literature has used to define what the perfect aspect is: a past action with current relevance. A definition frequently found in the literature (Comrie 1976, 1985; Dahl 1985; Bybee et. all 1994; Algeo 1976; Akerberg 2006) is that the PP expresses an eventuality that occurs prior to the reference time and is relevant to the present. In other words, an indefinite past whose goal is not to locate a situation in a specific moment in the past, but to show it as relevant to the current moment. In the literature, the perfect is able to manifest either a one-time eventuality in the past or a repetitive/durative eventuality up to the present. From this description, we can see that the perfect has two locutory functions: a) indicating if the action ended or not (boundedness), and b) demonstrating how a past action is anchored to the present. Therefore, perfects denote two internal structures of the event, and thus, are constituted by two

aspectual features. Hence, I propose that sentential aspect is not primarily defined by perfectivity only, but also by continuity. Leaving aside more pragmatic and specific aspects, such as habitual and progressive, and focusing on the past system, I suggest that the past consists of four main aspects that arise from the different combinations between the traits [±perfective] and [±continuative]:

(86) Perfective: [+perfective] [-continuative]

(87) Imperfective: [-perfective] [-continuative]

(88) Anterior: [+perfective] [+continuative]

(89) Continuative: [-perfective] [+continuative]

Understanding aspect as the perception of the temporal structure of an event, perfectivity refers to the boundedness of an eventuality: if it is perceived as complete or incomplete. The sentence in (90) shows that David did the action of cleaning the windows and such action is complete.

(90) David limpou as janelas
David clean.PRET the.F.PL windows
'David cleaned the windows'

(91) David limpava as janelas
David clean.IMP the.F.PL windows
'David was cleaning the windows'

The preterit morphology entails [+perfective]. The difference in (91) lies in the [-perfective] imperfect morphology that does not state when the cleaning ended, since the imperfect expresses past habits and recurring actions over a past interval. What both sentences have in common, however, is that in none of the examples the eventuality of cleaning continues up to the present, nor do the effects of the cleaning linger at the moment of speech. These sentences are uttered in narratives in the past and do not need to be connected to the speaker being near a window or talking about windows. They are both [-continuative].

Continuativity consists of either the event itself or its effect continuing up to the moment of speech with the possibility of going further. This is the fundamental trait that distinguishes the perfect from the rest of the simple past system. Perfects are still defined by perfectivity. The one-time eventuality readings, referred to as existential or resultative/experiential, are [+continuative] [+perfective]:

(92) David has cleaned the windows

Sentences like (92) generate a reading of an event that happened sometime in the past, but they also generate a pragmatic value to the present, for instance, that because David has cleaned the windows, I do not have to clean them. Since sentences like this mostly point to an event anterior to the moment of speech, I will refer to them as having an *anterior* aspect. Unlike the previous examples (90) and (91) with perfective and imperfective aspects, this anterior sentence (92) must be uttered near a window or while discussing either *cleaning*, *windows*, or *cleaning windows*. It cannot be part of a narrative in the past (93-94) detached from the present:

(93) *David has cleaned the windows while I cooked[7]

(94) *David has cleaned the windows, then he cleaned the bathroom

The sentence in (92) is an anterior perfect, thus, it contains the traits [+perfective] [+continuative] given that the action ended in the past, but its result lingers in the present. Perfects can also have the [-perfective] trait, which is when they produce the universal or iterative/durative readings. In English and Spanish, this is possible with a durative adverbial (95a, 96a)[8] or the present perfect continuous morphology (95b, 96b). Portuguese, however, outputs a [-perfective] [+continuative] by default (97).

(95) a. David has cleaned the windows for 2 hours

b. David has been cleaning the windows

(96) a. David ha limpiado las ventanas por 2 horas

b. David ha estado limpiando las ventanas

(97) David tem limpado as janelas

The sentences above are [-perfective] because the eventuality has not come to a halt yet. More than that, because the speaker actively chooses to portray the action of cleaning as not finished — in other words, as not having achieved the right boundary. Unlike the imperfective, which also denotes that the right temporal limit has not yet been achieved, the imperfect places this limit

[7] This sentence is grammatical on the reading of *while* meaning 'although'. This is not the intended reading here.
[8] E-PP and S-PP output by default an experiential reading, even with statives and durational adverbials. Thus, a reading of David having cleaned for 2 hours sometime in the past is also available in (95a, 96a).

before the moment of speech, that is, not continuing into the present. On the other hand, the perfect sets the right boundary somewhere between the present and the future, being thus, [+continuative] into the moment of speech. Because this type of perfect presents an imperfective eventuality that started in the past and continues up to the present, I will refer to this as the *continuative* aspect.

In fact, the primitives of my model clarify the description that the P-PP has been given of an imperfective or a perfective with imperfective properties (Squartini and Bertinetto 2000, Molsing 2006). The confusion arises because both imperfectives and continuatives are [-perfective]. The difference between them resides in the [continuative] feature, which is negative for the imperfective aspect and positive for the continuative aspect. In sum, the four aspects are: a) perfective: clear beginning, clear ending; b) imperfective: unclear ending, but situated before the moment of speech; c) anterior: event is regarded as complete, but its effect lingers; d) continuative: both event and effect linger into the moment of speech with unclear ending. These differences are illustrated below in (98), where the left bracket represents the beginning of the eventuality (left temporal boundary), the right bracket indicates the end of an eventuality (right temporal boundary), and the dots show the effect of the eventuality:

(98)

	Past Now Future →
Perfective	[clean]
Imperfective	[clean……]
Anterior	[clean]……
Continuative	[clean……]…….

In addition to differentiating the perfect from the perfective and imperfective, the inclusion of the [±continuative] feature allows us to understand why the eventuality in the perfect can be regarded as surpassing the present. According to my proposal, [-perfective] eventualities fail to locate the right temporal boundary. In the case of imperfectives, the limit is set before the present by the [-continuative] feature. However, with continuative perfects, this limit is never set. Therefore, the eventuality might continue further into the future. This corroborates Algeo (1976), who asserts that the P-PP's length of the extension is indeterminate. He adds that this possible extension is not a property of the PP: if the event extends into the present, such extension is perceived by inference. Indeed, such inference is not present in anterior perfects, which are [+perfective] and are the default output in English (99a) and Spanish (99b).

(99) a. Laura has made coffee

b. Laura ha hecho café

Moreover, the [±continuative] feature also sheds light on the problematic notion of "current relevance". As already discussed in Chapter 2, stating that the function of the perfect is to show past events as relevant to the present stands *in contra* the notion of relevance in pragmatics, given that it is theorized that speakers are guided by the principles of cooperation in order to achieve effective communication and be collaborative interlocutors (Grice 1975). In the Cooperative Principle, there are four Gricean Maxims: a) quantity: make your contribution as informative as required; b) quality: be truthful; c) manner: be orderly and avoid obscurity, ambiguity, and prolixity; d) relation: be relevant. According to Grice's (1975) Maxim of Relation,

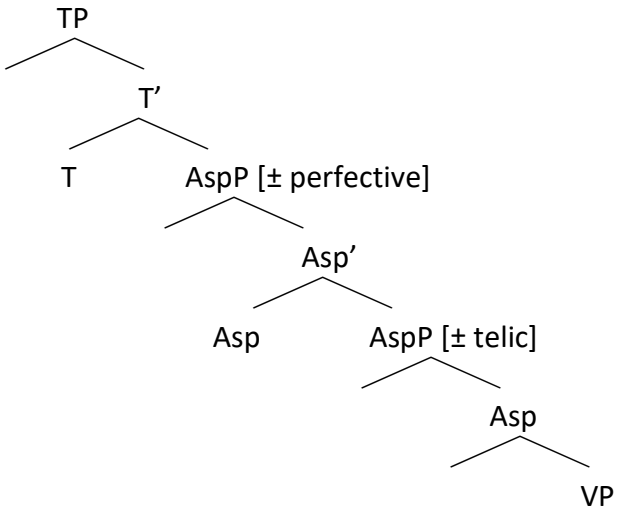
speakers always say pertinent information to the conversation, regardless of what tense and aspect are being used. Therefore, even though the literature is correct to point that the PP offers past events as pragmatically relevant to the present, "current relevance" by itself is not what distinguishes the perfect from the perfective or imperfective. After all, listing a sequence of past actions or describing past habits are relevant to questions such as "what did you do over the holidays?" or "what did you do in college on the weekends?". What truly sets the perfect apart is the [+continuative] trait, which anchors the eventuality or its effects onto the present.

3.1 The Syntax of the [±Continuative] Model

In addition to discussing the semantic properties of the perfect, it is important to indicate how sentential aspect is projected in the syntax so that we can define what the acquisition task is. In my proposal, I assume a Minimalist model of the grammar (e.g. Chomsky, 1995 et sequens.) in which the derivation of a clause is driven by pair-wise merge and checking of lexical and functional features within the Numeration. Furthermore, I follow Giorgi and Pianesi (1997) and assume that both grammatical (sentential) and lexical aspect manifest as functional categories. In their work, aspect is projected right below TP in two AspP heads. The lower one represents lexical aspect, where in English, Spanish and Portuguese [±telic] features are checked. Right above it, we have higher AspP representing grammatical aspect. This model accounts for the past system, focusing on the preterit/imperfect aspectual distinction. In this approach, Portuguese and Spanish instantiate both [+perfective] and [-perfective], therefore verbs move to higher AspP for overt [±perfective] feature checking through the preterit and imperfect morphology. On the other hand, English has an important parametric difference. English verbs can express different

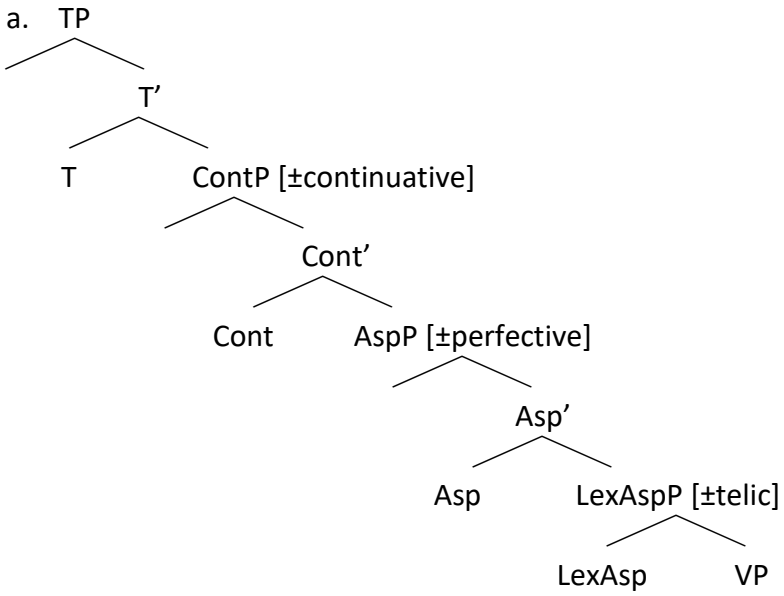
verbal values with the same form. For instance, “cut” can be present, past, participle, imperative and even a noun. Therefore, English verbs are considered morphologically “naked”. It is hypothesized (Giorgi & Pianesi 1997; Slabakova & Montrul 1999) that English instantiates [+perfective] but not [-perfective]. In (100) we can see a scheme of aspect that is composed of only one feature, e.g., [±perfective]:

(100)

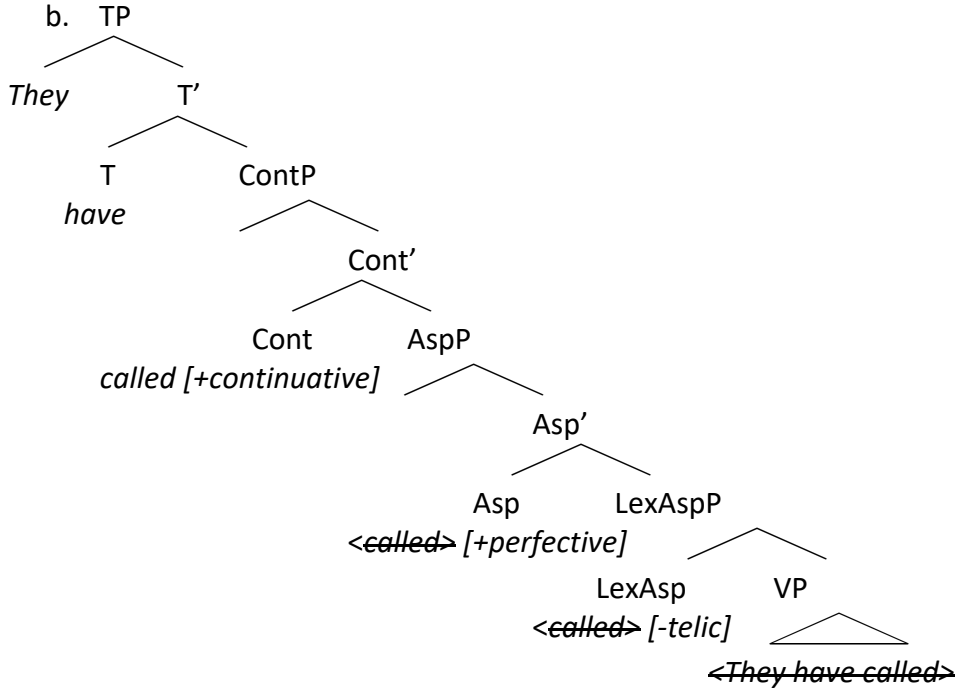


In the [±continuative] model, I propose that the past tense system primarily presents 4 sentential/grammatical aspects that arise from two features [±perfective] [±continuative]. Thus, I will adapt Giorgi and Pianesi (1997), and propose another AspP head that instantiates [±continuative]. To simplify the recognition of the three aspectual heads, I will rename lower AspP to LexAspP as in Lexical Aspect Phrase. For grammatical aspect, the formerly higher AspP will remain the same, while the additional head will be referred to as ContP. Consider the hierarchy of functional projections above VP in (101a):

(101) a.


TP
T’
T
ContP [±continuative]
Cont’
Cont
AspP [±perfective]
Asp’
Asp
LexAspP [±telic]
LexAsp
VP

(101) b.


TP
They
T’
T
have
ContP
Cont’
Cont
called [+continuative]
AspP
Asp’
Asp
<~~called~~>
LexAspP
[+perfective]
LexAsp
<~~called~~>
VP
[-telic]
~~<They have called>~~

If we recall the aspect-to-morphology distribution in English, Spanish and Portuguese, we will note that in English and Spanish[9] the PP can generate two aspectual values: anterior and continuative, the first one being the default output. E-PP and S-PP move to AspP for [±perfective] feature checking, where [-perfective] may be assigned in the presence of atelic verbs or the present perfect continuous morphology. Then, they move up to Asp2P to check [+continuative], following the tree in (101a) and resulting in (101b). In Portuguese, the PP is associated with only one aspectual value: continuative. Therefore, P-PP moves to AspP for [-perfective] then to Asp2P for [+continuative]. Nonetheless, it is the preterit morphology in Portuguese that is twofold, being able to generate either a perfective aspectual value or an anterior one. I hypothesize that verbs move to AspP to check [±perfective] against the imperfect or preterit first, and then move to Asp2P for [± continuative].

3.2. Lexical Aspect and the Iterative vs. Durative Readings

We have discussed in the first two chapters that the literature has conflicting data on the availability of durative readings in the P-PP. On one side we have the claim that durativity is generated in the presence of atelic verbs (Algeo 1967), while another side suggests that iterativity is obligatory (Schmitt 2001). An alternative group believes that durativity is available in some contexts or some dialects (Molsing 2006, 2010; Laca 2010).

[9] As mentioned in Chapter 1, in this dissertation I will be focusing on the Latin American Spanish. The peninsular variety has a more restrictive use: a recent past event, more particularly one that occurred in the same day as the moment of speech: the so called hodiernal past. Given that recency in perfectivity is not the goal of this work, I will not be addressing this variety.

In the S-PP and E-PP, continuative aspect is possible with states. Algeo (1967) asserts the same for the P-PP. This is true when we analyze the distinctive pair *estar* and *ficar* for physical and mental states in Portuguese. The first one has a homogeneous value of being sick (*estar doente*) or being sad (*estar triste*). While the latter has an inchoative value of change of state, as in getting sick (*ficar doente*) or getting sad (*ficar triste*). *Ficar* will immediately generate an iterative reading in the P-PP (102), whereas *estar* can license both iterativity and durativity (103):

(102) Ana tem ficado doente

'Ana has been getting sick'

(103) Ana tem estado doente

'Ana has been sick'

Thus, we can see lexical aspect does interact with the semantics of the present perfect. Nevertheless, inserting a frequency adverbial into (103) will obligatorily turn it into an iterative event (104a).

(104) a. Ana tem estado doente muitas vezes

'Ana has been sick many times'

b. Ana tem estado doente desde a semana passada

'Ana has been sick since last week'

c. Ana tem estado doente há 5 anos

'Ana has been sick for 5 years'

A durative adverbial will reinforce durativity (104b), but a durative adverbial with a long period will cause ambiguity (104c). If we know Ana is a healthy young woman, it is odd to assume she has been sick for 5 years straight. So, even though this sentence is grammatical, we must force it into an iterative eventuality, a repetitive cycle of getting sick and getting healthy again.

Verkuyl (1972) proposes that aspect is not a semantic property of verbs, but their combination with adverbial phrases and their arguments. Indeed, in Portuguese, events that cannot be iterated (e.g., dying) are ungrammatical (105). However, if these are used with generic pluralized NPs, they become grammatical with an iterative reading (106).

(105) *Uma pessoa tem morrido

'A person has been dying'

(106) Muitas pessoas têm morrido

'Many people have been dying'

(107) Muitas pessoas têm estado doentes

'Many people have been getting sick'

Likewise, states with pluralized NPs also convert into iterative readings. The example (107) must be interpreted as iterative, since it makes more sense to think that people individually got sick and stayed sick at different moments and for different lengths than interpreting that a group of people coincidentally got sick together at the same time and stayed sick for the same duration. This latter odd reading of (107) can be generated by the syntax, but it is disfavored in the computation due to the unlikelihood of such an event. Given the main verb's lexical aspect is a

state, the reading should be a homogeneous one, creating durativity. Instead, the context will override such interpretation, leading interlocutors to perceive the iteration of single eventualities by many different people. Thus, the final decision for an iterative reading here is not within the syntax, but the pragmatics. Even though lexical aspect plays a role, it is specific contexts and background information that can change how some sentences are perceived. Therefore, I claim that adverbial modification, lexical aspect, and pluralized NPs have a secondary compositional property. It is up to the syntax to generate the anterior and continuative aspects, but their sub-structure, e.g., durative or iterative readings for the continuative aspect, is at the level of pragmatics. In other words, stative verbs, durational adverbials, and pluralized NPs contribute to a durative reading of the continuative aspect. However, this reading may be overridden and rejected over an iterative reading if our world knowledge and/or specific context do not allow us to interpret a stative verb as completely homogeneous, i.e., not having suffered any alteration from the event time to the speech time. Let us observe some more examples where context and empirical knowledge compose the final reading of the PP:

(108) a. Jonathan has been faithful to his creed for 20 years

b. Jonathan has been unhappy for 20 years

(109) a. Jonathan has been sleepy since this morning

b. ?Jonathan has been sleepy for 20 years

(110) a. The economy has remained stable since the 90s

b. The economy has remained unstable since the 90s

(111) a. Roberto has washed the dishes

b. ?Roberto has washed the dishes for hours

b'. Roberto has been washing the dishes for hours

c. ?Roberto has washed the dishes for days

c'. Roberto has been washing the dishes for days

Durativity is possible with states and, in most cases, with short periods of time. Durativity will still hold with long periods of time if the event can remain unchanged. Take the case of (108a), in which we have a mental state (belief or faith) that can continue unaltered over a long period of time. (108b) is somewhat dubious. It is unlikely that someone has remained 20 years unhappy every single second without having ever been calm, peaceful, or even joyful at times. Durativity is possible here if we look at the overall picture, ignoring the instances in which Jonathan was asleep or in a different mood, and if we know about all the burdens that he has carried over the years that prevented him from becoming a happy person. Similarly, we have the case of (109a) where durativity is available because it happens in a short interval (since this morning). When we change the timeframe to a longer one (109b), the sentence becomes odd. After all, empirically, we all know that one cannot go without getting any rest and recovering sleep for so long (20 years). The only way to make (109b) interpretable is to force iteration and understand the sentence as Jonathan having demonstrated being sleepy in many different occasions over 20 years. While it is still odd, it is at least grammatical if contextualized. For instance, let us imagine that Jonathan has worked three jobs over 20 years to support his family. Therefore, he is always tired. No context could explain the durative reading of Jonathan not recovering energy and being

in the same state of somnolence for 20 years. Finally, let us move to the examples in (110), where the same verb is employed in both cases. In (110a), durativity is possible even though the timeframe consists of decades. Both the verb *remain* and the argument *stable* help the computation generate durativity: an event starting in the past and homogeneously continuing (the same) up to the present. On the other hand, (110b) is almost identical, the only change is that now we have the argument *unstable* instead. Due to the nature of instability, durativity is no longer supported since it would have to express that the economy became unstable at some point and remained with the same instability for decades. That would, in fact, express the opposite: stability, and would contradict what *unstable* is. Therefore, (110b) forces an iterative reading in which we perceive the economy going through ups and downs since the 90s.

As we have seen in examples (108-110), it is unlikely that someone's physical and mental states remain the same for a long period of time. Durativity is, then, disfavored in many contexts despite the syntax (the presence of stative verbs) making it possible. In fact, non-stative eventualities generate the anterior aspect by default (111a). Only by adding a durative adverbial (e.g., *for hours/days*), we may have durativity. In the cases of (111b) and (111b'), durativity is possible because of the short time span. However, if we analyze (111c) and (111c'), we will notice that these sentences must be interpreted as iterative, since it is not likely that people will continue doing the same action non-stop for a long interval. Thus, I agree with Laca (2010), Schmitt (2001) and Molsing (2006, 2010) that iteration is the default output in P-PP, but, as Laca (2010) has shown, durative readings are accepted by some speakers as well. In addition to the restrictive contexts necessary for durativity to be interpreted, as discussed above, I assume that part of this variability is because, in some contexts (112), it might be difficult to distinguish

iterativity from durativity, since both readings would work. If we assume Schmitt (2006) is on the right track regarding there being an operator that applies coercion for the obligatoriness of the repetition of events with the participle, then we may understand that this operator forces us to scrutinize a homogeneous eventuality (durative states) and focus on its interior (subintervals) as repetitions (iteration). This becomes even clearer with activity predicates, when such a difference is difficult to see and might not be relevant. Since activities are processes, they inherently represent a big homogeneous event composed of a succession of heterogeneous mini steps, for instance *walking* means *stepping forward several times*. This might cause iterativity and durativity to be very hard to distinguish. Such distinction might even be irrelevant in some cases. For example, in (112), one might see the eventuality a) outwardly as a continuous rising; or b) inwardly as several instances in which some rising of the sea level took place.

(112) Com o aquecimento global, o nível do mar tem subido
With the.M warming global, the level of-the sea have.PRES rise.PTCP
'Because of global warming, the sea level has been rising'

Regardless of how one sees it, the meaning of (112) will be practically the same. The 'unavailability' or 'disfavoring' of durativity might simply be an unnecessary semantic distinction most of the time. Given that both durative and iterative readings represent an action that started in the past and continues up to the present, and, as we have seen, their semantic difference might be irrelevant. In my model I collapse these two readings into one aspectual category: continuative. My proposal that this ambiguity is ultimately resolved at the level of pragmatics is

in accordance with Nishiyama and Koening (2004), who also claim that final reading is determined at the level of pragmatics. But unlike their post-state theory that only accounts for the anterior aspect, my [±continuative] model also motivates how the continuative aspect is anchored to the present.

In Chapter 1, I addressed the many labels that have been associated with the perfect in the past. I also discussed how *perfect* has sometimes been used to talk about aspect and other times to refer to the PP morphology. This inconsistency is problematic, because the PP morphology does not always carry *perfect* aspect. For instance, Peninsular Spanish, Italian and French instantiate the perfective aspect with the PP morphology (verb of possession in the present + main verb in the past participle). Moreover, the term *perfect* is sometimes in the names of the imperfect and preterit morphologies, whose full titles are *imperfect preterit* and *perfect preterit*. Thus, in this dissertation, I will be using the labels *present perfect* and *perfect* interchangeably to describe the morphosyntactic form. By adding the continuative functional feature to the aspectual system, I suggest the use of four aspects in the past system *imperfective, perfective, anterior* and *continuative.* The labels *iterative* and *durative* are semantic-pragmatic readings of the continuative aspect. In other words, they are interpretations of the sub-structure of eventualities that start in the past and continue into the moment of speech. Now that we have defined the features of the grammatical aspect for the past system and how and where they are in the syntax, let us move to the acquisition task of English-Spanish bilinguals acquiring the Portuguese present perfect as an L3.

3.3 The acquisition task

I investigate the acquisition of the PP in L3 Portuguese by bilinguals of Spanish and English. Thus, one of the goals of this dissertation is to examine the acquisition of functional features and their morphosyntactic realization in a third language. There is diverging data on whether adults have access to UG. A part of the literature (Hawkins & Chan 1997; Beck 1998; Meisel 1997) defends it is not possible or there is only partial access (Schacter 1990; Bley-Vroman 1190). Whereas data from another group (Montrul 2004; Schwartz & Sprouse 1996) supports UG-continuity to be possible in adulthood. Many scholars have researched the difficulty English natives have acquiring the imperfect-preterit distinction in Romance languages. These languages have [±perfective] feature checking under AspP, a functional category within T. English is hypothesized to only instantiate [+perfective] (Giorgi & Pianesi 1997). Studies have pointed to successful attainment of the morphosyntactic and interpretative properties of the preterit and imperfect tenses, in other words, acquisition of the [±perfective] feature checking in L2 Spanish (Slabakova & Montrul 1999, Montrul and Slabakova 2002) and L2 Portuguese (Goodin-Mayeda & Rothman 2005). However, very little research has been done on the acquisition of the PP in Romance languages. As stated previously, to my knowledge, there is only one on L2 Portuguese present perfect (Akerberg 2006) and one on L2 Spanish present perfect (Kanwit, Geeslin and Fafulas 2015), which means this will be the second study on the acquisition of the Portuguese present perfect and the first study on the L3 acquisition of the present perfect.

Another goal of this dissertation is to observe what variables are the most influential in the process of acquiring a third grammar. To do so, I will test the prediction from three groups of

L3 models. Each makes stronger predictions for one variable: order of acquisition, typology, or modularity. A summary of the group and their overall predictions appears in Table 8:

Table 8. L3 Models and their predictions

Order of Acquisition	L1 Factor Hypothesis	Hermas 2010; Jin 2009; Leung 2005; Na Ranong & Leung, 2009	L1 is the source of transfer
	The L2 Status Factor Model	Bardel & Falk 2007, 2012; Falk & Bardel 2011	L2 is the source of transfer
Typology	The Cumulative Enhancement Model (CEM)	Berkes & Flynn, 2012; Flynn, Foley, & Vinnitskaya 2004	Any previous language can transfer, but only facilitative information is transferred
	The Typological Primacy Model (TPM)	Rothman, 2010, 2011, 2013, 2015	The language the learners believes to be the most typologically similar is transfered. Negative transfer can occur
Modularity	The Linguistic Proximity Model (LPM)	Westergaard, Mitrofanova, Mykhaylyk & Rodina 2017	No part of previous linguistic competence is blocked at any stage. Non-facilitative influence can occur.
	Scalpel Model	Slabakova 2017	L3ers can extract the facilitative options of L1 or L2 parameter values with a scalpel-like precision, since languages are always active.

It is important to recall that L3 studies so far have focused on attempting to track the L1 or L2 as the source of transfer and the variables that would guide this subconscious choice. This has been done primarily by identifying a commonality between the L3 and one of the previously acquired grammars. The present study differs significantly because Portuguese is strikingly typologically proximal to Spanish and has some parallels with English lexically and syntactically, too. More specifically, the P-PP is morphosyntactically very similar to both English and Spanish. However, it differs from them because its default output is one of iterative reading, while

durative readings are also possible. Unlike the other two languages, P-PP cannot produce experiential or resultative readings, a function of the preterit in Portuguese.

Some studies have shown the obligatoriness of PP generating iterativity and that durativity is not even available to some Portuguese native speakers. Due to the difficulty and sometimes irrelevance – shown in the section before – of telling if an eventuality is perceived as iterative or durative, and due to conflicting and insufficient data from previous studies, I will be referring to the readings produced by the Portuguese present perfect as the *continuative aspect* since, in both cases, the event starts in the past and is protracted up to the moment of speech and may continue even further. In turn, the default aspectual value Spanish and English generate will be regarded as the anterior aspect, because in such cases the eventuality takes place before the moment of speech and only the effects of the event linger and are presented with pragmatic importance to the moment of speech.

Table 9. Distribution Aspect-to-Morphology in English, Spanish and Portuguese

	CONTINUATIVE [+CONTINUATIVE, -PERFECTIVE]	**ANTERIOR [+CONTINUATIVE, +PERFECTIVE]**	**PERFECTIVE [-CONTINUATIVE, +PERFECTIVE]**
ENGLISH	Present Perfect	Present Perfect	Simple Past
SPANISH	Present Perfect	Present Perfect	Preterit
PORTUGUESE	Present Perfect	Preterit	Preterit

English and Spanish can also generate the continuative aspect but with a different morphology or the presence of a durative adverbial. Finally, perfective expresses a bounded event that happens in the past, whose effects are seen as discontinued and expressed on their own. This

aspect is mapped onto English simple past and the preterit in Spanish and Portuguese. However, Portuguese also uses the preterit for the anterior aspect. Therefore, there is a mismatch in the aspect-to-morphology distribution in English, Spanish, and Portuguese (Table 9) that can disrupt the acquisition of L3 Portuguese.

Participants in this study, detailed in chapter four, are bilinguals of Spanish and English. Both previous grammars already instantiate the continuative reading, either with the present perfect continuous or with the present perfect combined with a frequency or durational adverbial (i.e., *twice, a lot, since 2010, for 5 years*). Thus, when acquiring Portuguese as their L3, they do not need to acquire new features. Instead, they must de-learn the association of [anterior] temporal-aspectual values with the PP morphology and re-assemble it, thus associating it with a different morphology: preterit. Consider Slabakova's (2012) description of 'de-learning', which I adopt:

> De-learning a property does not mean that the learner no longer knows something about a given language but that the learner acquires the ungrammaticality, or unavailability in the L2, of a construction that is available in the learner's native language. For example, an Anglophone learner of Spanish needs to "de-learn" the double object construction, which is available in English but ungrammatical in Spanish. (Slabakova 2012: 6)

Hence, the English-Spanish bilingual's acquisition task when acquiring L3 Portuguese present perfect is to:

1. Unassign the [+perfective] feature from previously acquired [+continuative, ±perfective] PP and map the obligatoriness of [+continuative, -perfective] onto the present perfect in Portuguese.
2. Understand preterit in Portuguese licenses two aspects, by resetting the values of the morphology from [+perfective, -continuative] to [+perfective, ±continuative]. That is, from an always perfective to an either perfective or anterior preterit.
3. Associate the experiential adverbs *já*, *nunca* and *ainda não* with the preterit and acquire their ungrammaticality when appearing with P-PP.

3.4 Hypotheses and Research Questions

There are a number of factors that may pose difficulties to learners in the case of the L3 Portuguese present perfect. First, the morphology is almost identical in the three languages, since in all of them the PP is composed of a verb of possession as the auxiliary, and the main verb is conjugated in the past participle morphology. Second, the overall similarity between Portuguese and Spanish will, at least initially, make L3ers assume that the PP is the same in both languages. Third, it is possible that learners receive insufficient input, since the Portuguese PP expresses a very specific aspectual condition: an event that started in the past and continued up to the moment of speech. Most of the time, such contexts exemplify either the start of a new habit or the breaking of an old one, i.e., someone who used to drive to work, but lately has been walking to it or someone who would normally go to bed early, but due to anxiety or a job-related condition has been going to bed late. In addition to that, the input that comes from formal instruction may also not be enough or come too late. A widely used textbook (Jouet-Pastre et al.

2013) in US undergraduate Portuguese courses presents the P-PP in one page of grammar instruction and one page of exercises. The P-PP is first introduced in lesson 14 out of 15. Likewise, Duolingo, the biggest learning language platform, used both individually and for language classes through the Duolingo for Schools platform, introduces the present perfect among advanced skills only. The instruction concerns continuativity and does not provide negative input for the ungrammaticality of anteriority with the P-PP. The fourth factor relates to ambiguous input that learners receive, given that (as shown in Table 8 above) there are some overlaps of the morphology and aspectual values among languages. As we can see in (113), English and Spanish license the anterior aspect – in fact, it is their default output – with the present perfect, while Portuguese does not. Nonetheless, as shown in (114) there is a confluence with the continuative aspect.

[Continuative aspect]

(113) a. Laura and Simone have been happy here (since they moved) (English)

b. Laura y Simone han estado felices aquí (desde que se mudaron) (Spanish)

c. Laura e Simone tem estado felizes aqui (desde que se mudaram) (Portuguese)

[Anterior aspect]

(114) a. Laura and Simone have bought a house (English)

b. Laura y Simone han comprado una casa (Spanish)

c. *Laura e Simone tem comprado uma casa (Portuguese)

In Portuguese, the present perfect is obligatorily continuative. That is the default and only output possible. In English and Spanish, the continuative aspect can be generated with stative eventualities, especially when accompanied by a durative adverbial. In sum, Portuguese is more restrictive only licensing continuative and differs from the other languages, which generate the anterior as the default and the continuative aspect in specific contexts. L3 Portuguese learners might misanalyze the infrequent instances where all three languages converge and be led to conclude that the PP in Portuguese is identical to their first and/or second language. Learners might simply not receive enough negative input or even any for the contexts where there is a morphology-aspect mismatch.

Finally, another factor that may affect acquisition is little, or absent formal instruction on the topic, as demonstrated by Akerberg (2006). Despite these challenges, I hypothesize that acquisition of the PP in L3 Portuguese is possible, and that learners will transfer the [-perfective, +continuative] feature to P-PP, that is, they will transfer the facilitative information – continuative aspect – available in their L1 and L2. Nevertheless, de-learning [+perfective] – anterior PP – will only take place in advanced stages and/or will have a direct correlation with exposure to natural input in a Portuguese speaking community.

Another part of the acquisition task is to reset preterit to check for either [+continuative] or [-continuative] for an anterior or perfective association, respectively. Because of the well-known and well-documented difficulty of the preterit/imperfect distinction at early levels of L2 acquisition, preterit is studied very early on and often multiple times in the classroom over the course of time. Moreover, preterit is a very frequent morphology in Portuguese, perhaps even more than in Spanish, since it can also generate the anterior. My second hypothesis is that

acquisition of anteriority with the preterit will be demonstrated early on and before the acquisition of obligatory continuative P-PP. Earlier acquisition of anterior readings will happen due to the constant classroom instruction learners get about the preterit/imperfect distinction and the saliency of the need to learn the preterit. Thus, acquisition of the morphology will accompany the acquisition of [+perfective, ±continuative].

Slabakova & Montrul (2002) comment on developments in the Minimalist Program concerning functional categories and the idea that their feature specifications are the locus of all cross-linguistic differences. Therefore, the general assumption for language acquisition is that, if learners have acquired a specific functional projection, they will have knowledge of both the inflectional morphology and the semantics associated with this projection, since UG ensures that there is no dissociation between morphology and semantics. Bearing that in mind, the tense-aspect related research questions are:

RQ1. Do English-Spanish bilinguals demonstrate evidence of acquiring the present perfect in Portuguese?

RQ2. Does acquisition of abstract functional features, such as aspect, take place before, after, or simultaneous to the acquisition of functional morphology?

RQ3. Since acquiring P-PP means resetting preterit to both perfectivity and anteriority and the present perfect to always output [+continuative, -perfective], do these phenomena take place simultaneously or is there the emergence of one prior to the other?

Subjects in this study participated in four tasks: one in syntax, one in morphology, and two in semantics. Details and sample items will be provided in Chapter 4, where I will describe the morphology. Following the Missing Surface Inflection Hypothesis (MSIH) (Prevost & White 2000), which predicts that acquisition of functional features may take place despite learner's surface optionality in morphology production, evidence that would answer RQ1 must come from the semantics tasks. If both groups (English natives and Spanish natives) demonstrate knowledge of the default output of the P-PP, i.e., the exclusive availability of [+continuative, -perfective] with the present perfect in Portuguese, we will be able to claim acquisition of the P-PP occurred.

The morphology task results compared to the data from the semantics tasks would shed light on RQ2. If subjects perform well in the morphology task and the semantics tasks, that will indicate acquisition of functional features and functional morphology happen simultaneously. If they indicate mastery of the morphology but inconsistency in the semantics, then abstract functional features acquisition is not directly associated with functional morphology, which would go contra the Minimalist Program (Chomsky 1995 *et sequens)*. In the case the opposite happens, i.e., optionality in the morphology but knowledge of the semantics, then the MSIH would be corroborated, and it would indicate that abstract functional features may be acquired before functional morphology.

Finally, for RQ3, analyzing the items in the semantics task in which the preterit is [+continuative] and is modified by experiential adverbials (e.g., *nunca* 'never', *já* 'already/ever', *ainda não* 'not yet'), and comparing this data to the items where subjects must reject anteriority with the P-PP will let us know if the acquisition of both cases happen simultaneously or not. If

subjects perform well with anterior preterit but not continuative P-PP, or vice-verse, we will know that one phenomenon emerges earlier in their interlanguage.

Now moving to the L3A hypotheses regarding initial transfer and acquisitional process, I have the following research questions:

RQ4. Do both languages serve as source of transfer or does one have a privileged role? In this case, which will transfer?

RQ5. Which of the current L3/Ln Acquisition models best predicts how acquisition occurs? That is, what influences L3A the most: (psycho)typology, order of acquisition, or modularity?

When it comes to L3A, structural proximity predicts that Spanish will serve as the main source of transfer due to psychotypological similarities. If this occurs, there will be support for the TPM as the best predicting model for the IS. For the beginner and intermediate levels, we will also expect to attest negative transfer from Spanish. Note that it would be *contra* the modular models and not in favor of the TPM, since this model makes predictions for the IS only. Nevertheless, because my second hypothesis is that acquisition of anterior preterit will occur early and there will be a lack of evidence for acquisition of P-PP until the advanced stage, even partially successful de-learning will support the modular models' predictions of a property-by-property acquisition. In sum, I hypothesize that data will be in favor for both the TPM and the modular models (Scalpel and LPM).

CHAPTER 4

METHODOLOGY

4.1 Participants: Experimental Group

A total of 72 participants composed the experimental group, which was subdivided into two mirror-image groups. The English natives (E-Nat) group refers to those who met the criterion of L1 English L2 Spanish L3 Portuguese order of acquisition. Spanish natives (S-Nat) were the second group, with L1 Spanish L2 English L3 Portuguese participants. They were recruited online through social media in groups and pages dedicated to language learning. Recruitment was also carried out through listservs of Portuguese, Romance Languages, and Linguistics programs in American universities. Participation took place in two 25-minute steps for a total of approximately 1 hour. All data was collected via Internet through the platform *Qualtrics*. The first step was a survey in which they signed the consent form, completed a language background questionnaire, and took a Portuguese proficiency test. The language background contained questions about age, gender, order of acquisition, length of experience with Portuguese, time spent abroad in a Portuguese-speaking country, knowledge of other languages, self-assessed proficiency and what dialect of Portuguese, English, and Spanish they mostly identify with. Recall that Peninsular and Mexican Spanish show variation in their PP with a tendency for hodiernal and continuative PP, respectively.

Proficiency in the L3 was controlled by two measures. First, during the language background, they self-assessed their Portuguese according to descriptions of communicative abilities I created based on ACTFL's (2012) proficiency levels and sublevels. Each sublevel had a hidden score. Table 10 summarizes the hidden scores and descriptions for each sub-level.

Table 10. Self-assessment description and hidden scores

Level and Sub-level		Description	Hidden Score
Novice	Low	I can greet and list objects	10
	Mid	I can use strings of words and memorized sentences	20
	High	I can communicate in familiar topics about me and others	30
Intermediate	Low	I can maintain a simple conversation well and sometimes improvise short sentences to non-familiar topics	40
	Mid	I can communicate well in simple social interactions and give short information in conversations higher than my level	50
	High	I can communicate well in simple and in more complex conversations, though with inconsistent grammar	60
Advanced	Low	I can narrate and describe events in oral and written paragraphs and find a solution for social incidents with hesitance	70
	Mid	I can manipulate formal language sometimes and find a solution for social incidents	80
	High	I can manipulate formal language, articulate hypothesis, and arguments in familiar topics	90
Superior		I can contribute to the discussion in concrete and abstract topics with precision and developed hypotheses	100

The second measure was a 50-question online Portuguese proficiency, which took place right after the background language questionnaire and was embedded in the same survey. It had four parts and lasted approximately 20 minutes. Part 1 had multiple-choice grammar questions,

testing different tenses, subject and object expression, question words, conjunctions, comparisons, regency, and preposition-article contractions (e.g., *em + a = na* 'in + the = in-the'). Part 2 examined knowledge of advanced conjugations, such as the subjunctive mood (present, imperfect, future) and compound tenses, in short paragraphs. Part 3 brought two texts for comprehension questions. Finally, part 4 observed vocabulary, taking in consideration non-cognates in Portuguese and Spanish, e.g., Pt. *grávida* 'pregnant', Sp. *embarazada* 'pregnant'. The maximum score was 50. For this test, those who performed at 40 or better were considered as advanced; 29-39, as intermediate; and below 29 as novice.

Written tests are a quantifiable standard method in language acquisition studies, but they do not always accurately reflect proficiency. For instance, current Portuguese college students might score higher than those who have finished their studies and no longer are in contact with written tests. Likewise, their performance might differ from those who have never taken Portuguese in formal instruction simply because current students might be more used to being tested on grammar. Besides that, there is the fact that written Portuguese is significantly intelligible to even monolingual Spanish speakers. It is hypothesized that Spanish speakers without any previous knowledge of Portuguese can understand more than 50% of oral speech (Jensen 1989) and up to 94% of an academic text in Portuguese (Henriques 2000). That is because it is estimated that there is about 85% of lexical similarity between these two sister languages (Ulsh 1971, Green 1988). In fact, some subjects who self-assessed intermediate placed as advanced in the written test. The self-assessment average was 49.86/100 while the written test score average was 73.19/100, which means that overall L3ers assessed their own proficiency 23.33 points lower. Thus, final placement in one of the three DS (beginner, intermediate,

advanced) was done by the average of the sum of the written proficiency test and the communicative performance based self-assessment. In other words, their Portuguese proficiency test scores (50 items) were doubled (reaching a maximum of 100 points) then added to the self-assessment (with a maximum of 100 points). This sum, depicted below in (115), was then divided by two for a final proficiency categorization.

(115) $$Proficiency = (Written\ test * 2) + (Self - assesment)/_2$$

L2 proficiency went a separate way. During the preliminary survey, participants also self-assessed in their L2 using the same communicative performance descriptions from Table 10. Self-assessment was also used as a screen method. Subjects that self-assessed lower than the intermediate level in their L2 had their participation discontinued. For the L2, participants did not take a written test for the sake of the duration of their total participation. Qualtrics, the platform used to collect data, is a powerful engine for online surveys. It provides guidance for survey construction, including an analyzer of quality. Qualtrics' data indicates that:

> Surveys longer than 12 minutes (and 9 minutes on mobile) start to see substantial levels of respondent break-off [and] up to 53% of surveys started on Qualtrics happen on mobile devices. Unfortunately, many of these mobile respondents end up leaving before they finish the survey (Qualtrics, n.d.).

As indicated by the data above, more than half of the people take surveys on their phones where there is constant distraction. Adding a proficiency test for their L2 would add approximately 30 minutes to the survey, which already lasted approximately one hour (2 steps of 25 minutes). An additional concern was that fatigue of taking two proficiency tests might skew the results. A study (La Bruna & Rathod, 2005) sponsored by Bloomerce in their White Papers series compared the results between two versions of the same survey: a short one (12 minutes) and a long one (35 minutes). The authors found that the response rate to the shorter version is higher but not significantly better. On the other hand, they concluded that fatigue impacts data quality, as participants tend to get sloppier towards the end of surveys, particularly long ones. They recommend that surveys last less than 20 minutes. In face of the data provided by Qualtrics (n.d.) and La Bruna & Rathod (2005), no written test for the L2 was applied. Whereas overall proficiency was not quantitatively measured through a test, knowledge on the object of study was, namely knowledge on their L2 PP. At the end of the study, subjects completed a separate task with 9 questions, which was either a Spanish or English version of the appropriateness preference task (APT) they took in Portuguese. Because English and most varieties of Spanish share semantic similarities in the PP (i.e., the possibility of generating both anteriority and continuativity), syntax was the best route to examine L2 representation and the possibility of property transfer from the L2 grammar. Participants were tested on adverbial placement (n = 6) and verb movement in questions (n=3) (see section 4.3.1). Those who scored above chance, i.e., 6 or higher out of 9, were deemed as having knowledge of the property. Those who did not meet the threshold were categorized as No-Syntax (i.e., not having indicated knowledge of their L2 PP syntactic properties) for post-hoc analysis, which I discuss in Chapter 5.

After screening and placement, participants were put in three groups: beginner, intermediate, and advanced. Given that the average score of the written test seemed to boost subjects to a higher level, final categorization received a strict cutting point. The beginner group ranged 0-49; the intermediate, 50-74; and the advanced, 75-100. Figure 2 brings a comparison of the self-assessment and written test scores. In the left, you can see many who self-assessed as novice scored similarly in the test as those who self-assessed as intermediate. Figure 3 demonstrates the final proficiency categorization with three levels of DS.

Figure 2. Distribution of self-assessment and written test scores

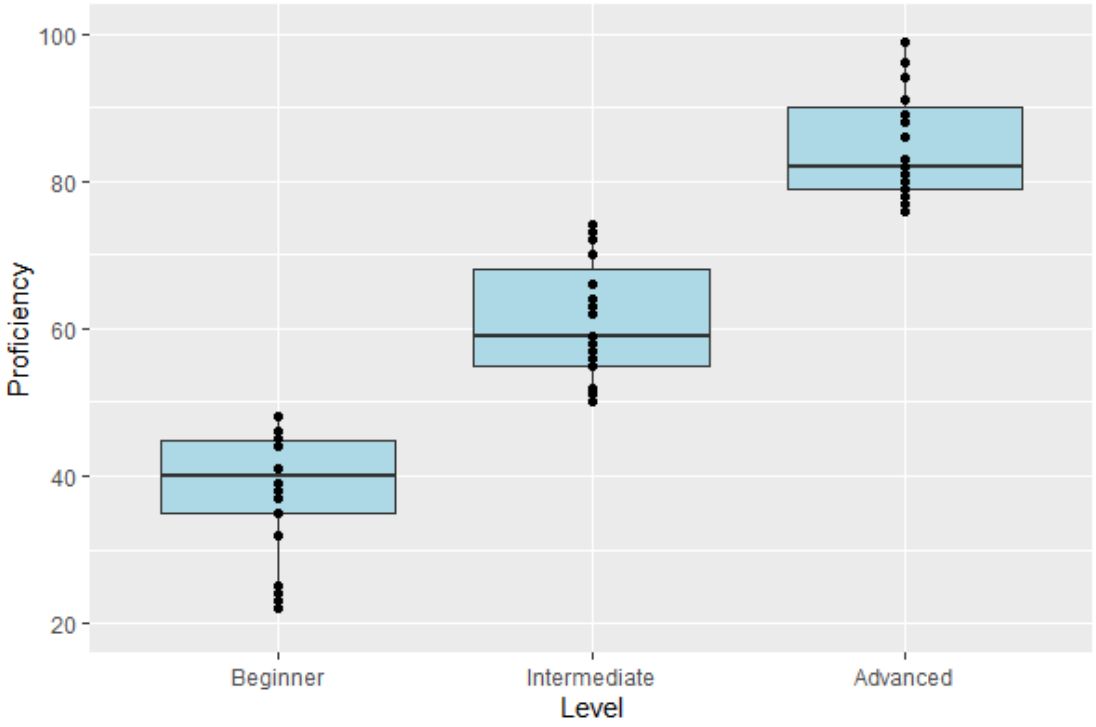


Figure 3. Proficiency for the 3 levels of developmental stages

Table 11. Experimental group

	Proficiency Average	Average of Time Learning Portuguese
Beginner [22] • E-Nat (n= 18) • S-Nat (n= 4)	38.2	1.6 semesters (~10 months)
Intermediate [27] • E-Nat (n= 14) • S-Nat (n= 13)	61	2.54 semesters (~1 year, 3 months)
Advanced [23] • E-Nat (n= 16) • S-Nat (n= 7)	84.5	4.89 semesters (~2 years, 5 months)

The English native-speaker group (E-Nat) had a total of 48 participants with a proficiency average of 60.3, while the Spanish native-speaker group (S-Nat) had 24 participants and a proficiency average of 64. An ANOVA test ($F(1)=0.526$, $p > 0.471$) did not return any difference between the

groups. Table 11 summarizes the experimental group by developmental stage. Note that 11 Spanish native speakers declared to be studying Portuguese for less than a year, but only 4 of them were placed in the beginner group, very likely due to the typological proximity with Portuguese.

4.1.2 Initial Stages

In Chapter 1, I stated that this study centers on the DS of the L3 Acquisition of the P-PP to examine access to UG for the remapping of functional features. Much of the field of L3A has focused on the examination of the source of transfer at IS, thus, there is a significant amount of literature available about the L3 IS, especially in Portuguese (see section 2.7). Therefore, the reason for choosing to primarily look at DS is to contribute to the knowledge on L3 DS, which has been neglected.

As discussed in section 2.6, there is no precise definition of what amount of time or experience with a new language constitutes the IS. Rothman (2013) differentiates the IS from the first DS, such as novice or beginner. They are not analogous, rather the IS are what the learner brings to the task of starting to acquire a target language and the experimental period with the novel language during which learners analyze cues to decide which language to transfer. Since a) it is extremely difficult to measure when subjects really started to be exposed to the L3 grammar and compare among themselves; and b) many Portuguese L3ers at American universities are English-Spanish bilinguals who are interested in the possibility of a speedy acquisition because of similarities between the two Romance languages, I considered those who had started learning Portuguese in less than 6 months to be part of the IS group. However, recruitment for these

participants happened within the first two months of classes, and the academic semester usually lasts only about 4 months. 10 participants (7 E-Nats, 3 S-Nats) constitute the sub-group of IS: while they self-assessed their Portuguese proficiency as novice with an average of 21, they scored around 60 in the written test, for a 40.5 score as their final proficiency. The data from this sub-group will be used for secondary analysis of the IS to track possible lingering of effects into higher groups.

4.2 Participants: Control Group

As briefly discussed in Chapter 1, L3A studies have a methodological issue that needs attention when it comes to control groups. Using monolinguals as a control group would result in a comparative fallacy (Bley-Vroman 1983; Sorace 2011), given that the brain of bilinguals is not like the monolinguals' in that all languages are always active, which leads to a constant linguistic suppression of the other grammar that bilingual brains go through. Considering the arguments about monolinguals not being the ideal control group, the first measure I took to avoid the comparative fallacy was having the experimental groups mirrored, so they could be compared to each other. An additional measure was a control group formed by a mix of 46 bilingual and trilingual Portuguese native speakers in English and/or Spanish to compare their judgements of Portuguese sentences among the experimental groups. Only 2 native speakers declared being a Portuguese-Spanish bilingual, while 22 indicated speaking Portuguese and English. Another set of 22 asserted being trilingual in Portuguese, Spanish, and English. Since the data shows that all languages are always active, we can assume that crosslinguistic influences might affect judgments on the P-PP even by native speakers.

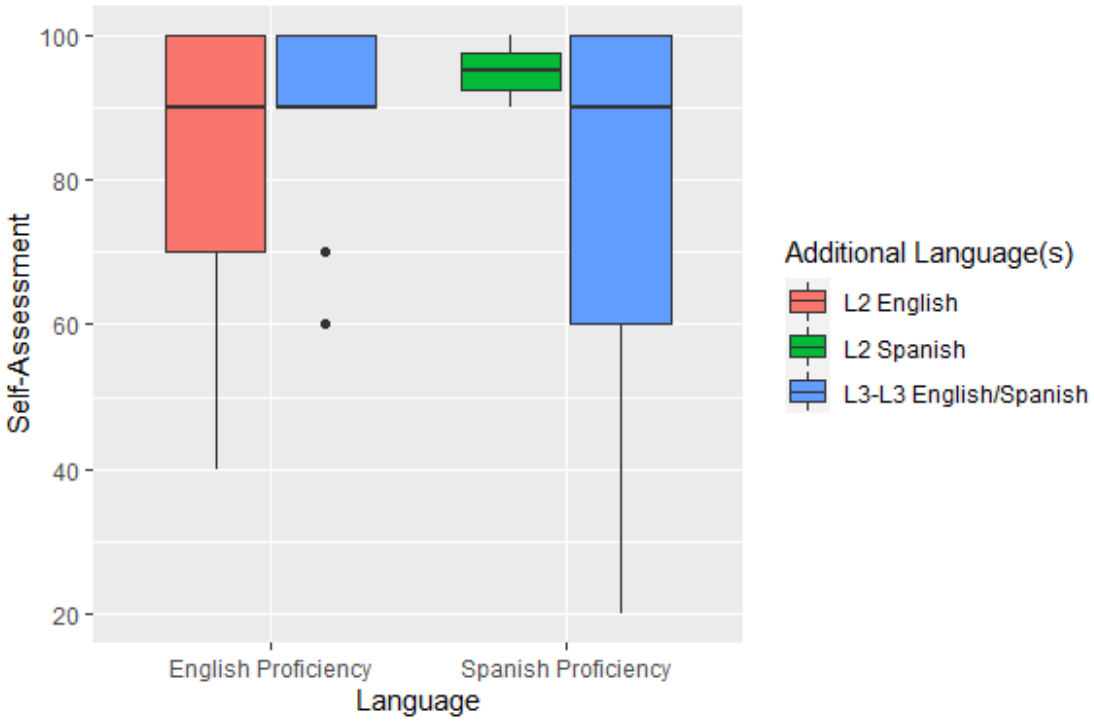


Figure 4. Control group self-assessment

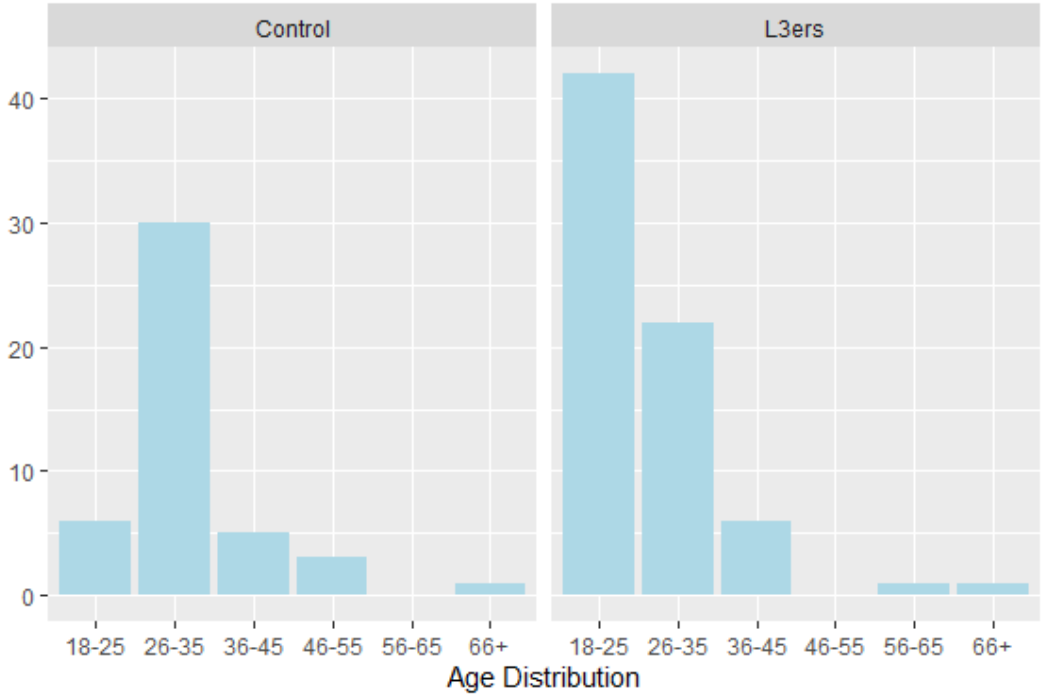


Figure 5. Age distribution among experimental and control groups

Similarly to the experimental group, Portuguese native speakers had to self-assess their proficiency in their L2 (and L3, if applicable) (see Figure 4). Their Spanish proficiency average was 75.83, while their English proficiency average was 87.90. Moreover, at the end of the survey, they were tested on syntactic knowledge of the present perfect in their additional language(s) to better control for possible transfer.

Figure 5 compares the distribution of age groups between the control group (multilingual Portuguese native speakers) on the left and the experimental group (L3ers) on the right. We can see a concentration of L3ers in this study in the younger age group of 18-25, given that the majority of them are undergraduate college students. Meanwhile, most of the control group fall into the 26-35 range, since many of them are graduate students and young professionals.

4.3 Instrument

After the initial screening and language background, participants were given a code via email and a link to access the linguistic data collection instrument. This second part of the study was another 30-minute session. Subjects completed a four-task online questionnaire. The first activity of the instrument is a syntactic test dedicated to tracking possible sources of transfer through adverbial placement and verb raising in questions. The second task examined morphology in the present perfect and preterit in Portuguese. In the third one, they judged the felicity of semantic implications between two sentences on a 4-point (-2, -1, 1, +2) Likert Scale. The fourth was also on the semantics of the P-PP. They simply had to choose 'correct' or 'incorrect' for the explanation given for a sentence. All items in each task were totally randomized for each participant. The order of options for each item in the morphology and syntax tasks were

also randomized for each participant. However, the order of the tasks was the same for all subjects. The syntax task came first to avoid sentences containing adverbials or interrogative structures in the other tasks priming participant responses. Slabakova & Montrul (2001) and Montrul & Slabakova (2002) also investigated if semantic properties come for free after acquisition of morphology. Following their methodology, the morphology task preceded the semantics tasks. Given that the nature of semantics tasks is to bring attention to the meaning of the sentences and all the elements that compose such meaning, the truth value judgment task was left at the end, so that the linguistic awareness that it causes wouldn't affect subjects' performance throughout the instrument. Details on each task follow in sections 4.3.1 to 4.3.5 below.

4.3.1 Syntax: Appropriateness Preference Task (APT)

The first part of the instrument is an APT, consisting of 16 items (9 tokens and 7 distractors). It tested acquisition of two properties: adverbial placement and question formation in Portuguese. The goal of this task is to observe possible selection of previously acquired languages for transfer to the L3. Due to the overlapping of continuative readings among the three languages (110), simple judgment of appropriate semantic sentences in Portuguese is not a reliable manner to determine which prior grammar is transferred. However, there are some language-specific characteristics in the syntax of the PP regarding adverbial placement. In English (116), the experiential adverbs *already* (116a) and *never* (116b) appear between the auxiliary and the main verb in a AuxAdvV position. In negatives, the experiential adverb *not…yet* (116c) comes at the end of the sentence as AuxNegV(O)Adv.

(116) a. Pedro has **already** read this book

b. Pedro has **never** read this book

c. Pedro has**n't** read this book **yet**

In Spanish, experiential adverbs *ya* 'already' (117a), *nunca* 'never' (117b), and *todavía no* 'still not' (117c) are located before the auxiliary and main verbs as in Adv(Neg)AuxV. Additionally, *todavía* may appear at the end of the sentence in a NegAuxV(O)Adv (117c').

(117) a. Pedro **ya** ha leído este libro

b. Pedro **nunca** ha leído este libro

c. Pedro **todavía no** há leído este libro

c'. Pedro **no** há leído este libro **todavía**

Portuguese adverbial placement tends to follow the same patterns as in Spanish, given that both languages have rich verbal inflection and license null subjects. However, for the specific case of P-PP, inserting these adverbials causes ungrammaticality (118) since they are associated with the anterior aspect. If we recall, P-PP is incapable of generating such aspect, being restricted to the obligatoriness of continuativity. Note that these adverbials and the same placement as in Spanish are impossible with P-PP (118) but are legitimate in Portuguese with the preterit (119), which is the morphology onto which anteriority is mapped.

(118) a. *Pedro **já** tem lido este livro

b. *Pedro **nunca** tem lido este livro

c. *Pedro **ainda não** tem lido este livro

c'. *Pedro **não** tem lido este livro **ainda**

(119) a. Pedro **já** leu este livro

b. Pedro **nunca** leu este livro

c. Pedro **ainda não** leu este livro

c'. Pedro **não** leu este livro **ainda**

Therefore, the first step of the syntactic task was a 6-item APT on the position of experiential adverbs. For each item, participants had to analyze four options, as in (120) below. Two options consisted of a sentence in Portuguese with the P-PP, one with English-like syntax and another with Spanish-like syntax. The third option was *both are correct*, while the last alternative was *neither are correct*. The expected response was always the latter. As discussed in Chapters 2 (see §2.4) and 3, experiential adverbs are ungrammatical with the P-PP (118), since it is the preterit that generates anteriority in Portuguese (119).

Subjects received in random order 6 tokens and 4 distractors – which brought sentences containing either the simple present or the present continuous –, yielding a total of 10 items for this first part. An example of a token is shown below in (120). The expected response is marked in bold.

(120) Syntax Task – Portuguese Adverbial Placement.

a) Eu tenho já assistido este filme

b) Eu já tenho assistido este filme

c) BOTH ARE CORRECT

d) NEITHER ARE CORRECT

Thus, the L3ers had to demonstrate knowledge of the semantics-syntax interface of the P-PP, by rejecting association of experiential adverbials and indicating having acquired [-perfective, +continuative] as the default and only aspect. Choosing option (a) on (120) would indicate transference from English, given the adverbial *já* is in the same position of where *already* would be. On the other hand, (b) would point to transfer from Spanish, where *ya* would be in the same position of *já* – before the auxiliary. Option (c) would suggest guessing by the participant, which would also strongly indicates not having acquired the target feature specification of the P-PP. All items were presented randomly with balanced examples of telic and atelic verbs. Options (a) and (b) were also randomized, while (c) and (d) always appeared as third and fourth, respectively.

The second property tested in this task employed another strategy to test for possible transfer. These three languages form questions distinctively in compound tenses. English moves auxiliary verbs, in the case of the PP *have/has,* to a position above the subject (121) when asking questions. Spanish moves both the auxiliary and the main verb to before the subject to transform affirmatives into interrogatives (122).[10] In Portuguese, however, no movement takes place (123).

[10] In Caribbean Spanish varieties it is grammatical to have questions without any verb movement for regular questions that are not *echo*-questions and do not encode incredulity/surprise. In the language background form, subjects were asked to identify their dialect of Spanish. No participant has indicated a Caribbean dialect.

Interrogatives in Portuguese depend solely on intonation in spoken language and question marks in written registers.

(121) **Has** John **done** his homework?

(122) **Ha hecho** Juan la tarea?

(123) O João **tem feito** a tarefa?

In the questionnaire, after judging the grammaticality of adverbial placement, participants would move to a different page, where they received for this second part of the APT a total of 6 items (3 tokens and 3 distractors). Each token presented three versions of the same sentence in Portuguese: a) an English-like AuxSV(O); b) a Spanish-like AuxVS(O); and c) Portuguese syntax without verb movement. They were asked to select which option was the most natural for a question in Portuguese. There were 3 tokens with different inherent lexical aspects of a state, activity, and accomplishment without any adverbs. Items were randomly presented and intermingled with 3 distractors (present continuous n = 2, immediate future n = 1). Options for each item were also provided randomly. Expected answer is marked in bold:

(124) Syntax – Portuguese Question Formation

The most natural question in Portuguese is:

a) <u>Tem</u> Carlos batido na porta? (English syntax AuxSVO)

b) <u>Tem batido</u> Carlos na porta? (Spanish syntax AuxVSO)

c) **Carlos tem batido na porta?** (Portuguese syntax SAuxVO)

In this case, if participants choose sentences like (124a), they would most likely be transferring from English. Picking alternatives like (124b) would support the claim of transfer from Spanish.

4.3.2 APT for L2 Control

As mentioned in section 4.1 when we discussed proficiency testing, the experimental groups were also examined on their knowledge on the PP of their L2 English or L2 Spanish. This was done with a translated version of the syntactic task shown above in 4.3.1. So that data on L3A was not affected by any priming effects, the items for L2 examination were given at the end of the study. Subjects analyzed items on adverbial placement and question formation.

There were 6 items for adverbial placement. The S-Nats and Portuguese native speakers who declared speaking English evaluated 6 sentences with four options: a) an English-like syntax; b) a Spanish-like syntax; c) *both are correct*; and d) *neither are correct*. In (125) we can see an example of such items. In this case, option (125a) is the expected response, since the experiential adverbial already in English appear between the auxiliary and the main verb. Likewise, E-Nats and Portuguese native speakers who indicated speaking Spanish, took a test on L2 S-PP. Again, they judged 6 sentences with the same four options. In the example (126), the expected response for Spanish is (126b), given that the experiential adverb *ya* in Spanish precede the auxiliary and the main verb.[11]

[11] Please note that the order of (a) and (b) options are fixed in the samples for the reader's convenience. However, in the survey, (a) and (b) were randomly presented.

(125) Syntax – L2 English Adverbial Placement

a) I have <u>already</u> seen this movie

b) I already have seen this movie

c) BOTH ARE CORRECT

d) NEITHER ARE CORRECT

(126) Syntax – L2 Spanish Adverbial Placement

a) He ya visto esta película

b) <u>Ya</u> he visto esta película

c) BOTH ARE CORRECT

d) NEITHER ARE CORRECT

Moving to the second property, E-Nats and Portuguese natives who also speak English analyzed 3 items with E-PP with different syntax for English question formation (127). Meanwhile, S-Nats and Portuguese natives who also spoke Spanish were tested on question formation for the S-PP in 3 items (128). For both cases, the first alternative had a true English syntax of AuxSVO, the second option had a Spanish structure of AuxVSO, and the third one a Portuguese syntax without verb movement in SAuxVO position. The expected answer for English (127) is (127a), since English brings the auxiliary to before subjects to create questions. On the other hand, expected answer for Spanish (128) is (128b). In this language, both the auxiliary and the main verb precede the subject when forming interrogatives with compound verbs.[12]

[12] Once again, the alternatives for the items are ordered here for the reader's convenience comparing the differences. In the survey, all items and alternatives were automatically randomized for all subjects.

(127) Syntax – L2 English Question Formation

The most natural question in English is:

a) **Has Carlos knocked on the door?** (English syntax AuxSVO)

b) Has knocked Carlos on the door? (Spanish syntax AuxVSO)

c) Carlos has knocked on the door? (Portuguese syntax SAuxVO)

(128) Syntax – L2 Spanish Question Formation

The most natural question in Spanish is:

b) Ha Carlos tocado la puerta? (English syntax AuxSVO)

a) **Ha tocado Carlos la puerta?** (Spanish syntax AuxVSO)

c) Carlos ha tocado la puerta? (Portuguese syntax SAuxVO)

This translated version of the syntactic task was used to test L2 (and L3 for trilingual Portuguese natives) PP representation and it took place at the end of the survey. It had a total of 9 items (n = 6 for adverbial placement and n = 3 for question formation). Participants with a score of 5 or higher were categorized as having transferable L2 properties.

4.3.4 Morphology: Forced-Choice Task (FCT)

The second task in the linguistic questionnaire was a forced morphology selection test that required learners to choose either the preterit or the PP morphology in 16 tokens. Tokens were coded in 4 variables: anterior preterit ([+perfective, +continuative], n=4), perfective preterit ([+perfective, -continuative], n=4), continuative perfect ([-perfective, +continuative]) with progression adverbials (n=4) and with durational adverbials (n=4). In (129) we can see a sample

of a set that was coded for anterior preterit [+perfective, +continuative], i.e., a completed past action whose effects linger into the present. The alternatives are shown in capital letters and the expected response is marked in bold. You will find a translation for the tokens under them, but such translation was not available for participants. They only saw the Portuguese sentence and had to choose between the two options.

(129) Agora que você já **ASSISTIU** / TEM ASSISTIDO ao filme, leia o livro

'Now that you already WATCHED / HAVE WATCHED the movie, read the book'

Since (129) includes the experiential adverb *já*, the expected choice is the preterit *assistiu*. Note that transfer from either previously acquired language would be negative for the same sentence in Spanish and English would favor the PP morphology instead. The next four items were coded for perfective preterit [+perfective, -continuative], which expresses a completed past action anchored to the past. The expected response for the sample in (130) is the preterit due to the presence of the past adverbial *ontem 'yesterday'.* In this case, all languages pattern similarly. Spanish would also take the preterit, while English would take the simple past.

(130) Não **RECEBI** / TENHO RECEBIDO o e-mail de confirmação ontem

'I DIDN'T RECEIVE / HAVEN'T RECEIVED the confirmation email yesterday'

Let us move to the continuative PP tokens [-perfective, +continuative], events initiated in the past and that continue taking place in the present or further. The first four items came with

adverbials with a sense of progression, they were all a variation of *cada* 'each', i.e., *cada dia* 'each day'. Because these adverbials have a meaning of progression and the sentences talk about events that can be repeated, the expected response for the sample in (131) is the PP.

(131) Samsung e Apple PRODUZIRAM / **TEM PRODUZIDO** smartphones cada vez melhores
'Samsung and Apple PRODUCED / HAVE BEEN PRODUCING better smartphones every time'

The fourth and last set also had the continuative PP, but this time the variable coded for analysis and what cued the PP morphology was the presence of durational adverbials, such as *até hoje* 'until today' and *desde* 'since'. Such adverbials indicate that the event has not yet come to a halt. Therefore (132) favors the PP.

(132) Desde que foi eleito, o presidente do Brasil RECEBEU / **TEM RECEBIDO** críticas ao seu governo
'Since elected, Brazil's president RECEIVED / HAS RECEIVED complaints about his administration'

This test is similar to Slabakova & Montrul's (1999, 2002) and Salaberry's (1997) Spanish preterit/imperfect test, and Akerberg's (2006) Portuguese present perfect/preterit test. Slabakova & Montrul (1999, 2002) applied a morphology test prior to a semantic one to test the correlation between acquisition of morphology and aspectual features. Following their

methodology, participants that correctly chose morphology 75% of the times were placed in a Yes-morphology group that symbolizes acquisition of functional morphology. The total number of tokens for morphology in the present study is 16. Thus, participants who scored 12 or higher were categorized as Yes-morphology. Distractors in this task were on the simple present vs. present continuous for ongoing activities, simple present vs. present continuous for habitual events, and immediate future vs present continuous for planned future events.

4.3.5 Semantics: Naturalness Judgment Task (NJT)

In the third part of the instrument, participants rated 9 items that contained two sentences combined, one of them with the PP. They had to judge the appropriateness of these combinations by deciding if they made sense and sounded natural to them. Their judgment was applied on a four-point Likert scale as in (133):

(133) -2 (Nonsense/weird),
-1 (A bit weird),
+1 (Somewhat natural),
+2 (Completely natural).

Note this was forced choice that did not include a midpoint 0 or an *I don't know* option. Each item had clauses conjoined by *e* 'and', *mas* 'but', *porque* 'because' or separated by a full stop (.), representing consecutiveness. Acquisition of P-PP revolves around re-mapping an existing feature, rather than acquiring new features. This task's design is to examine the de-association

of [+perfective] from PP and onto the preterit in Portuguese in three contexts. First, learners had to reject anteriority with P-PP and demonstrate knowledge of the obligatoriness of continuative readings. The expected choice for the example below (134) is -2 (Nonsense/weird). It is simply ungrammatical to use P-PP for events that cannot be iterated. If participants have not de-learned the feature [+perfective], such sentences will seem a legitimate owing to transfer of anteriority from either their L2, their L3, or both. Again, translations are available for the reader's better understanding of the sentences. However, participants received only the Portuguese sentence.

(134) Minha amiga está muito triste. O gato dela tem morrido. **-2** -1 +1 +2

My friend be.PRS.3sg very sad. The cat of-her have.PRS.3sg die.PTCP

'My friend is very sad. Her cat has been (repetitively) dying'

The second set of clauses brings the same context of ungrammatical anterior P-PP. Nevertheless, there is the addition of one variable: experiential adverbs. Part of the acquisition task described in Chapter 3 (see section 3.2) is the dissociation of experiential adverbs *já '*already'*, nunca* 'never', and *ainda não* 'not yet' with the PP morphology in Portuguese. The expected response for (135) is -2 because the second part of the sentence requires an anterior aspect. In Spanish and English, this would be manifested with the PP. Nevertheless, in Portuguese this aspect can only be generated by the preterit morphology. The P-PP in (135) would oddly describe that Marcela has not been leaving yet.

(135) Marcela está na garagem. Ela não tem saído ainda. **-2** -1 +1 +2

Marcela is in.the garage. She not have.PRS.3sg leave.PTCP yet

'Marcela is in the garage. She hasn't been leaving yet'

The last context concerns resetting preterit to [+perfective, ±continuative]; in other words, understanding that the preterit in Portuguese also generates anteriority. Therefore, the expected response for items like (136) is +2, indicating acceptance of preterit with experiential adverbials, such as *ainda não* in the example below:

(136) Eu sei que é um filme famoso, mas eu ainda não vi -2 -1 +1 **+2**

I know that it-is a movie famous, but I yet not saw

'I know it's a famous movie, but I haven't seen it yet'

For distractors, subjects were expected to reject sentences where the present continuous expressed planned future and accept those in which stative verbs were in the present continuous morphology. All items were totally randomized. The goal of this task is to compare the results with the data from the morphology task in order to examine precedence or simultaneity of acquisition of semantics and morphology. This is the same strategy employed by Slabakova & Montrul (1999) and Montrul & Slabakova (2002).

4.3.6 Semantics: Truth Value Judgment Task (TVJT)

The goal of the final section of the instrument was to investigate acquisition of the obligatoriness of the continuative aspect as the default output of the P-PP in a TVJT. Each item introduced a sentence with the PP morphology. Below the sentences, participants would find a brief metalinguistic explanation of the meaning. They judged if the explanation was correct or incorrect. There were 6 tokens. Special attention was given for verb selection. Since sentences were short and without any adverbs, common and cognate verbs were used to lessen any possible miscomprehension. Although a literal translation is provided in brackets for the reader's convenience, the translation was not present in the instrument.

(137) Hector tem completado o projeto

Meaning*: The project is complete*

Correct

Incorrect

[Literal Translation: Hector has completed the project]

In (137), the explanation does not correspond to what the sentence conveys. Because P-PP is by default [-perfective, + continuative], the sentence expresses that Hector has been completing the project. The event of completing the project has not concluded [-perfective]. Thus, the explanation is incorrect for the project is not complete yet. Choosing *correct* for (137) would be evidence of not having reset the aspectual features of the present perfect in Portuguese. It would also lead us to conclude transfer from the previously acquired grammars, since the suggested

meaning in (137) would correspond to the default anterior aspect of the E-PP and S-PP. Evidence for transfer in (138) would arise if participants choose the option *incorrect* based on the fact that E-PP and S-PP would manifest a [+perfective, +continuative] event as seen in the literal translation.

(138) Paulo tem estudado para a prova de biologia

Meaning*: Paulo is still studying for his biology quiz*

Correct

Incorrect

[Literal Translation: Paulo has studied for the quiz of biology]

However, for the P-PP under analysis, the explanation provided is correct because the right temporal boundary of the event of studying must be extended up to the moment of speech for a continuative aspect. The expected answer for (138) is *correct* because the event of studying must be perceived as still ongoing due to the obligatoriness of continuativity in the P-PP. All items were randomly presented along with distractors on the simple present and present continuous.

4.4 L3 Acquisition Predictions

English, Spanish, and Portuguese are morphologically equivalent in the PP, at least from a structural standpoint. However, for English- Spanish bilinguals in this study, none of the previously acquired languages offer facilitative semantic information for the acquisition of L3 Portuguese PP. Morphology is not a useful property to examine transfer since in all three

languages the PP is structured with an auxiliary verb of possession and the main verb in the past participle. Semantics are not much more helpful either. Both the E-PP and S-PP generate anterior aspect by default. It would be difficult, then, to trace from which previous language learners might be transferring semantic anteriority, since it would be available in the L1 and the L2 in Portuguese and Spanish. Among the four sections in the instrument, only the syntactic task can inform which variables play a role in L3A. The anterior aspect in the E-PP and S-PP is associated with experiential adverbials, respectively, *already/ya*, *never/nunca*, and (*not…) yet/todavía (no)*. As discussed in section 4.3.1, their placement is specific to each language. In English (116), *already* and *never* appear between the auxiliary and the main verb, while yet is located at the end of the sentence. In Spanish (117), *ya, nunca*, and *todavía* precede the auxiliary and main verbs. *Todavía* may also appear at the end of the sentence. In Portuguese (118) these adverbials are not associated with the PP, rather they are with the preterit (119), the morphology used to manifest anteriority in Portuguese.

In the syntactic task, learners had to judge a series of sentences regarding adverbial placement in the P-PP. They had to pick the Portuguese sentence with adverbials in either an English-like position or a Spanish-like position. They could also decide that both were correct or that neither were correct. The expected target answer would always be *neither are correct*. In addition to that, L3ers received three more items to indicate among three options which sentence best exemplified a natural question in Portuguese. The same sentence was written in three different ways: an English-like question with auxiliary verb above subject (AuxSVO), a Spanish-like with both auxiliary and main verb above subject (AuxVSO), and the natural Portuguese question without verbal movement (SAuxVO). The results of the syntactic task can

help us answer research questions 4 and 5, concerning what prior grammars are available for transfer, what variables play a role in L3A, and which L3 model makes the best predictions.

Regarding order of acquisition, we can predict that if the S-Nat group (L1 Spanish L2 English) accepts more or only items with English-like adverbial placement and question formation; and E-Nats (L1 English L2 Spanish) do the same for items with Spanish-like sentences, then the L2 Status Factor (Bardel & Falk, 2007, 2012; Falk & Bardel, 2011; Falk, Lindqvist, & Bardel, 2015) – which argues that the L2 is always the source of transfer – will be supported. However, if E-Nats accept more or only English-like items; and if S-Nats do the same to Spanish-like items, there will be supporting data for the L1 Status Hypothesis (Hermas 2010; Jin 2009; Leung 2005; Na Ranong & Leung, 2009), since experimental groups would be transferring from their L1.

For the typology models, the TPM will prove to be the best model for the IS if both experiential groups select for Spanish-like adverbial placement and question formation. That would indicate that L3ers' selection of previously acquired grammar is based on psychotypological influence. While the CEM claims that both languages are available and that the most typological proximal is the one that learners choose, it also argues that only facilitative information transfers while the rest remains neutral. In this sense, acceptance of Spanish-like tokens is negative transfer, thus, data would not support the CEM. Rather, the Cumulative Enhancement Model will be supported if participants reject all items, by choosing the *neither are correct* option, as well as if they transfer [-perfective, +continuative] and block [+perfective, +continuative] onto P-PP. In other words, a) if they transfer facilitative information (continuative PP); and b) if negative information (anterior PP, experiential adverbials with PP) remains neutral,

CEM will be supported. No clear prediction can be made regarding preterit as it is not a matter of transfer, but de-learning features.

The authors of modular models (Slabakova 2017; Westergaard et al. 2017) (see section 2.6.3) recommend that L3 studies should break free from exclusive attention to the IS, moving on to DS as well. However, they do not make specific testable predictions on how acquisition of languages subsequent to the L2 occurs. These models argue that since all languages are always active in the bilingual brain, there can be crosslinguistic influence from both. Their implication is that L3ers can access information from either their L1 or L2 at all stages of acquisition. The Scalpel Model contends that analyzing language specificities can be done with a scalpel-like precision, making transfer of facilitative information on a property-by-property basis, instead of carrying all values from L1 and L2 categories to the L3. The Linguistic Proximity Model (LPM) is in accordance with transfer not happening in a wholesale manner but highlights that negative transfer can happen when L3ers misanalyze a property. Data in favor for these models will emerge if learners demonstrate acquisition of one phenomenon, i.e., de-learning of [+perfective, +continuative] anterior preterit, prior to another, i.e., ungrammaticality of [+perfective, +continuative] anterior P-PP. Moreover, we can also make some claims to support modularity as the most influential variable if we see early acquisition of either in the IS or novice stage. Since none of the previous languages are facilitative, then negative transfer is bound to happen, either through order of acquisition or typology due to WT. Assuming that L3ers are successful language learners, modularity will be corroborated if participants demonstrate high acuteness of linguistic analysis in early stages. In other words, if they can perceive that, even though Spanish and Portuguese are sister languages with much structural similarity, they differ in regard to the PP, then we will

have support for a modular model of L3A. This analysis of such specificity would indicate that they do not select only one previously acquired grammar as their IS. Instead, they analyze L3 input on a property-by-property basis and resort to UG when they parse and their L1 and L2 cannot provide facilitative transfer – which is the case of L3 P-PP.

4.5 Morphology Acquisition vs. Functional Features Acquisition

My two first hypotheses have to do with the acquisition of functional features. I hypothesize that a) acquisition of the present perfect in L3 Portuguese is possible and learners will transfer the [±perfective, +continuative] feature to P-PP, but de-learning [+perfective] will only take place in advanced stages and/or will have a direct correlation with exposure to natural input in a Portuguese-speaking community; and b) acquisition of anterior preterit will be demonstrated early on and before the acquisition of obligatorily continuative P-PP. Earlier acquisition of the anterior aspect will happen due to the constant instruction learners get about the preterit/imperfect distinction and the saliency of the need to learn the preterit to effectively communicate past events. Thus, acquisition of the preterit morphology in Portuguese will accompany the acquisition of [+perfective, ±continuative].

Assuming the Minimalist Program is right regarding there not being any dissociation between morphology and semantics, we can presume that the early acquisition of the preterit morphology due to its frequency and early formal instruction will lead L3ers to also acquire the [+perfective, +continuative] features in Portuguese very early. Nevertheless, the acquisition of the P-PP requires both the dissociation of anteriority features and related experiential adverbials, and the licensing of the obligatoriness of [-perfective, +continuative] P-PP. This two-part

acquisition task might turn out to be challenging since it is a two-part acquisition task that involves syntax, morphology, and semantics. In order to better understand distinct levels of complexities in these two processes, let us review two hypotheses that predict the difficulties in the acquisition of functional lexicon.

The Feature Reassembly Hypothesis (Lardiere 2007, 2008)

This hypothesis argues that the acquisition task will be more challenging depending on how much re-assembly of features is necessary in the mapping of form to meaning. Both the morphology and sentence judgment task should account for this. The preterit requires less re-mapping than the PP, thus demonstration of acquisition of morphology and appropriate judgment of sentences with preterit over ones with PP will support this hypothesis. That means that if participants choose preterit for the appropriate contexts in the morphology test and perform well on the semantics tests – rating preterit as logical for sentences with both perfective and anterior readings – they will show transfer of the Spanish preterit to the Portuguese preterit, but also re-assembly of the anterior reading from S-PP and/or E-PP onto the Portuguese preterit: a one-step reassembly task. In turn, acquisition of P-PP requires de-association of anteriority with a present perfect morphology and re-mapping of continuative readings with the PP only, instead of E-PPC/S-PPC or PP + Durational/Frequency Adverbials: a two-step-reassembly task. Therefore, if participants do not demonstrate successful acquisition of the P-PP, but do show it for the Portuguese preterit, that would suggest the Feature Reassembly Hypothesis is right at predicting difficulty in functional lexicon acquisition.

Bottleneck Hypothesis (Slabakova 2008)

From a syntax-before morphology view, the Bottleneck Hypothesis (Slabakova 2008) builds on the idea that syntactic computation flows from universal mechanisms while inflectional morphology is parametric. In this sense, learners might display knowledge of formal features before mastery of the functional lexicon, which should be the most difficult part. This concept is in accordance with the Missing Surface Inflection Hypothesis (MSIH) (Prevost & White 2000) addressed in Chapters 1 and 2, which claims that language learners may have knowledge of functional categories and features despite showing optionality in the production of functional morphology.

If we observe target performance on the semantics tasks, data will indicate that L3ers have knowledge of the semantic-pragmatic values that come with the preterit and P-PP. Moreover, if they simultaneously demonstrate non-target performance on the morphology task, we will be led to believe that they have knowledge of formal features, but have not mastered the morphology yet, which should be accounted for by the Bottleneck Hypothesis. Much stronger support for this hypothesis will occur if we see this phenomenon up to the intermediate group, but dominance of both semantics and morphology by the advanced group. This would suggest that acquisition of the functional lexicon indeed is more difficult, and therefore takes longer to acquire. If the phenomenon is present in all groups, there will still be a possibility to partly support the Bottleneck Hypothesis, because one can claim that the advanced group will not have mastered the morphology yet.

Table 13. Summary of Predictions of Difficulties in Functional Lexicon Acquisition

		Morphology	*Semantics*
Feature Reassembly	***Preterit***		
	P. Perfect	√	√
Bottleneck Hypothesis	***Preterit***	√	
	P. Perfect	√	

In Table 13, we can see a summary with all the hypotheses and the predictions they make for where difficulties will arise in the acquisition of functional lexicon. Bearing those in mind, let us revisit RQs 1-3 and make predictions for them. The first research question has to do with English-Spanish bilinguals demonstrating evidence of acquiring the PP in Portuguese. So that we can claim that L3ers have acquired it, participants must demonstrate knowledge of [+perfective, +continuative] with preterit and [-perfective, +continuative] with P-PP on the semantics task. In addition to this, they must reject experiential adverbials *já*, *nunca*, and *ainda não* on the syntactic task so that we can conclude complete acquisition of the present perfect in Portuguese. We can still claim P-PP has been successfully acquired even if L3ers pattern as expected in the semantics and syntax tasks, but not in the morphology one. In this case, there will be support for the MSIH (Prevost & White 2000), suggesting acquisition of semantics with absent or unstable morphological production.

In the case that L3ers that perform well on the semantics tests also perform well on the morphology test, the assumption will be that the acquisition of morphology takes place simultaneously to that of functional features. In other words, when one learns the functional morphology, the features associated with it will accompany its acquisition. On the other hand, if

participants demonstrate grammatical knowledge (via the morphology test) and logical choices (via the semantics test) for anteriority with the preterit, but not for continuative readings with the P-PP, my second hypothesis will be confirmed. That is, due to the abundance of input of the preterit and the lack of it with PP, acquisition of anterior preterit occurs before acquisition of the obligatoriness of [-perfective, +continuative] with P-PP.

Finally, if beginner and intermediate groups show acquisition of anterior preterit only and demonstrate transfer from English, Spanish or both prior languages on the syntax task, my first hypothesis will be confirmed. Dissociation of anteriority from the PP and the acquisition of obligatory continuative readings take longer given that a) they might be receiving conflicting input because of some overlap in the morphology-aspect distribution among languages (see Table 9), and b) the three languages have similar morphology (verb of possession + past participle).

4.6 Methodology Summary

The overall acquisition task of L3ers is to re-map functional features from the E-PP and S-PP: a) to de-learn [+perfective, +continuative] with the PP; and b) re-map them on the preterit in Portuguese. Thereby, acquiring that the P-PP is obligatorily continuative with the features [-perfective, +continuative], while the preterit in Portuguese can be either perfective [+perfective, -continuative] or anterior [+perfective, +continuative]. Table 14 summarizes the predictions the L3 models make about the P-PP acquisition task

Table 14. Predictions for the L3 Models

MODEL	SUPPORT FOR THE MODEL WILL TAKE PLACE IF:
L1 Status Hypothesis	E-Nat accepts English-like syntax items S-Nat accepts Spanish-like syntax items
L2 Status Factor	E-Nat accepts Spanish-like syntax items S-Nat accepts English-like syntax items
TPM	Both groups accept Spanish-like syntax items
CEM	Participants transfer facilitative information (continuative PP) and block negative information (anterior PP, experiential adverbials with PP) there will be some support for the CEM. However, there are no clear prediction in terms of typology, since the most closely-related language (Spanish) does not offer facilitative transfer in this case.
Scalpel Model & LPM	De-learning of [+perfective, +continuative] anterior occurs before ungrammaticality of [+perfective, +continuative] anterior P-PP, or vice-versa. Learners demonstrate acquisition of P-PP in early stages

Table 15. Instrument summary with questionnaire flow and number of tokens

1.1 Syntax APT. Part 1 - Adverbial Placement	6 Tokens 4 Distractors
1.2 Syntax APT. Part 2 – Question Formation	3 Tokens 3 Distractors
2. Morphology Forced-Choice. Preterit x PP	16 Tokens 10 Distractors
3. Semantics: Naturalness Judgment	9 Tokens 9 Distractors
4. Semantics: Truth Value Judgment	6 Tokens 4 Distractors
5. L2 PP Knowledge • 6 Adverbial Placement • 3 Questions	E-Nat → Syntax of Spanish Present Perfect S-Nat → Syntax of English Present Perfect Control Group → Syntax of Spanish/English Present Perfect

Subjects' knowledge of the P-PP was tested on 4 tasks: 1 in syntax (APT), 1 in morphology (FCT), and 2 in semantics (NJT and TVJT). At the end of the questionnaire, they received a version of the same syntax task they did in Portuguese, now testing their knowledge of the present perfect of their L2.

In this chapter, I presented the tasks of the instrument of data collection in the order subjects took them in the questionnaire (see Table 15). In the following chapter, I demonstrate the results from the instrument by comparing the performance of the 3 DS in the L3ers group among themselves and against the multilingual Portuguese native speakers. First, I analyze the acquisition of functional morphology and the functional features associated with it, which is the primary analysis of this study. Thus, I will start by displaying the data from the morphology and semantics tasks. The syntax APT, which is the first task of the instrument, target L3 questions pertaining the IS. The results of the APT will be examined at the end of the next chapter, as I move to a secondary analysis of the IS subgroup.

CHAPTER 5

RESULTS

5.1. Morphology Data

This section presents the results from the FCT in which subjects chose between either preterit or PP morphology to complete sentences. Figure 6 displays the overall performance of the L3ers and the control group. In the former, learners demonstrate accuracy of expected morphology 69.4% of the time. On the other hand, BP native speakers' performance points to an almost categorical preference of each morphology for the anterior, perfective and continuative (durative and iterative) aspects, since expected responses occur at a rate of 97.6%.

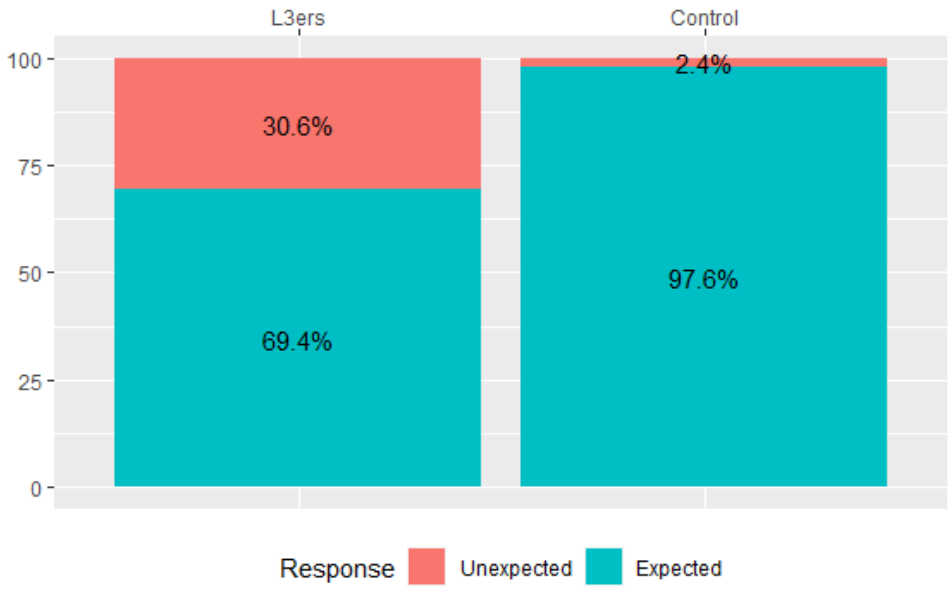


Figure 6. Overall morphology accuracy between L3ers and control.

Separating the L3ers into the S-Nat and E-Nat groups, we find, illustrated in Figure 7, that those with L1 English (70.1%) were slightly more accurate than the L1 Spanish (68.2%) counterpart with a non-prominent 1.9% interval. An ANOVA test confirms that there is no significant difference between the S-Nat and E-Nat groups ($F(1) = 0.163$, $p > 0.687$). However, there is a significant difference among the L3ers and the control group ($F(1) = 1336$, $p < 0.001$).

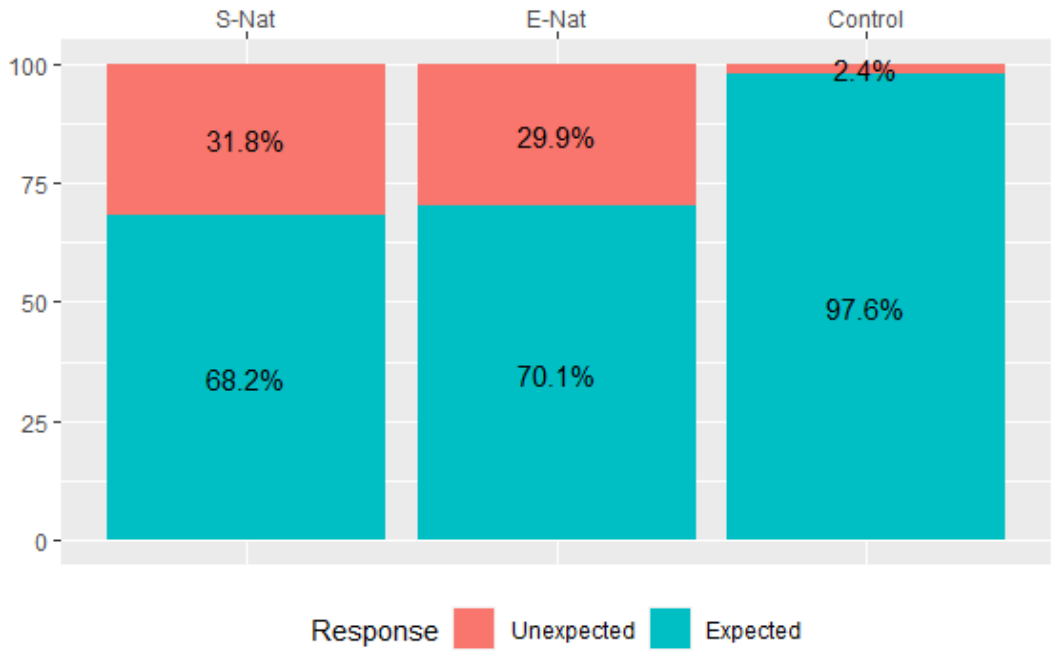


Figure 7. Overall morphology accuracy among S-Nat, E-Nat, and control.

Moving to the DS, another ANOVA returned a significant difference in the DS ($F(2) = 17.57$, $p < 6.82e\text{-}07$), confirming the tendency we can see in Figure 8. Beginners performed above chance with a 58.8% accuracy. The intermediate group's expected response rate was almost 7% higher for a total of 65.7%. Meanwhile, the advanced group, as expected, behaved the closest (84%) to

the multilingual BP speakers in the control group (97.6%). Nevertheless, a post-hoc Tukey test revealed that there is a significant difference between the advanced and control groups, which indicates that advanced learners have not yet achieved ultimate attainment of the preterit vs. PP in L3 Portuguese. No significant difference between the beginner and intermediate levels was found. I take this to be an influence of the lack of formal exposure to the PP in beginner and intermediate language courses.

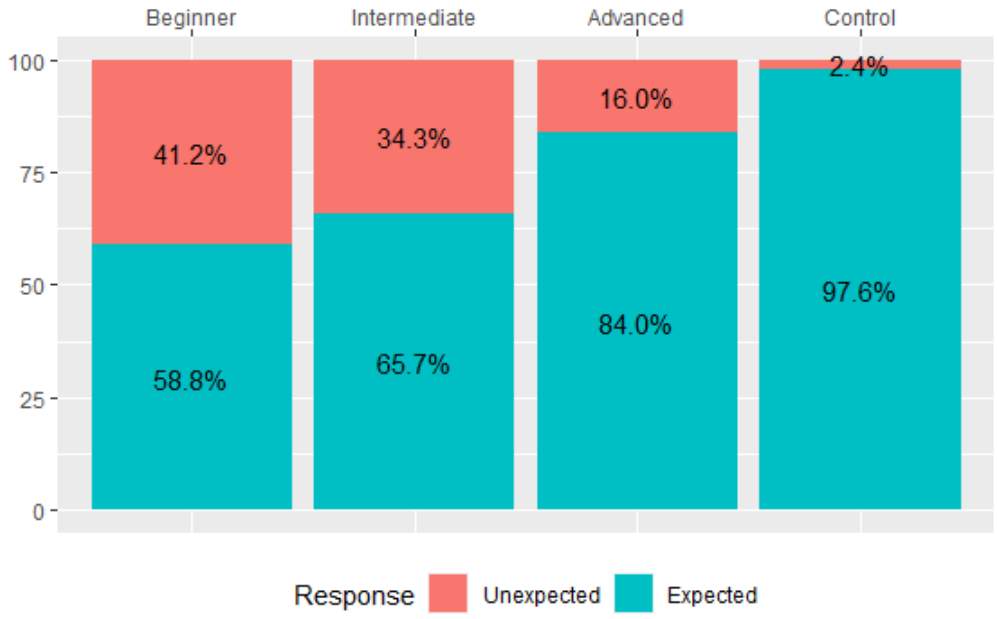


Figure 8. Overall morphology accuracy among proficiency levels

So far, we have observed the overall results with both morphologies and the four conditions (perfective preterit, anterior preterit, durative perfect, iterative perfect) grouped together. Figure 9 shows the distribution of expected and unexpected responses for four conditions: continuative perfect (durative and iterative readings), perfective preterit, and

anterior preterit. On the left, we find the control group results. At the bottom we can observe there is a categorical use of the preterit for the anterior aspect in the BP native grammars. For all the other cases with the control group, there are occasional tokens of unexpected responses. Note that choosing the preterit for the durative perfect and iterative perfect contexts is not ungrammatical, but dispreferred in the instrument as those sentences hinted that the moment of speech was contained and there was a possibility of the event lingering past it. However, the three tokens in the perfective preterit are surprising since using PP in that context is ungrammatical in Portuguese. On the right, we can see the distribution of the experimental group. L3ers performed the best at the perfective preterit with an average of 75.3%, followed by the durative perfect 71.5%, the anterior preterit 68.4%; and, finally, the iterative perfect as last with an average of 62.5%.

Figure 9. Distribution of morphology responses by conditions

This order is interesting because the perfective preterit is available in Spanish and is one of the most studied topics in Romance languages courses. Their second best is the durative perfect, readily transferrable from both their L1 and L2, and where PP overlaps among all three languages. Their two lowest scores (anterior preterit and iterative perfect) are as expected, since these conditions are where Portuguese aspectual differences lie.

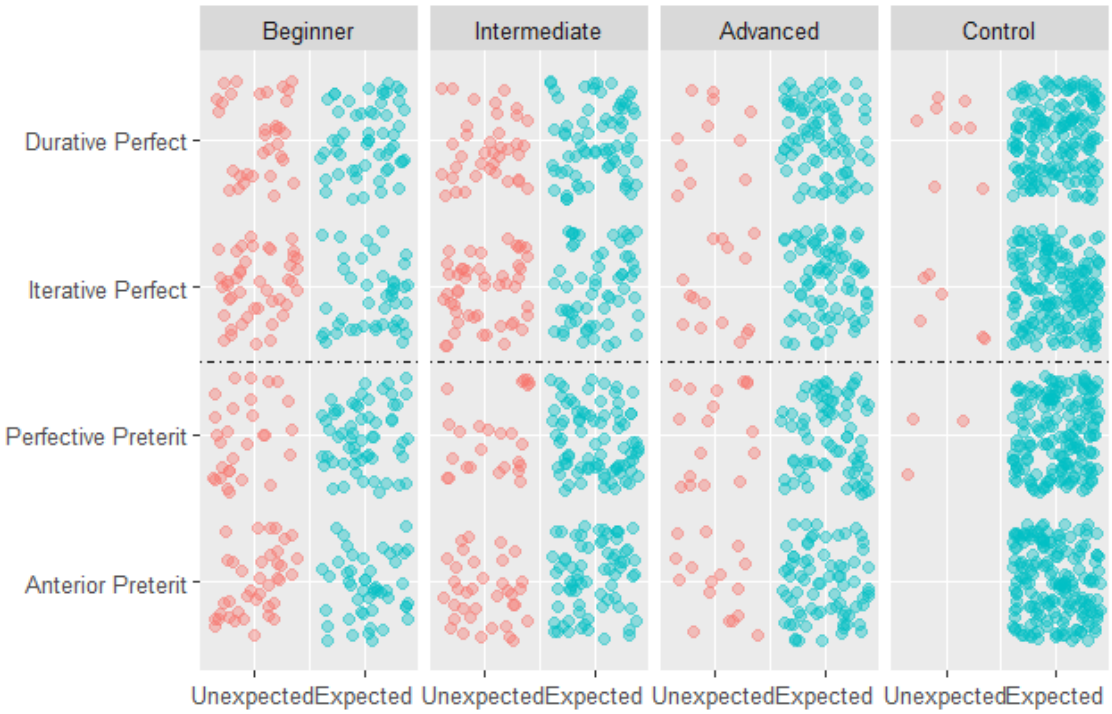


Figure 10. Distribution of morphology responses by conditions and levels

The distribution by proficiency level is represented in Figure 10. Visually there is not much improvement in accuracy from the beginner to the intermediate levels. However, the advanced learners demonstrate target-like performance. In fact, their biggest scores were on the perfect morphology. For the forced-choice task, expected responses were coded as 1 and unexpected

responses were coded 0. The closer their averages are to 1, the more they demonstrated accuracy with morphology. Scores represent the frequency they selected the appropriate morphology for each condition. Advanced learners had an average of 0.88/1.00 for the durative perfect and 0.84/1.00 for the iterative perfect. Their preterit scores were 0.83 (anterior preterit) and 0.82 (perfective preterit). In contrast, the intermediate level performed the best with the preterit: 0.67 (anterior) and 0.76 (perfective). Their PP scores were 0.65 (durative) and 0.55 (iterative) – reaching a PP performance approximately 0.22 lower than the advanced group. Curiously, the beginner L3ers had a mixed performance: their highest scores were 0.67 for the perfective preterit and 0.63 for the durative perfect. The other two cases suggest a high rate of instability: 0.56 (anterior preterit) and 0.5 (iterative perfect).

Let us now compare the mirror-image groups across the stages in Figure 11.

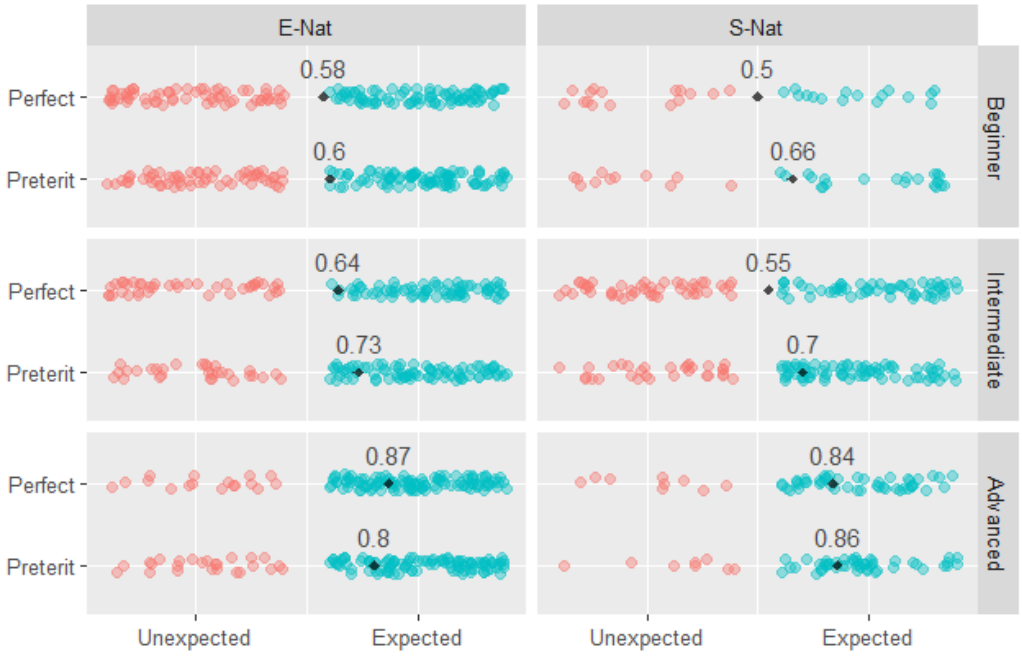


Figure 11. Distribution of morphology responses between E-Nat and S-Nat

E-Nats and S-Nats had similar scores on the beginner and advanced levels, however S-Nats had a considerable difference for the perfect at the intermediate level with a 0.55 score against E-Nat's 0.64. In general, we can see that S-Nats were more accurate in the preterit contexts than E-Nats. In turn, the L1 English group scored higher with the perfect on every proficiency level. Moreover, the results above from the beginner and intermediate groups indicate that the acquisition of the preterit morphology takes place before the perfect – which only occurs in this study at the advanced level. A detailed summary of the distribution follows in Table 16.

Table 16. Detailed Distribution of the Morphology Task in Accuracy Means

		Anterior Preterit	*Perfective Preterit*	*Durative Perfect*	*Iterative Perfect*
Beginner	S-Nat	0.562	0.75	0.625	0.375
	E-Nat	0.555	0.652	0.625	0.527
Intermediate	S-Nat	0.634	0.769	0.576	0.519
	E-Nat	0.696	0.767	0.714	0.571
Advanced	S-Nat	0.928	0.785	0.821	0.857
	E-Nat	0.781	0.828	0.906	0.828
Control		1	0.983	0.955	0.966

As the reader will recall, the data from the morphology task will be compared to the data from the semantics tasks so that we can analyze if acquisition of functional morphology is accompanied by functional features associated with it (see section 4.3.4). Thus, below in Table 17, I present the individual data of subjects. As explained in the methodology, those who performed at 75% or higher were grouped within the Yes-morphology group.

Table 17. Yes-Morphology/No-Morphology Sub-groups

	Beginner	*Intermediate*	*Advanced*	*Total*
Yes-Morphology	5	7	21	33
No-Morphology	17	20	2	39

In the table above, we can see that more than half of the participants did not meet the criteria, falling, then, into the No-Morphology group. While it is unexpected that 5 participants from the beginner group should have made the cut, note that, following the tendency seen in the figures of this section, the beginner, and intermediate groups pattern very similarly, with a success of 22.73% and 25.93%, respectively. The advanced level, on the other hand, brings an abrupt change with almost an inverse ratio. At this developmental stage, 91.3% of subjects were successful.

5.2 Semantics Data

Two tasks examined learner's representation of features associated with the anterior and continuative aspects. First, let us consider the data from the NJT, in which subjects rated sentences on a Likert scale containing four points: -2 (Nonsense/weird), -1 (A bit weird), +1 (Somewhat natural), +2 (Completely natural). For the first condition, they were expected to reject sentences with the PP morphology and anterior aspect. There were no experiential adverbials (*nunca, já, ainda não)* in the sentences, so they judged the default and only available grammatical output: continuative. Figure 12 illustrates the mean scores of their judgment[13] and shows that

[13] Note that the black lines in the boxplots represent the median (the midpoint value of the range of responses). Diamonds were inserted in some plots to also show the mean (the calculated average of all responses). Thus diamonds and lines may not overlap.

all DS groups rated these sentences significantly differently (F(1) = 70.76, p = 1.16e-13) than the control group. Not surprisingly, BP native speakers rejected these items on a -1.2 average. The beginner group performed the poorest with an acceptance score of 0.8. This time we find that the intermediate group behaves more like the advanced with very close means: 0.2 and 0.1, respectively. Therefore, both demonstrate optionality in their ratings, signaling that the ungrammaticality of anterior PP has not been salient in their input. That is, they treat P-PP as capable of generating both aspects; much like their L1 and L2. In fact, Tukey's HSD post-hoc comparisons reveal that all levels were statistically similar (F(2) = 2.779, p = 0.0692).

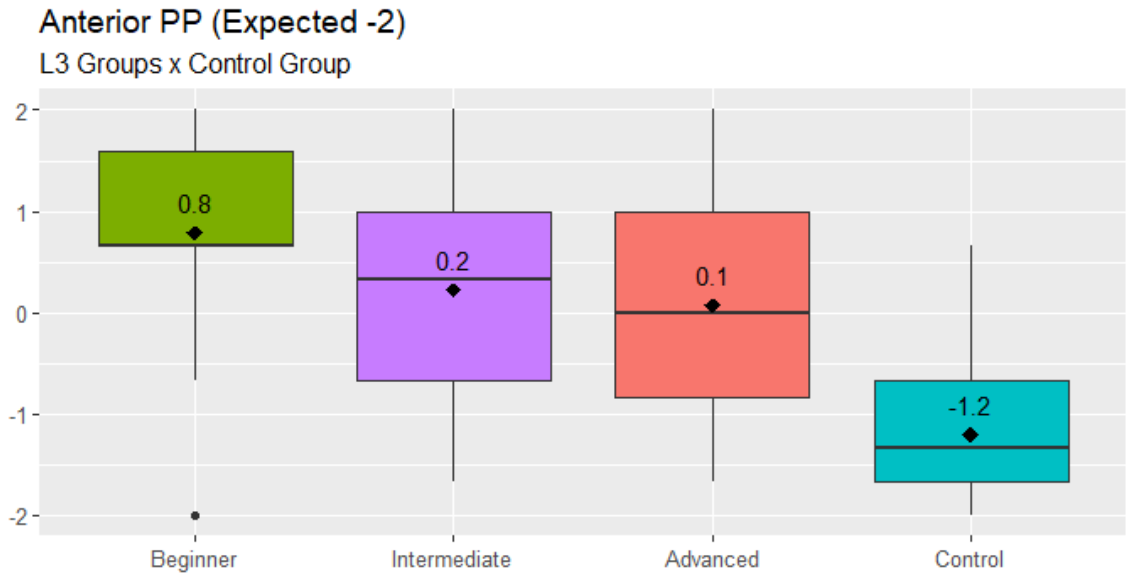


Figure 12. Anterior PP results for L3 and control groups

Figure 13. Anterior PP results for L3 groups by order of acquisition

For the comparison of the mirror-image group, let us take a closer look Figure 13. E-Nats and S-Nats have an almost identical range at the advanced level. Even though, at the intermediate level, S-Nats scored 0.076 against E-Nats' 0.429 mean, there is no significant effect for order of acquisition ($F(2) = 2.779$, $p = 0.0692$). Also confirmed by a post-hoc test ($p > 0.905$) specific for the intermediate level.

We now move our attention to the second condition, which presented ungrammatical anterior PP with experiential adverbials to examine if these adverbials would help acquirers reject anterior P-PP sentences (Figure 14). L3ers had better results here than in the previous condition, but still behaved significantly differently ($F(1) = 115$, $p < 2e\text{-}16$) than the control group, with ratings around 0, while BP natives averaged their rejections at -1.4. Neither order of acquisition nor proficiency level manifested a main effect.

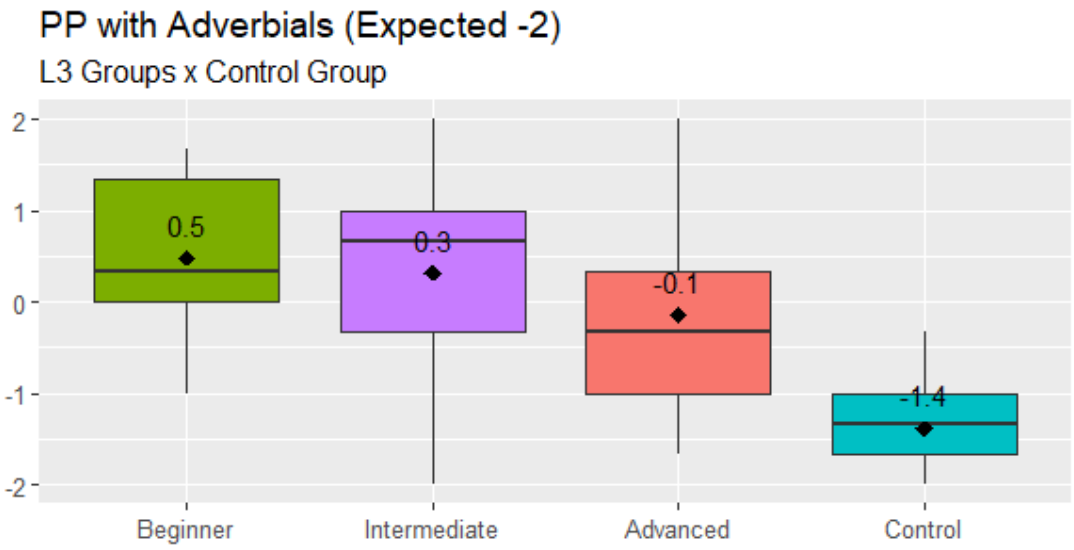


Figure 14. Anterior PP + adverbials results for the L3 and control groups

However, in the figure 15, we can see that advanced S-Nats performed better before adverbials when compared to E-Nats. S-Nats had an average of -0.38 and E-Nats a lower score of -0.04, showing more acceptance of ungrammatical sentences. A two sample T-test comparing the means of the condition 1 (anterior PP) and condition 2 (anterior PP with adverbials) did not return any statistical significance ($t(138.85) = 0.7344$, $p = 0.4639$). From these results, we may infer that all groups, including advanced learners, have difficulty with the ungrammaticality of anterior PP regardless of the presence/absence of adverbials, thus, not showing traces of acquisition of the obligatoriness of [+continuative, -perfective] features with the P-PP morphology.

The third and final condition in this task is the anterior preterit (Figure 16). It is expected that learners accept these sentences to demonstrate having mapped [+continuative, +perfective] onto the Portuguese preterit. As in the morphology task, the control group once again made categorical choices for this condition, by having a mean of 2 in their acceptance.

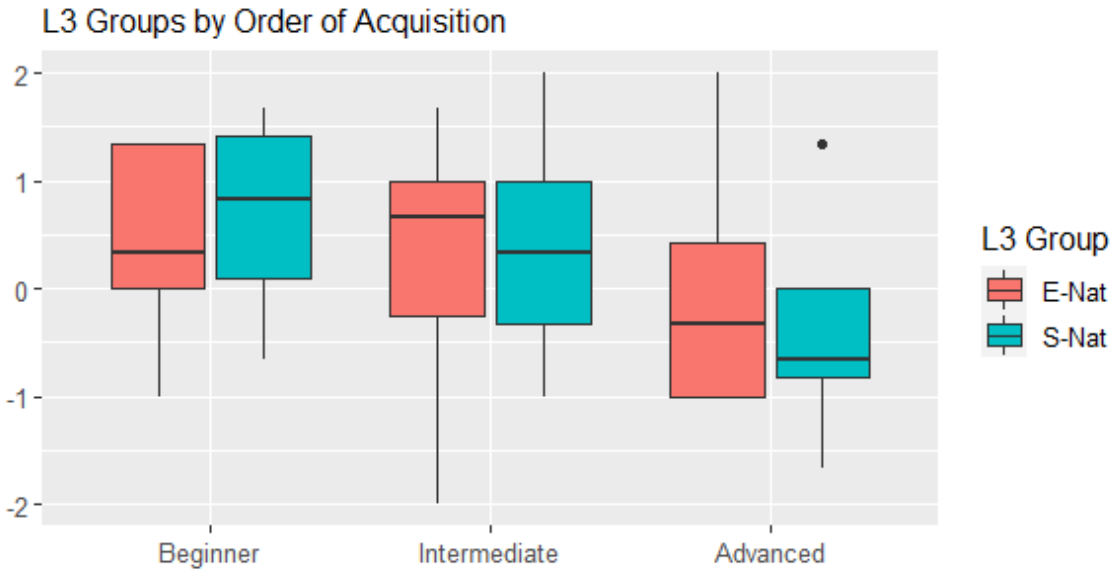


Figure 15. Anterior PP + adverbials results for L3 groups by order of acquisition

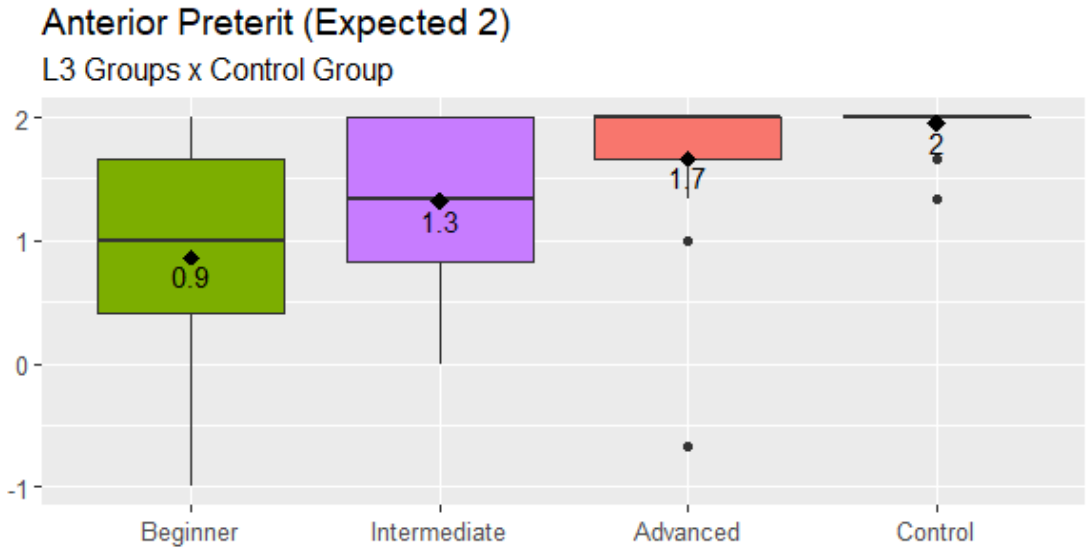


Figure 16. Anterior preterit results for the L3 and control groups

Unlike the results from the PP, L3ers' performance with the preterit was aligned with the expected responses. Yet, an ANOVA (F(3) = 22.706, p = 1.48e-11) still returned a significant difference between the experimental and the control groups. A Tukey HSD revealed this is only due to the beginner group, which had a significant difference with the intermediate (p > 0.0184), advanced (p > 0), and control (p = 0). Even the beginner level shows a considerably high acceptance score of 0.9, which rises to 1.3 at the intermediate level, and then to 1.7 with the advanced, reaching a level of variation similar to the control group. The same post-hoc test above corroborates that there is no significant difference between the advanced and the control group (p > 0.1572). As in every result so far within the mirror-image groups (Figure 17), E-Nats and S-Nats pattern statistically similarly.

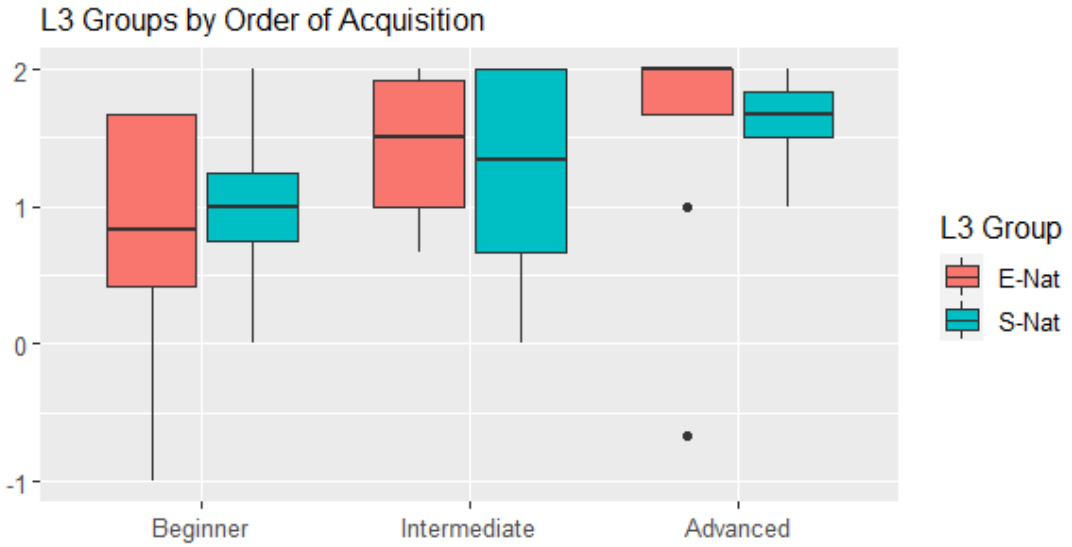


Figure 17. Anterior preterit results for L3 groups by order of acquisition

In this first analysis of the semantic data, we saw the results from the conjoined clauses naturality judgment task, looking at the acquisition of anterior preterit and the ungrammaticality of anterior PP. Let us now consider the results from the TVJT, where subjects read a sentence in Portuguese and judged if a metalinguistic explanation of the meaning of such sentence was correct or incorrect. In this task, I assessed their representation of the default and obligatory continuative output of the P-PP. Note that there were no adverbials in any of the tokens or distractors. In all items, the continuative aspect was the grammatical choice, which was coded as 1. Responses that indicated an ungrammatical anterior interpretation were coded as 0. Scores closer to 1 represent reading the default output of the P-PP as continuative more frequently. The overall results follow in Figure 18:

Figure 18. Overall results from the truth value judgment task

In general, L3ers did not demonstrate having acquired the default output of the P-PP, instead, their low performance of 0.47/1.00 indicates instability in their readings, treating the sentences with P-PP at the same rate as able to generate either [+continuative, -perfective] or [+continuative, +perfective] like their L1 and L2. In contrast, the control group had an overall preference for the continuative aspect. Since, anterior PP is ungrammatical in Portuguese, the anterior responses by the control group were not predicted. Given this is a cognitively demanding task and came at the end of the survey, some fatigue might have influenced their choices. Nonetheless, I would like to point out that in the morphology task, BP natives also had outlier responses for anterior PP. I attribute to this an influence from their additional languages, which legitimate such interpretations.

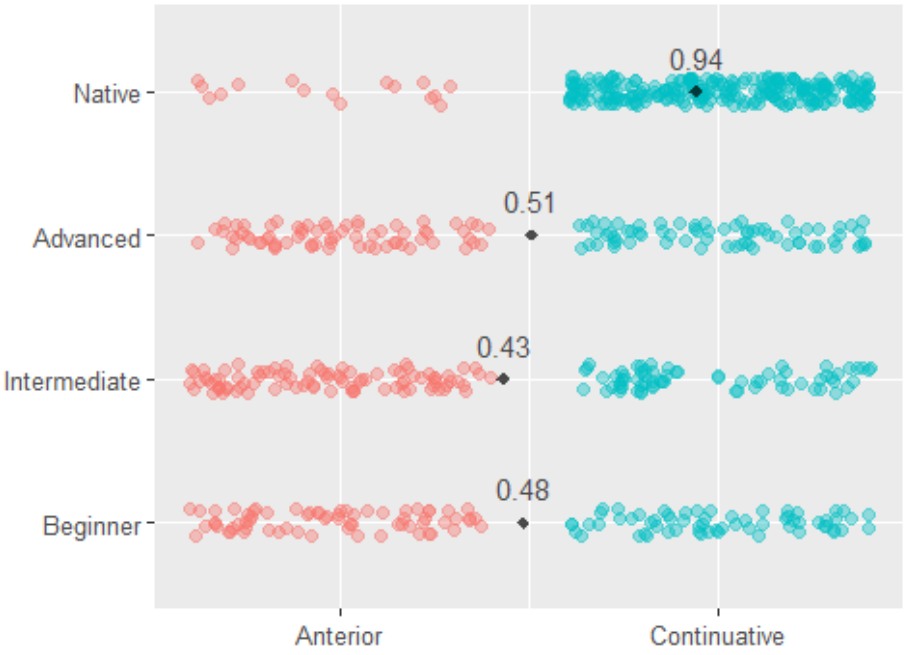


Figure 19. Proficiency groups results from the truth value judgment task

Returning to the experimental group, let us consider how they behaved by analyzing their results in the DS and mirror-image groups. All levels had scores far from the control group (Figure 19). The beginners performed close to chance with a 0.48/1.00 average. The intermediate group had an even lower score (0.43/1.00), favoring the default output generated in their previously acquired grammars. The advanced group had the highest average (0.51), but also performed at chance, indicating inconsistency.

Regarding the mirror-image group, Figure 20 shows their overall performance. The S-Nat group had an average of 0.4, while E-Nats scored 0.51 – a superior success rate of 11%. A small level of significant difference was found between the mirror-image groups ($F(1) = 4.267$, $p = 0.03945$). A higher level of significance was returned for the interaction between order of acquisition and proficiency level ($F(2) = 4.902$, $p = 0.00786$).

Figure 20. Order of acquisition results from the truth value judgment task

Figure 21 clarifies the significance of this interaction, given that it demonstrates that S-Nats at the advanced level patterned differently from their counterpart. E-Nats showed improvement towards the representation of the obligatoriness of continuative PP, understanding tokens as [+continuative, -perfective] 60% of the time. Advanced S-Nats, on the other hand, did it 29% of the time, clearly favoring an anterior reading. This not anticipated, especially since S-Nats (88.7/100) are more proficient in their L3 than E-Nats (82.7/100). I return to this matter in detail in the discussion (Chapter 6).

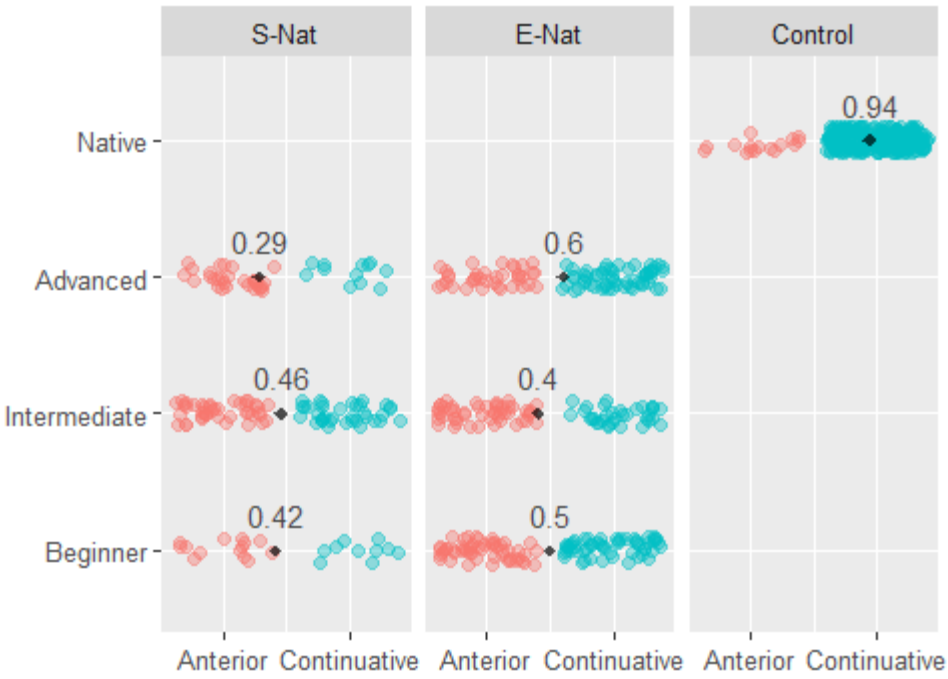


Figure 21. Proficiency by order of acquisition results, truth value judgment task

In sum, the results of the semantics data indicate that acquisition of anterior preterit does not pose difficulties to learners, not even at the beginner level. However, acquisition of the P-PP takes much longer or may only be possible at the highest levels of attainment. As done in the morphology data section, I now present the individual results for the semantic tasks.

Table 18. Individuals who demonstrated representation of P-PP aspectual features

	Beginner (22)	*Intermediate (27)*	*Advanced (23)*	*Total (72)*
Yes-Anterior Preterit	7	13	19	39
*Yes-*Anterior PP*	0	3	6	9
Yes-Continuative PP	3	3	8	14

Table 18 shows those who performed at 75% or higher in accepting anterior preterit sentences, rejecting anterior PP constructions, and those demonstrating understanding P-PP's default continuative output. For the anterior preterit, given that the control group had a categorical score of 2 out of 2, the 75% cut-off point was 1.5/2 or higher. For the anterior PP, I grouped the data from both condition 1 (anterior PP without adverbials) and condition 2 (anterior PP with adverbials). In addition to that, I considered the cut-off point 75% out of the control group's average in both conditions (-1.3). Thus, L3ers who scored -0.9 or below gained a Yes-*Anterior status, corresponding knowledge of its ungrammaticality. Finally, for the continuative PP, performing at 75% meant getting at least 4 out of the 6 tokens correct. This data will be compared to the Yes-Morphology group in the following section.

5.3 Acquisition of Functional Morphology and Features

My second research question seeks to determine if functional morphology and functional features are acquired simultaneously, or if there is an emergence of one before the other. In this section, we will center our attention on the analysis of the possibility of functional features coming for free after the acquisition of functional morphology. I will examine both aspects under study, namely anterior and continuative, in three conditions: anterior preterit, *anterior PP, and continuative PP. For each case, I ran a correlation test and a linear model on the continuous variables comparing group data. Furthermore, as aforementioned, participants were given a *yes* condition for four categories: Yes-morphology, Yes-anterior, Yes-*anterior, and Yes-continuative. Thus, their results were recoded to categorical variables for an individual analysis.

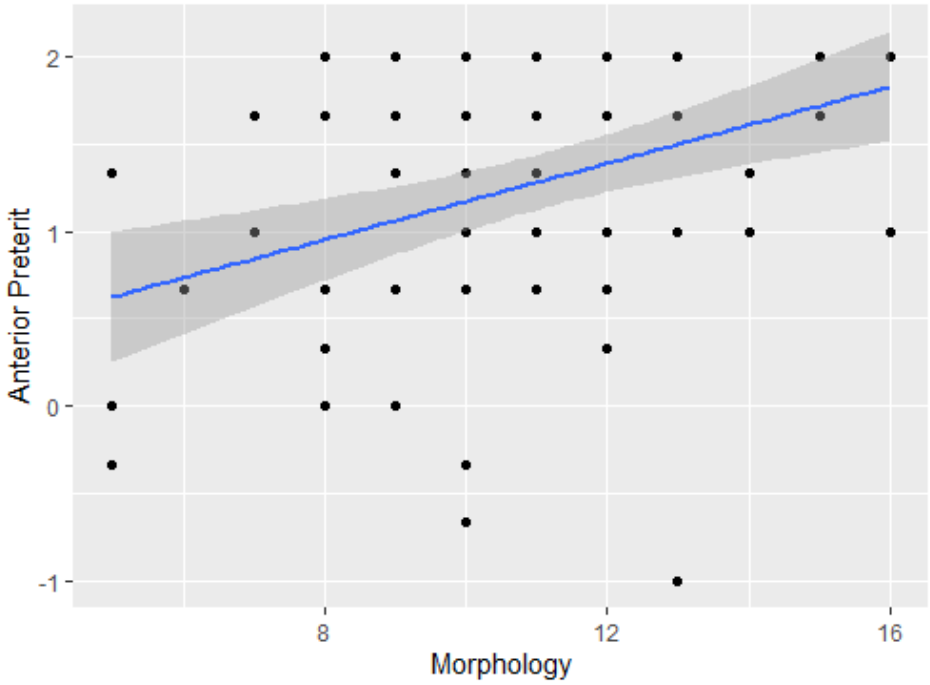


Figure 22. Linear regression of morphology ~ anterior preterit

In the section before, results pointed out that L3ers demonstrated a sound knowledge of the semantics of the anterior preterit. Comparing their representation to their performance in the morphology task, I found a positive and strong correlation ($r(70) = 0.43$, $p < .001$), which can also be visualized in Figure 22 by a linear model that predicted anterior perfect based on morphology and returned a positive and significant result ($R2 = 0.18$, $F(1, 70) = 15.48$, $p < .001$).

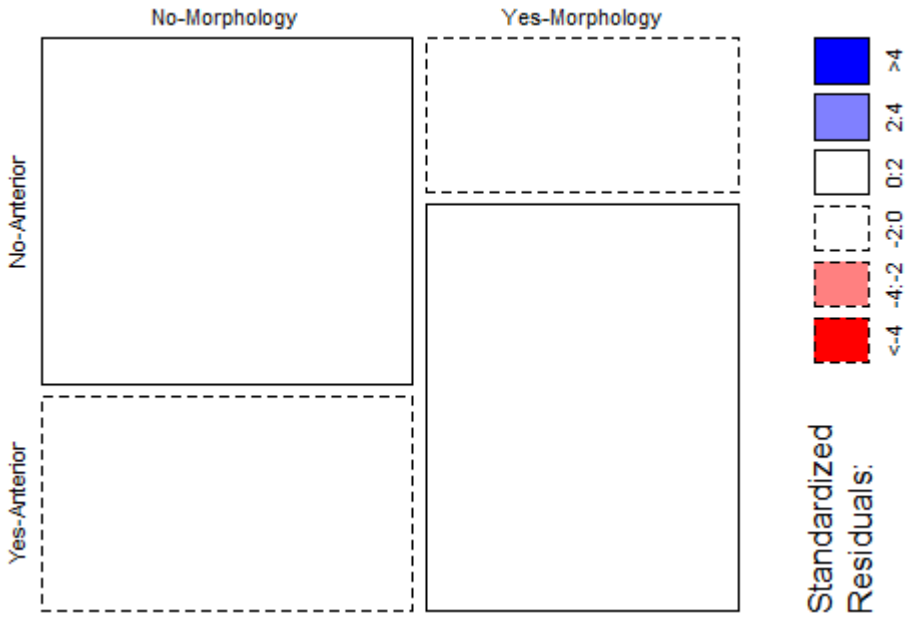


Figure 23. Individual results morphology ~ anterior preterit

For the individual results, the mosaic plot in Figure 23 shows the proportion of subjects who did or did not demonstrate representation of semantic features and mastery of morphology. In the x-axis, the No-morphology rectangles are wider that the Yes-morphology ones, which depicts that most participants lack dominance of the functional lexicon. Now comparing the No-morphology with the y-axis, we can see that the majority of people who performed poorly in the morphology, did the same with the semantics of anterior preterit (61.53% of the No-

morphology), but a little less than half demonstrated representation of the aspectual features (36.46%). Now moving to the right side, fewer people fell in the Yes-morphology, given that the rectangles are narrower, but the vast majority of the Yes-morphology participants acquired the semantics of the anterior preterit (72.72%). In the mosaic above, we can attest a strong correlation between morphology and semantics, since the largest squares are the No-morphology/No-anterior and the Yes-morphology/Yes-anterior interactions. In other words, most often those who had not acquired the functional lexicon, had not acquired the semantics either. At the same time, the majority of individuals who had mastered morphology also performed highly in the semantics. Table 19 displays the number of individuals in each group.

Table 19. Summary of individual results morphology ~ anterior preterit

	No-morphology	Yes-morphology
No-anterior	24	9
Yes-anterior	15	24

Regarding the PP, let us first consider the *anterior condition. A Pearson's test ($r(0.56) = 5.65$, $p < .001$) returned a very large, statistically significant positive correlation between morphology results and the ungrammatical PP scores. Figure 24 confirms this connection between variables, by illustrating the results from a linear regression model ($R2 = 0.31$, $F(1, 70) = 31.97$, $p < .001$) that also revealed a positive and substantial proportion of variance, indicating that morphology mastery predicts acquisition of Portuguese not licensing [+continuative, +perfective] with PP. The plot shows that the higher the morphology results, the more subjects

reject ungrammatical anterior PP sentences. If the reader recalls, subjects were expected to reject sentences by rating them -2. Given scores were negative, I multiplied them by -1 to achieve a positive continuous variable so that I could avoid a false negative correlation. Thus, in Figure 24, the y axis now corresponds to participants' accuracy in rejecting anterior PP constructions.

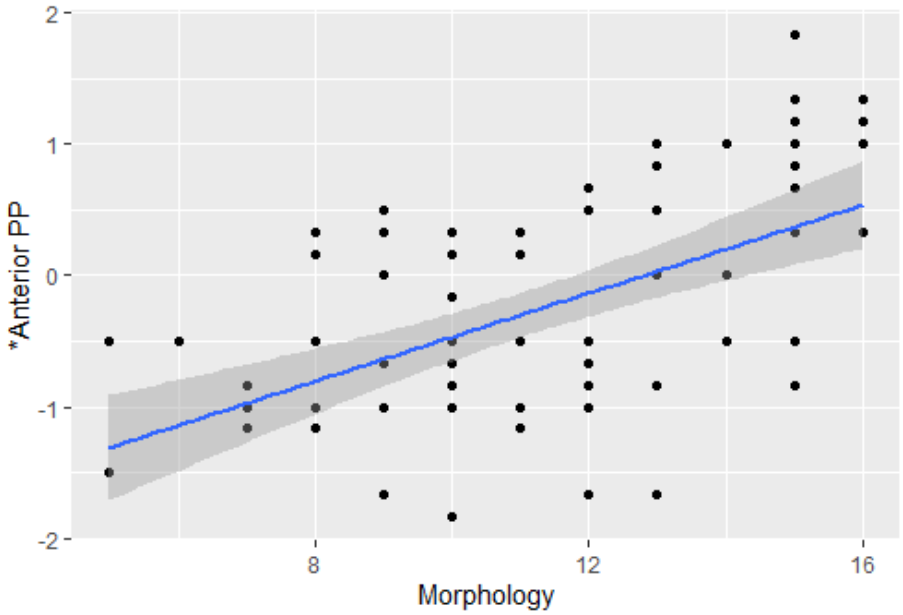


Figure 24. Linear regression of morphology ~ *anterior PP

The individual results are shown in Figure 25 and demonstrate that the lack of knowledge of the P-PP morphology had a prominent effect on L3ers' ability to reject anterior PP. On the left of the mosaic, we find that 97.43% of participants from the No-morphology group were categorized as No-*anterior as well. Nonetheless, we do not see an inverse ratio for the Yes-morphology individuals on the right side. In fact, many of them were still unable to reject sentences, observe how the Yes-morphology/No-anterior rectangle is bigger than the Yes-morphology/Yes-anterior one. Only 45.45% of the Yes-morphology appear to have acquired the

ungrammaticality of anteriority with the PP in Portuguese. Table 20 summarizes the individual results for the *anterior condition. Note rectangles that the color red filling the No-Morphology/Yes-*Anterior indicate that statistically there were fewer observations that there should have been. Likewise, the blue filling in the Yes-morphology/Yes-*anterior interaction indicates more observations than expected.

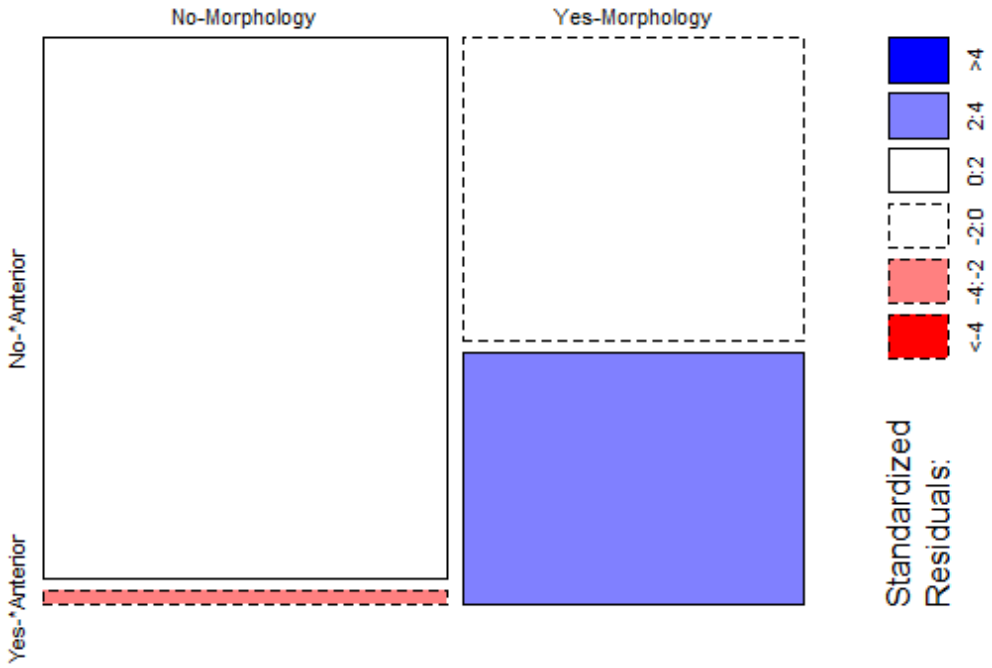


Figure 25. Individual results morphology ~ *anterior PP

Table 20. Summary of individual results morphology ~ *anterior PP

	No-morphology	Yes-morphology
No-*anterior	38	18
Yes-*anterior	1	15

Finally, we move to our final condition to examine the default PP's continuative aspect. Bear in mind that the results shown in the previous section about this condition had the poorest performance of L3ers across all proficiency levels. While I still found a statistically significant positive correlation between morphology and semantics, this time the correlation was weaker ($r(70) = 0.29$, $p = 0.013$). The slope of the linear regression line in Figure 26 is smaller than in the previous cases. The linear model that predicted the semantics of continuative PP based on morphology returned a statistically significant, but weak proportion of variance ($R2 = 0.09$, $F(1, 70) = 6.57$, $p = 0.013$). This suggests that acquiring the P-PP morphology does little in helping L3ers also acquire the aspectual features associated with it, suggesting that my claim that formal instruction and explicit negative input might be essential in acquisition. Further comments on this can be found in Chapter 6.

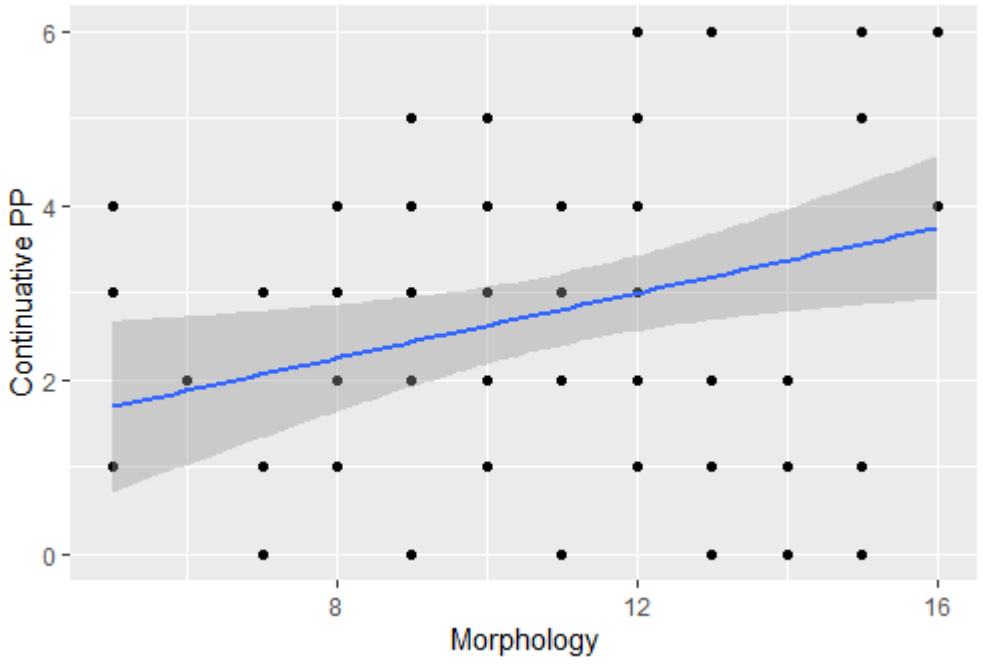


Figure 26. Linear regression of morphology ~ continuative PP

For now, let us compare the group data to the individual results. Figure 27 corroborates the recently displayed findings that unacquired functional morphology negatively impacts one's representation of semantics. A big portion (74.35%) of those in the no-morphology category failed to demonstrate acquisition of functional features. However, as we can see on the right, when it comes to P-PP, overcoming morphology optionality does not imply acquiring its semantics. Most of the Yes-morphology has been unable to dissociate [+perfective] from the PP in English and Spanish when acquiring the PP morphology of their L3. The summary of individual results in Table 21 informs that only 14 participants out of 19 were capable of de-learning functional features even after mastering functional morphology.

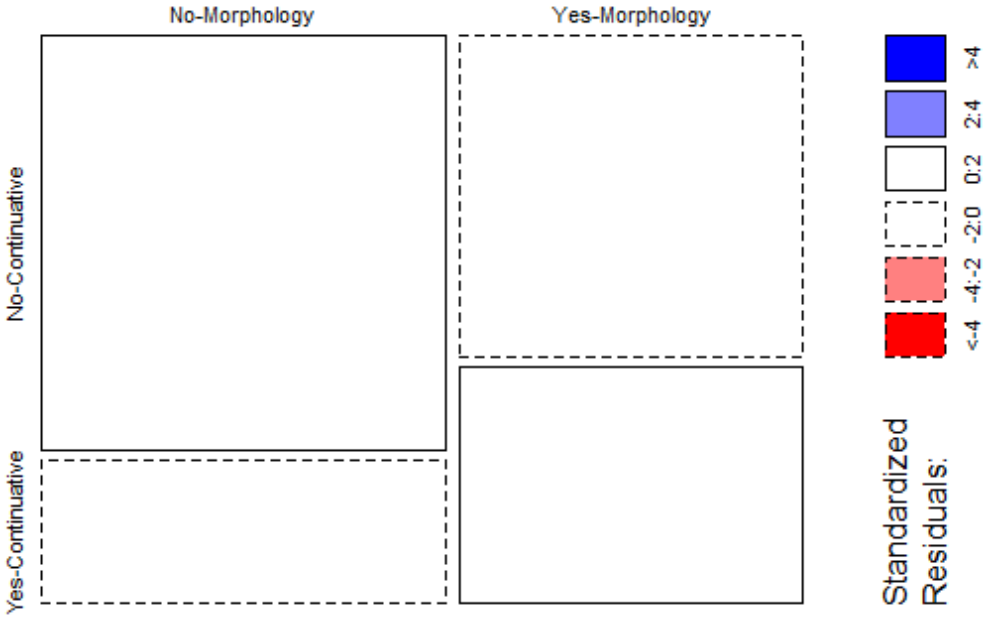


Figure 27. Individual results morphology ~ continuative PP

Table 21. Summary of individual results morphology ~ continuative PP

	No-morphology	Yes-morphology
No-continuative	29	19
Yes-continuative	10	14

In sum, these results lead us to conclude that morphology has a direct impact on the acquisition of semantics. While I also found that semantics acquisition may occur prior to that of morphology, the other way around is much more likely to happen. According to the data in this study, functional features do not come for free after acquisition of functional morphology.

5.4 Syntax Data and an Analysis of the Initial State

Learner's syntactic representation was tested by a 2-part Appropriateness Preference Task (APT). The APT was specifically designed to track possible sources of transfer from previously acquired languages at the IS and compare it to the DS in order to check for possible lingering effects across proficiency levels. In particular, the APT aims to shed some light on if (psycho)typology, order of acquisition or modularity play a role at the IS. Note that in addition to taking the APT for L3 knowledge on P-PP, participants took an APT in either English or Spanish as a means to prove knowledge of this phenomenon in their L2. In other words, I tested if they had features in their L2 interlanguage that could be transferred to their L3. Once more, individuals performing at 75% or higher gained the status of Yes-L2 Syntax. The analysis to follow compares the performance of them to the No-L2 Syntax subgroup – those with less dominant syntax knowledge of their L2 PP.

One part of the APT was dedicated to investigating question formation in Portuguese. Subjects received the same sentence in an English-like, Spanish-like, or Portuguese-like order. The results for the IS are displayed in Figure 28. All members of the IS had perfect accuracy selecting Portuguese-like items.

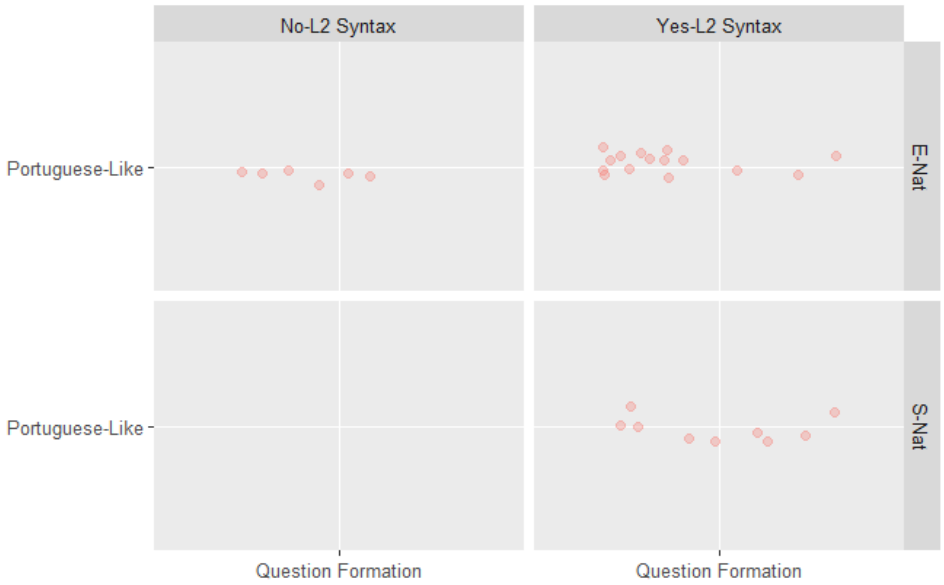


Figure 28. Initial state results for question formation

Figure 29 shows that the perfect score gets lost along the way to higher proficiency. However, we can still notice a strong preference for Portuguese-like structures in all interactions between L2 Syntax and L3 groups. Moreover, E-Nats' second most picked structures were Spanish-like, while S-Nats' were English-like, suggesting some L2 influence. For this section, members of the IS (8 beginners and 2 intermediate) were excluded from the results of the DS so that the same data would not be counted twice.

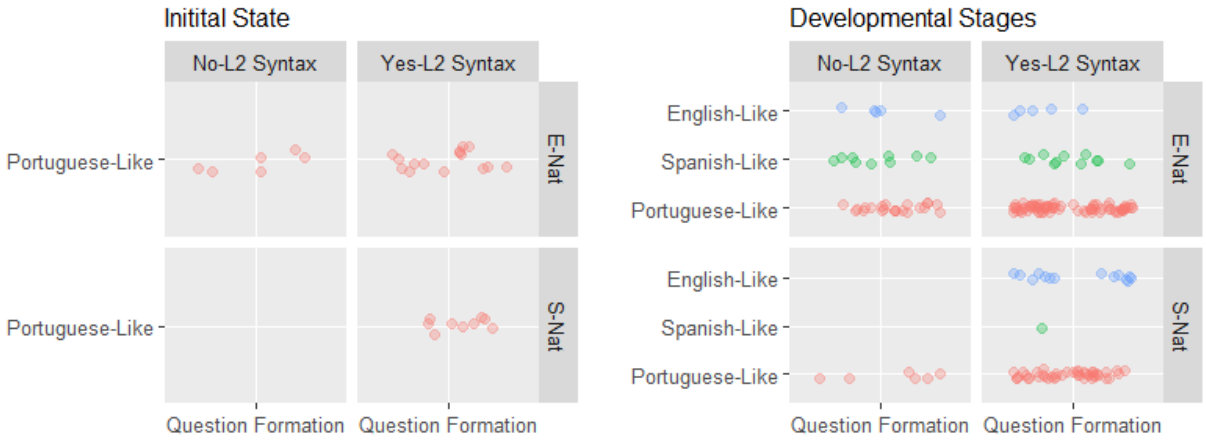


Figure 29. IS x DS results for question formation

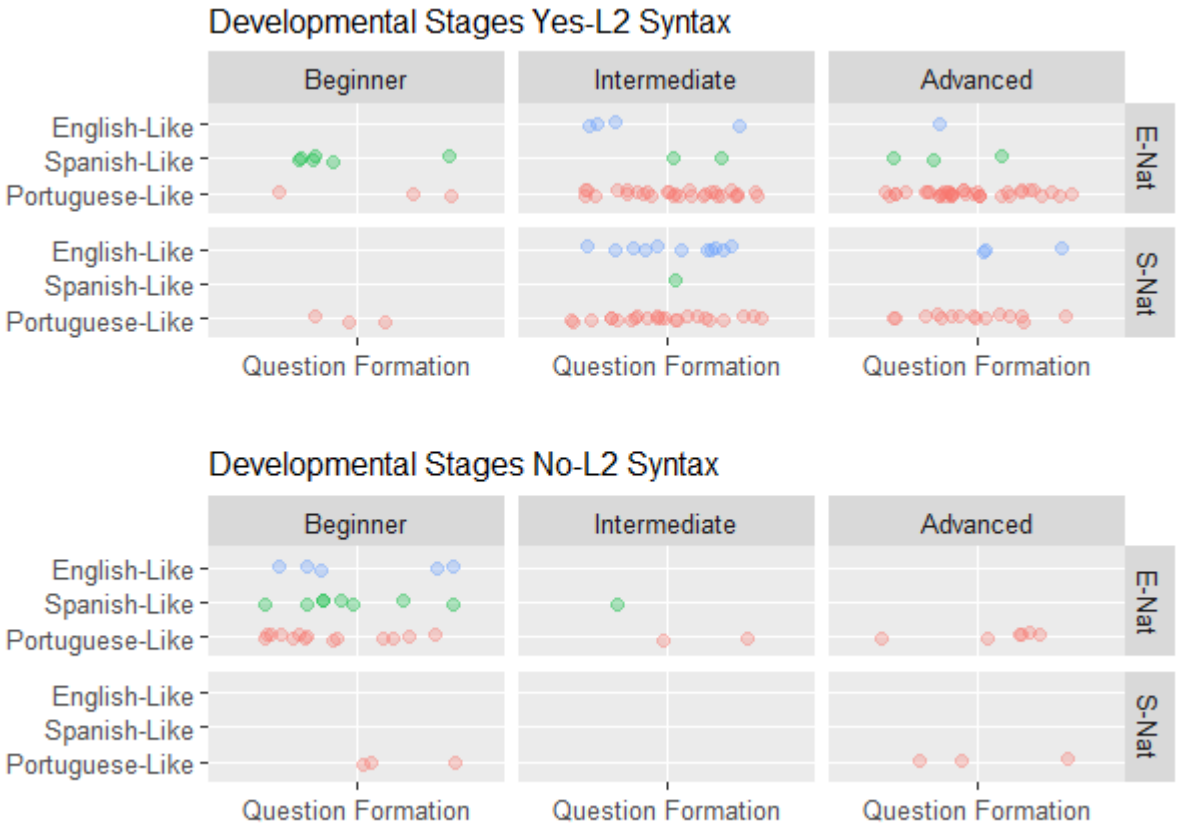


Figure 30. DS results per proficiency level for question formation

By taking a closer look at the proficiency levels in Figure 30, we find that surprisingly it is the beginner E-Nats in the No-L2 Syntax who suffer L2 influence. The intermediate and advanced groups have target-like behavior. For S-Nats, it is the intermediate group whose choices are L2 English transfer. In the discussion (Chapter 6), I address the issue of L2 influence. Regarding the control group, Figure 31 shows their responses are as expected.

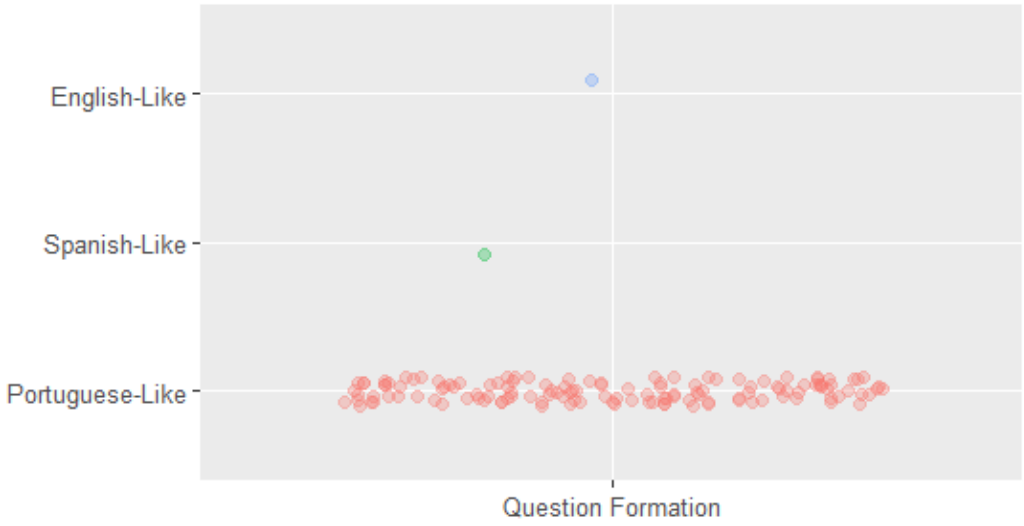


Figure 31. Control group results for question formation

The other condition tested in the APT is adverbial placement. Participants received the same ungrammatical anterior P-PP sentence with experiential adverbials whose placement were either Spanish-like or English-like. Additionally, they could choose the *both are possible*, which indicates optionality in their L3-interlangue, or the *neither are possible* option, which is the expected response and would indicate knowledge of P-PP morphosyntax. As illustrated by Figure 32, the IS once again showed traces of transfer from Spanish, by favoring Spanish-like adverbial

placement. That was even the case for the No-L2 Syntax L1 English learners. The DS had similar results (Figure 33) with a predominantly Spanish influence.

Figure 32. Initial state results for adverbial placement

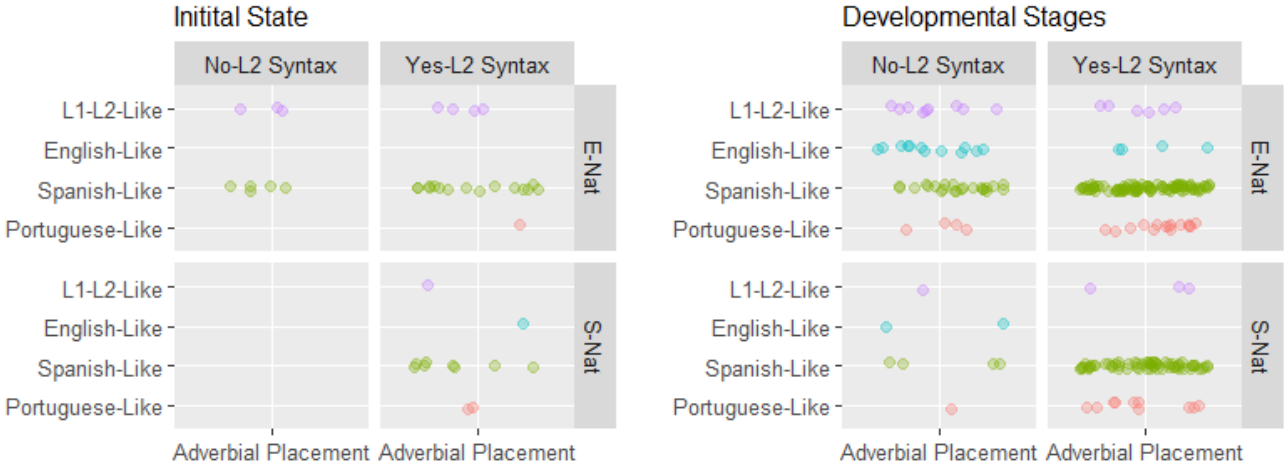


Figure 33. IS x DS results for adverbial placement

Figure 34 displays L3ers performance across the DS. Typology remains a strong factor even at higher proficiency levels. Overall, mirror-image groups behaved similarly, having their choices affected by linguistic proximity, even when they have not completely mastered the syntax of the most typologically similar grammar, as exemplified by the No-L2 Syntax E-Nat's performance.

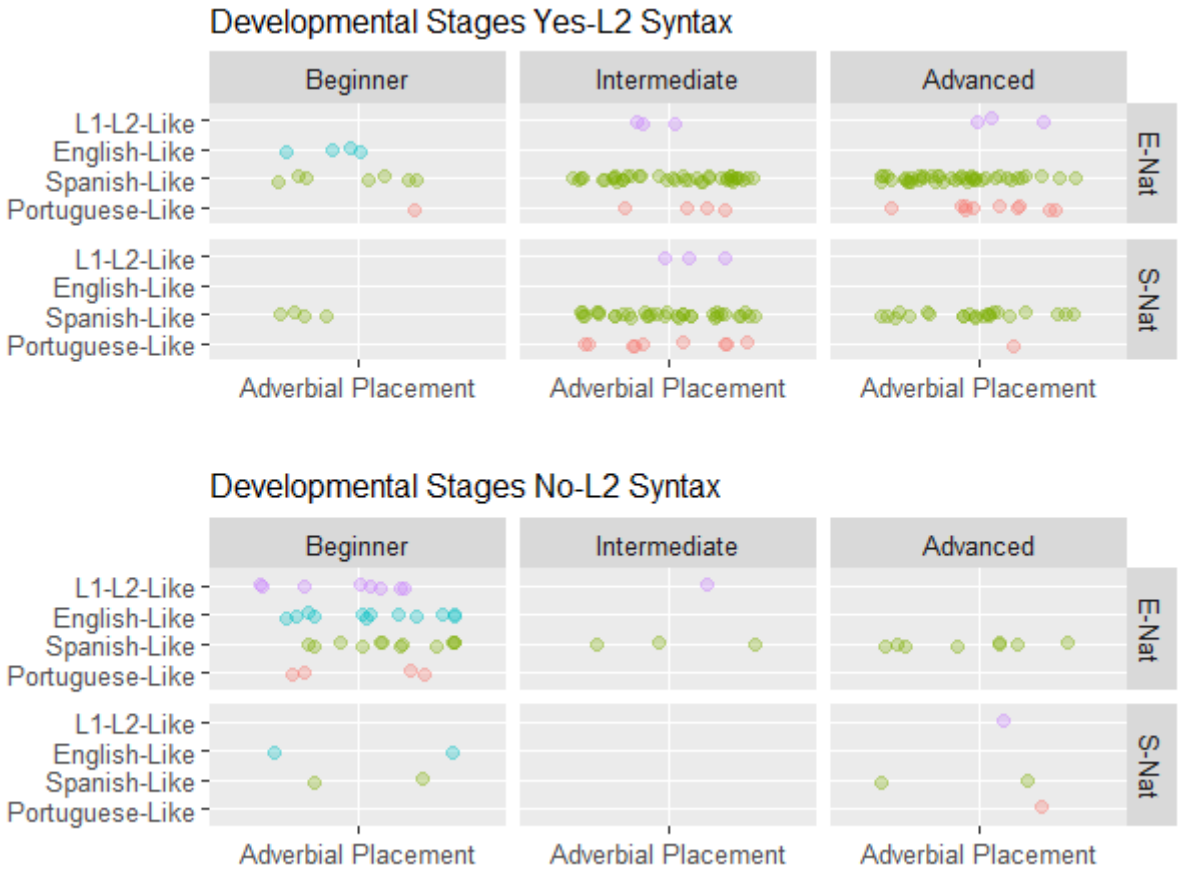


Figure 34. DS results per proficiency level for adverbial placement

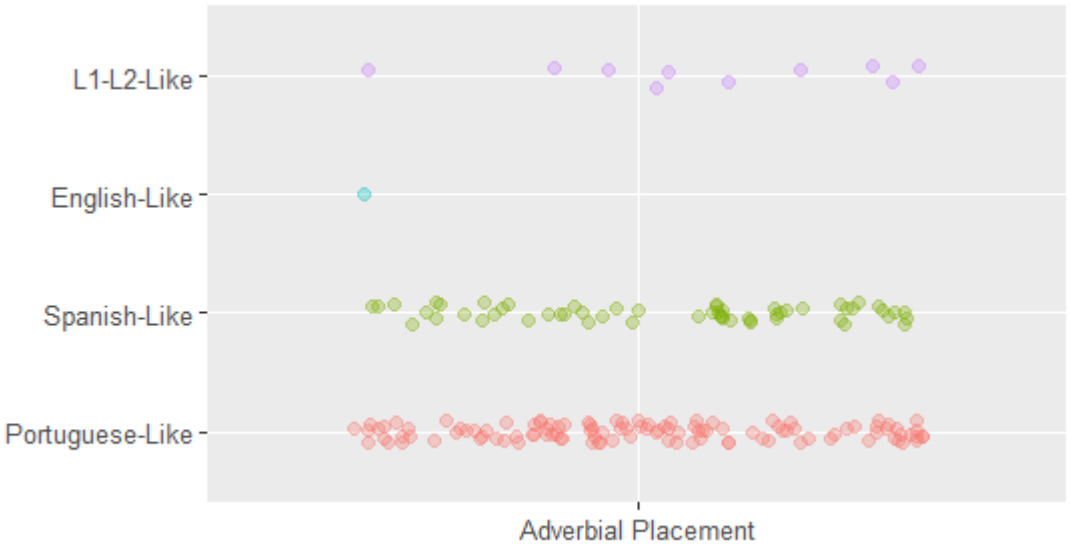


Figure 35. Control group results for adverbial placement

In Figure 35, we find that the control group performed as expected most of the time, by having rejected most of the sentences in the AJT. However, BPs also selected Spanish-like items more than expected, showing small traces of semantic extension from their additional languages to their native – something I return to in chapter 6.

5.5 Natural Input and Dialect

My final step in the data analysis was to verify if natural input in a Portuguese-speaking country or Spanish dialect can influence acquisition of the P-PP. In the language background form, students were asked if they had spent time abroad in a Lusophone region, if they answered yes, they would receive a follow-up question asking them how long they were abroad. Their responses were coded as a continuous variable. In regards of dialect, they were asked to inform with which Spanish dialect they mostly identified. A list of countries and regions (e.g., Caribbean) was

provided. They also had the possibility to choose the option *no specific dialect: parents and/or teachers from different countries* or enter a region not listed by typing their response. Spanish dialect was analyzed as a categorical variable.

If the reader recalls from the S-PP description in chapter 2, Mexican and Argentine Spanish have a frequent default output of continuative PP, while – unlike Portuguese – still licensing anterior PP. Peninsular Spanish is peculiar in regard to its default anterior output. The so called *hodiernal perfect* expresses past events that have happened within the day or the past 24 hours. Finally, Caribbean Spanish licenses questions without any verb movement, which could affect responses in the APT. When it comes to natural input, I hypothesized that time abroad in a Lusophone country would have a positive correlation with acquisition of the P-PP. A linear regression was run to predict performance in syntax, morphology, and semantics (anterior preterit, *anterior PP, continuative PP) based on input. For dialect, I ran one-way ANOVA tests for each variable. Results revealed that neither dialect nor natural input have statistical significance or strong correlation (see Table 22).

Table 22. Natural input linear regression and Spanish dialect ANOVA results

	Natural Input	**Spanish Dialect**
Syntax	R2 = 0.05, F(1, 70) = 3.44, p = 0.068	F(8) = 0.901, p = 0.521
Morphology	R2 = 0.01, F(1, 70) = 0.84, p = 0.362	F(8) = 0.774, p = 0.627
Anterior Preterit	R2 = 0.02, F(1, 70) = 1.59, p = 0.212	F(8) = 1.76, p = 0.102
***Anterior PP**	R2 = 0.01, F(1, 70) = 0.91, p = 0.342	F(8) = 0.781, p = 0.621
Continuative PP	R2 = 7.91e-03, F(1, 70) = 0.56, p = 0.457	F(8) = 0.581, p = 0.79

5.6 Results Summary

In this chapter we have reviewed the results from the analysis of the L3 acquisition of aspectual features with the data from the forced-choice morphology task and two semantics tasks. L3ers have demonstrated ability to acquire the semantics and morphology of the Portuguese anterior preterit, reaching target-like representation at the advanced level. On the other hand, acquisition of PP has not returned the same results. Both the default continuative output and the ungrammaticality of anterior have posed difficulty to participants. Regarding the IS, the syntax data suggests a very strong influence from Spanish, which lingers up to the advanced level. In the next chapter, I address the results from the instrument and how the data relates to my research questions and hypotheses. Finally, I also discuss methodological measures and needs for future research in L3A.

CHAPTER 6

DISCUSSION

This dissertation examined the acquisition of the present perfect in L3 Portuguese. In particular, it centered on the study of functional morphology and functional features associated with it. Following the discussion in the field of L3A that has enjoyed special attention in the past few years, that is, the analysis of L3 interlanguage post-IS, I looked at how bilinguals of English and Spanish behaved across three DS acquiring a temporal-aspectual structure that is available in their previously acquired languages in terms of morphosyntax, but slightly differs semantically. The P-PP has the same structure that Spanish and English do, viz., a verb of possession as an auxiliary conjugated in the present tense followed by the main verb in the past participle morphology. E-PP and S-PP both generate either an anterior or continuative aspect, being the former the default output. In turn, the P-PP only licenses the continuative aspect, checking for the [+continuative, -perfective] features under T. The anterior aspect in Portuguese is reserved for the preterit morphology, where [+continuative, +perfective] are mapped. In order to acquire the L3 P-PP, subjects had to de-learn the anterior aspect from the PP and reassemble it to the preterit, which in Spanish is [-continuative, +perfective]. In addition to it, they had to dissociate experiential adverbials (e.g., *nunca*, *já*, and *ainda não*) with the P-PP. Thus, L3ers' acquisition task was to acquire the obligatoriness of continuative P-PP, by also acquiring that Portuguese preterit

can be either perfective or anterior. The three research questions pertaining aspectual acquisition are repeated below for the reader's convenience:

RQ1. Do English-Spanish bilinguals demonstrate evidence of acquiring the present perfect in Portuguese?

RQ2. Does acquisition of abstract functional features, such as aspect, take place before, after, or simultaneous to the acquisition of functional morphology?

RQ3. Since acquiring P-PP means resetting preterit to both perfectivity and anteriority and the present perfect to always output [+continuative, -perfective], do these phenomena take place simultaneously or is there the emergence of one prior to the other?

For the first research question, I hypothesized that acquisition of aspectual features in L3 Portuguese present perfect was possible. Learners would access their L1 and L2 grammars and transfer facilitative information, that is, the features and morphology from E-PP and S-PP, which would lead them to transfer the continuative aspect to the P-PP. Anteriority, on the other hand, would be less successful, given that transferring features from the E-PP and S-PP implies that the [+perfective] feature from the anterior aspect would come along. De-learning it would be troublesome and would take place only in advanced stages. My reasoning was that because P-PP is not very frequent and only taught in advanced courses, usually concentrating on the similarities, beginners and intermediate learners would not have enough or any negative input. In addition to proficiency and longer experience with the language, I hypothesized that re-setting

the PP in Portuguese would have a direct correlation with exposure to natural input in a Portuguese speaking community, where learners would be more prone to negative input as well. The results presented last chapter show that my first hypothesis was validated. In the data from both the morphology and semantics tasks, beginners and intermediate participants had very similar patterns. In the morphology task, these two proficiency groups had no significant statistical difference, with averages close to chance, 0.57/1.00 average of accuracy for the beginners and 0.6/1.00 for the intermediate (See Figure 10). This is also the case for individual results (Table 17), when 5 out of 22 beginners got the Yes-morphology status (22.73% of individual success) and 7 out of 27 intermediate learners did the same (25.93%). On the other hand, advanced groups demonstrated an incredible boost in the development, jumping to a 0.86/1.00 accuracy and 21 out of 23 individuals in the Yes-morphology group (91.3%). Because the items in the morphology task were all grammatical, sentences containing P-PP were always continuative. The results from this task point out that acquisition of the [+continuative, -perfective] P-PP is possible and has taken place at the advanced level, as hypothesized. We are, then, left with accounting the de-learning of anteriority. In this case, both semantics tasks support my claim that it would be troublesome for learners. There was a big discrepancy between the control and the L3ers. From a group analysis, not even the advanced level showed having unassigned [+perfective] from the P-PP. All proficiency groups were statistically similar in failing to reject ungrammatical sentences with [+continuative, +perfective] PP in Portuguese (Figure 12). In fact, the results also indicate that they have not dissociated experiential adverbials (Figure 14). Averaging the results from Figures 12 and 14, we find that while the control group rejected sentences on a -1.3/-2.0 rate, the most proficient L3ers scored a mean of 0. The intermediate

group had an acceptance average of 0.25, while beginners rated them positively with a score of 0.65, accepting ungrammatical sentences. What we can conclude is that even though learners may receive enough input to acquire the morphology and the overlapping features among all languages, the Portuguese input that they are exposed to is not signaling to them that there are semantic differences in Portuguese that require them to reset features. In other words, they are not receiving enough or any negative input, and due to that, they are assuming that Portuguese generates both continuativity and anteriority with the present perfect, just like English and Spanish. The proximity between Portuguese and Spanish might be leading them to assume that all their verbal system is transferrable.

Another factor that weighs on these results is formal instruction. As already discussed in Chapter 3, educational material and language curriculum tend to introduce the topic of the present perfect (and compound tenses in general) at later stages of language learning, reducing the exposure to topics that actually should be presented early on for needing more time and contact for attainment. In the case of the P-PP, I also brought up that instruction usually centers on what is common between English and Portuguese (and sometimes Spanish as well), not providing explicit information of what is not licensed. Despite the fact that it is estimated that 45% of the students enrolled in Portuguese classes in the US are Spanish speakers (Milleret 2012), educational resources are still heavily targeted to a monolingual English-speaking audience, or, at least, to a heterogenous audience that is treated as homogeneous for being taught with English as the common language. Another factor is that many college classes follow the communicative approach in order to provide meaningful practices, with real-life situations, and active learning. The issue is that for the case of Portuguese and Spanish, this approach alone may

not be enough. Speakers of these two languages can mutually interpret what the other says due to the structural and lexical similarities. Besides this, since almost half of the Portuguese learners also speak Spanish (Milleret 2012), when a learner uses a Spanish structure that is ungrammatical in Portuguese, mutual comprehension still holds, because interlocutors can simply access their Spanish grammar. Therefore, educational resources targeted for an English-speaking public plus the predominance of the communicative approach and mutual comprehension among Spanish-speaking learners create a troublesome equation. This combination results in very few opportunities for negative input and explicit instruction of language phenomena in the L3 that might not be salient enough for one to parse in oral communication due to misleading lexical and structural cognates.

Discussion on the challenges of teaching Portuguese for Spanish speakers (Simões, Carvalho and Wiedemann 2004) has indicated that in spite of learners being able to achieve high degrees of listening and reading skills in early stages, they also suffer early fossilization in the interlanguage for the easy communicative capacity in Portuguese. In other words, for a lack of linguistic awareness of the subtle differences between these two sister languages. Carvalho and da Silva (2006) posit that the communicative approach, while useful for less related languages, is bound to be insufficient to make Portuguese learners pay attention to tenuous distinctions, needing adjustments in the pedagogy to focus on form and contrastive analysis. Their ideas are corroborated by the findings in Akerberg's (2006) study on the acquisition of the L2 Portuguese present perfect by Mexican participants. She found that explicit instruction was fundamental to help learners acquire the P-PP. In her pre-test, the accuracy rate was between 0% and 21%. After instruction, performance ranged from 24% to 71% of accuracy. She concludes that the closedness

between Portuguese and Spanish makes it very difficult for learners to detect subtle differences without instruction. The need for explicit instruction becomes even more evident when we go back to my analysis of the impact of natural input in section 5.6. Differently from what I had hypothesized, the results from linear regression tests revealed that natural input was not statistically significant. This suggests that even communication with natural input has not been enough to trigger linguistic awareness to subtleties between Portuguese and Spanish, showing that pedagogies with contrastive analysis play a very important role in Portuguese classes with Spanish-speaking students.

Still in the realm of aspectual features, let us move to the second research question, which has to do with the acquisition of functional morphology and the acquisition of abstract functional features, such as aspect, and if they occur simultaneously or sequentially. This research question is associated with two external hypotheses. The first one is Montrul & Slabakova's (2002) language acquisition assumption that, since UG guarantees that there is not any dissociation between morphology and semantics, after acquiring functional morphology, the semantics associated with this projection will come along. The other hypothesis is the MSIH (Prevost & White 2000), which posits that learners may demonstrate acquisition of functional features despite inconsistent morphology production. Montrul & Slabakova (2002) found a very important relationship between the acquisition of temporal-aspectual imperfect/preterit morphology and the acquisition of the [±perfective] semantic distinction in Spanish. They concluded that acquisition of morphology precedes that of semantics. In their study, 80% of the Yes-morphology group had acquired the semantic distinction, while no participant in the No-morphology showed acquisition of semantics. In the present study, I also found a close relationship between

morphology and semantics. There was a positive correlation among the results from the morphology task and the representation of anterior preterit, *anterior PP and continuative PP. In fact, linear regression models predicted (Figures 22, 24, and 26) the gradual nature of their development and showed that morphology acquisition was particularly helpful for the acquisition of anteriority. However, individual results were less straightforward. On one hand, it is clear that not having acquired the morphology impacts the acquisition of semantics. In this sense, we can say that morphology precedes semantics. On the other hand, 61.5% of the No-morphology were also No-anterior (Figure 23), but 38.5% had already acquired the semantics of the Portuguese [±continuative, +perfective] preterit. At the same time, 27.27% of the Yes-morphology had no knowledge of the semantics of anterior preterit, suggesting that abstract functional features had not come for free and were independent from the acquisition of functional lexicon. This is even more evident with the PP (Figure 25), when almost all (97.43%) of the No-morphology had not yet de-learned the [+perfective] from the P-PP, thus, falling in the No-*Anterior. For the case of the continuative PP (Figure 27), 74.35% of the No-morphology was also No-continuative. This reinforces that the lack of knowledge of morphology impacts the acquisition of the semantics. However, the data for these two cases does not validate the acquisition of abstract functional features after functional morphology, since more than the half of the Yes-morphology had not yet attained the features associated with the P-PP. 54.5% of the Yes-morphology failed to demonstrate knowledge of the ungrammaticality of anterior P-PP, while 57.5% did not demonstrate acquisition of the semantics of obligatory continuative P-PP.

As for the MSIH, the individual results agree with its predictions. Analyzing the performance of the No-morphology, we found that 38.5% (Figure 23) demonstrated having

acquired anterior preterit and 25.6% (Figure 27) having acquired continuative PP even though their performance in the morphology task was not consistent. Whereas the results from the *anterior PP do not show significant support for the MSIH (Figure 25), with only 2.6% of the No-morphology showing having de-learned anteriority with the PP, it might be the case that the majority of this group had not acquired the semantics yet. After all, this dissociation of functional features proved also difficult for the Yes-morphology.

Finally, the third research question relates to the two-part P-PP acquisition task. Assuming a FT/FA (Schwartz & Sprouse 1996) standpoint, L3ers in this study would be transferring the morphology and semantics from the E-PP and S-PP. In order to acquire the P-PP, they had to also reset preterit to both perfectivity and anteriority so that the PP would exclusively generate the continuative aspect. I hypothesized that these two phenomena, namely acquisition of [+continuative, -perfective] PP and [±continuative, +perfective] preterit, would not occur simultaneously. Instead, L3ers would acquire anterior preterit first and early on. The results confirmed my hypothesis. Data from the TVJT shows an evident contrast between anterior preterit and the semantics of the P-PP. Whereas L3ers were unable to reject ungrammatical sentences (Figure 12 and Figure 14) and behaved very differently from the control group – thus, not showing acquisition of resetting the features associated with the PP –, their responses with the Portuguese preterit were much closer to the expected ratings (Figure 16). The control group had a categorical acceptance rate of 2, followed by a very close score of 1.7 by the advanced level, indicating they are in the range of variation of the grammar of multilingual Brazilians. The intermediate level also had a very high rate of acceptance with a 1.3 score. Although a Tukey HSD returned a statistical difference among the beginner and the other groups, the least proficient

level still had a very good performance, with an acceptance average of 0.9 on the Likert scale, which shows representation of the [±continuative, +perfective] preterit in their interlanguage. The morphology data goes in the same direction (Figure 10). Both for the beginner and intermediate levels, the accuracy for the preterit was higher than for the perfect conditions. Beginners had a close range of 61.5% accuracy for the preterit and 56.5% for the perfect. But the intermediate learners demonstrated a faster development for the preterit, achieving a 71.5% average (a raise of 10%), while maintaining 60% for the perfect, improving only 3.5%. Advanced learners had balanced scores, choosing the preterit appropriately 83% of the time, and moving to an impressive high score for the PP of 86% of accuracy. Once again, the results demonstrate that my second hypothesis was right, and knowledge of a dual-aspectual preterit rises first and as early as the novice level.

Meanwhile, acquisition of the P-PP happens much later. Examining the semantics and morphology data together, L3ers' performance suggest that overall learners are not resetting the P-PP after transferring its properties from their previously acquired grammars. In other words, they are not re-mapping the anterior aspect to preterit while de-learning it from the P-PP, they are simply acquiring the [+continuative] and mapping it to the Portuguese preterit. The P-PP is kept as is after transfer from the E-PP and S-PP. Thus, L3ers' interlanguage is sustaining both the preterit and P-PP as two viable choices to generate anteriority. Thereby, learners believe that preterit is the favorite choice not the only choice. Additionally, it seems learners have understood P-PP to be similar to English and Spanish: able to license two aspects. However, unlike these two later languages, where anteriority is the default but continuativity is possible, they believe Portuguese functions the other way: continuative aspect is the default, while anterior is reserved

for more specific contexts. The morphology data (Figure 8), which only has grammatical P-PP, signals that L3ers acquired the continuative aspect for the P-PP and the anterior for the preterit. The semantics data indicate they highly accept preterit as anterior. But the results from the NJT (Figure 12 and 14) show acceptance of two aspects with the PP with a neutral rating around 0, which indicates they are not favoring or disfavoring any aspect with the PP. The semantics data from the TVJT (Figure 19) returned the same interpretation. Even the advanced level did not reset the P-PP to the exclusive continuative output. All levels seemed to represent the P-PP as licensing two aspects, since their responses were also in the middle: beginners interpreted P-PP's default aspect as continuative only 48% of the time; intermediate learners, 43%; and advanced 51%. My claim that the P-PP is being unaltered after transfer from previously acquired grammars is supported when we analyze the results of S-Nats in the advanced level (Figure 21). The L1 Spanish participants are treating the P-PP as the same as the S-PP. The advanced S-Nats performed the worst among all subgroups, by interpreting P-PP's default output as continuative only 29% of the time. This is surprising because advanced S-Nats are the most proficient subgroup in Portuguese (88.7/100) and were therefore expected to perform the best. In contrast, advanced E-Nats, whose proficiency was bit lower (82.7/100) had a much better accuracy rate, successfully interpreting the P-PP as continuative 60% of the time – but still not showing having reset the P-PP. I argue that E-Nats, for having a native language less similar to the L3, are being more metalinguistically aware of their choices and using knowledge from explicit instruction they needed for acquiring L2 Spanish and now L3 Portuguese. These results and this account are similar to those found in Carvalho and Silva (2006), where E-Nats performed better because they seemed to be applying grammatical rules more often. Since L1 English speakers do not possess

native intuition in Romance Languages, they consciously apply what they learned from formal instruction, utilizing contrastive analysis and examination of context and morphosyntactic triggers to drive their temporal-aspectual choices. In language classes, E-Nats are often taught tricks and acronyms to help them decide between imperfect and preterit, and indicative and subjunctive, for instance. On the other hand, L1 Spanish speakers rely on their native intuition to make generalizations and analogies between two very closely related languages. Thus, they put their faith in all the times that the transfer they did was positive. If this is really the case, then, E-Nats' results reinforce the importance of metalinguistic awareness for the acquisition of subtle differences. Cabrelli Amaro has similar finding in three other studies: two in morphosyntax (Cabrelli Amaro 2015: raising across a dative experiencer; Cabrelli Amaro et al. 2016: L3 Portuguese differential object marking) and one on word-final vowel reduction (Cabrelli Amaro 2013). In all cases, E-Nats had an advantage learning L3 Portuguese. Cabrelli Amaro (2017) concludes that the data from these studies suggest that development for learners may be slower if they are transferring from their L1. In these particular cases, when their L1 is Spanish and their L3 is Portuguese.

Returning to the discussion of the preterit, its early acquisition does not come as a surprise. As hypothesized, this morphology is very frequent in both oral and written registers. Since the imperfect/preterit distinction is not present in English, this morphology is very salient to learners, bringing metalinguistic awareness. Lastly, formal language learning dedicates a big chunk of its curriculum to the teaching of preterit, bringing it to learner's attention right at the start of novice-level classes and providing a great frequency of input. Furthermore, the anterior preterit's early acquisition can be explained by the Feature Reassembly Hypothesis (Lardiere 2007, 2008), whose

predictions are supported by the results of the present study. This hypothesis argues that the level of challenge in the acquisition task depends on how much re-assembly of features is necessary in the mapping of form to meaning. Preterit proved a much easier task, showing traces of acquisition right at the first developmental stage. Indeed, because L3ers already had the [±perfective] semantic distinction from their L1 or L2 Spanish, the Portuguese preterit was much simpler. Experiential adverbials (ENG. *already/never*, SPAN. *ya/nunca*) are grammatical with both English simple past and Spanish preterit, though generally with a perfective meaning. Therefore, learners simply had to acquire the [+continuative] feature and map it on the Portuguese preterit for its full acquisition: a one-step re-assembly. In contrast, the P-PP required the dissociation of experiential adverbials and the de-learning of continuativity with PP + durational/frequency adverbials or E-PPC/S-PPC. Thus, a two-step re-assembly. Indeed, by looking at the L3ers' performance of each condition in the morphology test (Figure 9), we find that the order of best accuracy is not random. Learners performed the best at the perfective preterit with an average of 75.3%, followed by the durative perfect 71.5%, the anterior preterit 68.4%; and, finally, the iterative perfect as last with an average of 62.5%. This order is interesting because the perfective preterit is available in Spanish and is one of the most studied topics in Romance languages courses. Their second best is the durative perfect, readily transferrable from both their L1 and L2, and where PP overlaps among all three languages. These two conditions require no reassembly, only transfer. However, their two lowest scores (anterior preterit and iterative perfect) are as expected, since these conditions are where Portuguese aspectual differences lie and reassembly would need to take place.

As for the Slabakova's (2008) Bottleneck Hypothesis, overall data did not support her claim that learners would indicate knowledge of formal features preceding mastery of functional lexicon. Data from the morphology task were generally better than the interpretation of semantics. Nonetheless, some individual results do offer some support, given that around 38% of those who acquired anterior preterit and 27% of those who acquired the obligatoriness of continuative P-PP had not yet mastered morphology.

In sum, knowledge of the grammaticality of continuative Portuguese present perfect is possible and generally occurs only after learners achieve the advanced level. The ungrammaticality of anterior P-PP is a complex task and explicit instruction seems to be a fundamental tool to assist parsing of subtle differences. Despite evident difficulties, acquisition of the P-PP is possible. 14 out of 72 participants demonstrated knowledge of both the P-PP morphology and its default and only available continuative output. Moreover, 10 out of 72 participants showed acquisition of the obligatoriness of continuative P-PP despite inconsistent morphology. This indicates that 24 out of 72 participants have reset the P-PP to [+continuative, -perfective], hence supporting UG-access in adulthood. When it comes to the anterior preterit, this number increases to 39 (24 Yes-morphology, 15 No-morphology), that is, more than half of the experimental group reset the Portuguese preterit to [±continuative, +perfective]. Such meaning-to-form configuration is not available in their L1 or L2, it is safe to assume that L3ers resorted to universal grammar and findings suggest that no impairment takes place in the adult acquisition of abstract functional features.

Now that we have reviewed the hypotheses and research questions regarding aspect and UG-access, let us shift our attention to the analysis of the L3 acquisition process, by revisiting the two remaining research questions, which I repeat below:

RQ4. Do both languages serve as source of transfer or does one have a privileged role? In this case, which will transfer?

RQ5. Which of the current L3/Ln Acquisition models best predict how acquisition occurs? That is, what influences L3A the most: (psycho)typology, order of acquisition, or modularity?

As previously discussed in Chapter 3, the field of L3A has been primarily concerned with tracking the source of transfer at the IS. This is not surprising, since, by nature, L3A and SLA differ because in the former there are two grammars promptly available at the beginning of the acquisition process, and because by examining the IS we can determine what factors influence transfer. The mostly observed factors have been order of acquisition and typology. Recently, modularity entered the pictured, challenging the idea that WT occurs. L3 Portuguese has been very important to the study of the IS (see Cabrelli Amaro 2017 for a review on the importance of Portuguese in L3A), especially when either English or Spanish can exclusively offer facilitative transfer. I hypothesized that learners would not be able to perceive that transfer from either previously acquired grammars would result negative, as well as that we would find traces of transfer from Spanish not only at the IS but also in the DS. Data from the AJT strongly suggest that my hypothesis is right. The IS had a strong preference for Spanish-like adverbial placement,

despite them being ungrammatical in Portuguese (Figure 32). Even E-Nats who were less than 75% dominant of the S-PP - thus classified as No-L2 syntax - transferred from Spanish. I also found that this tendency continues in the DS (Figure 34), as both intermediate and advanced levels demonstrate very strong lingering effects from Spanish. From this we can conclude that Spanish did have a privileged role, setting typology as the most influential effect in L3A. In addition to that, both E-Nats and S-Nats favored Spanish-like items most of that time, showing that order of acquisition does not play a significant role.

Although Spanish is clearly the source of transfer, results from the beginner level sheds some light on the availability of both languages. This least proficient DS group had similar rates of transferring from their L1 or L2, especially the No-L2 syntax E-Nats (Figure 34). This was also found in the IS, though with a much lesser predominance (Figure 32). This implies that L3ers have access to both L1 and L2, but the most structurally similar grammar is the preferred one to serve as the IS of the L3. This is in accordance with the previous literature (Carvalho and Silva 2006; Rothman 2010, 2011; Montrul, Dias, and Santos 2011; Giancaspro, Halloran, and Iverson 2014), which found that Spanish is often selected as the source of transfer instead of English. Their findings point out that typology is the main effect in L3A even when negative transfer occurs, making the TPM the best predicting model.

As for question formation, although Spanish is favored over English, and typology still shows its influence; such negative transfer from a previously acquired grammar took place at a low rate. All DS groups successfully chose Portuguese-like structures most of the time (Figure 29). In fact, the IS had a perfect score, picking only Portuguese-like items, and not transferring from their L1 or L2 at all, even though they had had little exposure to the L3. While this might be

surprising to the reader unfamiliar with Portuguese classes, these results are not completely unexpected. Portuguese interrogative sentences are rarely a concern for Portuguese teachers. Given that Portuguese questions do not cause any verbal movement, maintaining the same word order as statements, learners only have to acquire one word order for both affirmative and interrogative sentences, making the acquisition task simpler. Moreover, the communicative approach immerses students into asking and answering question from day 1, providing a great amount of input at the earliest contact with the language. Because there are only a few cases in which modern Portuguese accept inversion – i.e., copula verbs – students also receive negative input after their first attempts with Spanish and English-like structures. While I expected that there would be some transfer at the IS, I posit that question formation is not problematic for learners and this is salient enough early on to make IS selection so accurate.

Whereas Portuguese-like items were favored across the IS and DS, I found some L2 influence in the beginner group, where E-Nats transferred from Spanish, and in the intermediate group, where S-Nats transferred from English (Figure 30). I argue that, because P-PP is not frequent, especially in lower-level class input, L3ers are simply assuming that the new language is different from their L1. Additionally, the P-PP being a novel compound verbal structure might be making learners second guess their already acquired Portuguese no-movement question structure. After all, even though there is some L2 influence, they still strongly favor Portuguese-like items.

Moving to the final research question, the results from the adverbial placement have clearly indicated that psychotypology is the most influential factor, given that there was a strong preference for Spanish from both the E-Nats and S-Nats, rendering order of acquisition not

significant. We have also seen that both languages are available at the IS. Thus, the data in this study does not provide support for neither the L1 Factor nor the L2 Status Factor. When it comes to the typology models, CEM's predictions that transfer can come from either previously acquired language are correct; however, this model also argues that only positive transfer takes place, and all negative information remains neutral. In this sense, the CEM fails, since the transfer from Spanish in the case of the PP is negative. The AJT showed that L3ers at the IS accepted Spanish-like adverbial placement of experiential adverbs, which is ungrammatical in Portuguese with the PP; so, this transfer does not enhance acquisition. As it has happened in previous L3 Portuguese studies, the TPM has proven to be the best predicting model, since the data corroborate its predictions, namely, that transfer occurs from the most psychotypologically similar language, all previously acquired grammars are available, and negative transfer may occur.

What about modularity? The reader might be asking. Indeed, one can claim that the results from the question formation refute the notion of wholesale transfer (WT) that is sustained by the TPM. After all, if learners transfer their whole L1 or L2, after parsing which one has the most similarities, which in this study is Spanish, then learners should be expected at the IS to have chosen Spanish-like items for question formation too. Due to the fact they did not, one could argue that acquisition takes place in modularly, that is, on a property-by-property transfer (PF) basis. In fact, the very early acquisition of anterior preterit and the late resetting of the P-PP also provide some support for the PT. Nonetheless, as stated in Chapter 4, at this point the predictions that the modularity models make are too broad. Whereas there is some support for them here, it is not to the point to falsify WT and the TPM. After all, the analysis of the DS demonstrated that the effects found in the IS, viz., negative transfer from Spanish, lingers up to

the advanced levels. This suggests that WT occurred at the IS and the lack of negative input has not led learners to reset the semantics and syntax involved with the P-PP. As for the case of the IS with question formation, where there was no sign of crosslinguistic influence or WT at the IS, I sustain again that question formation does not pose difficulties for learners. In general, they demonstrate acquisition of this structure in the first weeks of instructions. Questions are highly frequent and very salient in the input; it is not unfair to deduce that WT could have taken place, including the word order of questions in their L1 or L2, but due to the saliency, L3ers in the IS acquired the Portuguese question syntax very early on.

In sum, the analysis of the L3 IS and DS have validated the findings in other studies that grouped L1-L2 English/Spanish and L3 Portuguese. That is, Spanish is selected as the source of transfer at the IS, even if it does not provide facilitative information. All previously acquired grammars are available, and negative transfer may occur. Therefore, (psycho)typology has been found to be the decisive factor for transfer. While there has been some support for the modularity models in the DS analysis, i.e., the early acquisition of one property (anterior preterit) over the other, the lack of specific certifiable predictions and more L3 studies examining the DS do not permit us to conclude that either the LPM or Scalpel model have been corroborated. In other words, at this moment, it is impossible to know if the evidence of acquisition of anterior preterit at the beginner level is due to the PT, or if it is simply following the natural development of acquisition.

Some final considerations I would like to discuss in this section have to do with the methodology in the field of L3A. The first one is regarding proficiency assessment. As addressed in Chapter 4, written tests are very common instruments for measuring proficiency in SLA and

L3A studies. However, as we have seen in this study (see Figure 2), there was a discrepancy between the self-assessment and the scores from the written test. Because L3ers are usually successful learners, who most likely went through some sort of formal instruction, they are used to being tested, hence, their experience with this type of tests may skew their actual proficiency level. Additionally, when we are dealing with languages that belong to the same family, written tests may be less effective. In this study, L3ers assessed their own proficiency 23.33 points lower than the score they got in the test. Even though members of the IS were in the first months of formal instruction, their lowest score in the written test was 34 out of 100. Self-assessments, oral interviews, or more in-depth language background questionnaires can be integrated in addition to written tests to average proficiency. Secondly, I join the chorus of authors (Schwartz & Sprouse 2021; Slabakova 2017, 2021; Westergaard et al. 2017; Westergaard 2021) who are preaching for more L3 studies that move past the IS. Moreover, I suggest that we also examine phenomena that are not readily available in the previous languages, that is, when neither the L1 nor the L2 provide facilitative information.

My third and final methodological consideration is regarding the use of a control group. A strategy to escape the comparative fallacy (Bley-Vroman 1983; Sorace 2011) of having L3ers performance compared to monolinguals has been using mirrored experimental groups. A further measure I carried out here was to have the control group consisting of multilingual BP native speakers. This not only sought to prevent the comparative fallacy, but also had methodological advantages. Due to the S-PP and E-PP not being readily available for transfer, having mirror-image groups only in this study would not be very informative regarding how acquisition of abstract functional features occurs in L3A. Indeed, the S-Nats and E-Nats were statistically not different

for the entire instrument. However, the multilingual control group served to compare L3ers development with Portuguese target-like representation, influenced by L1 variation, constant influence of other active language, and the effects of the instrument.

In the APT, the control group performed as expected most of the time, rejecting most of the sentences, which was not surprising since experiential adverbials in Portuguese are ungrammatical with PP constructions. However, BP natives still accepted ungrammatical sentences with Spanish-like adverbial placement at an unanticipated rate. My first consideration is that while such sentences are not generated by the BP grammar, Portuguese and Spanish have the same overall adverbial placement system. They both have strong verbal inflection, making adverbs move to a position higher than the verb. Thus, even though the control group may have found that sentences were semantically odd, since the task focused on the syntax, they chose the one which was permitted more frequently (with other tenses) in their native language. What also corroborates this idea is the data from the semantics task. When focusing on the meaning and not on the syntax, the control group had a rejection score of -1.4 on a +2 to -2 Likert scale. Furthermore, in the semantics and morphology data, bilinguals BPs also showed small traces of semantic extension from their additional languages to their native. In other words, they seemed to interpret sentences with ungrammatical Portuguese syntax by accessing the semantics and morphosyntax of their Spanish and/or English, which reinforces that all grammars are always active.

Thus, I argue, echoing some of Cabrelli Amaro, Flynn and Rothman's (2013) concerns, that the field of L3A needs methodological standardization regarding proficiency evaluation, assessing the L2's knowledge on the object of study, and strategies to avoid the comparative fallacy (Bley-

Vroman 1983; Sorace 2011), especially as we move to the analysis of the DS and phenomena when simply having mirror-image groups in the study design might not be enough. In the next chapter, I make my final considerations about the L3 acquisition of the P-PP, addressing the limitations of this work, the future directions, as well as the research and pedagogical implications of my findings.

CHAPTER 7

FINAL CONSIDERATIONS

This study had a two-fold goal of looking at the acquisition of abstract functional features and the factors that drive L3A. It centered on the acquisition of the L3 Portuguese present perfect by English-Spanish bilinguals across the DS. Previous literature on the PP has presented several different labels to treat the umbrella term *perfect*, which has been used to refer to tense, aspect, and even morphology. Likewise, the models presented in Chapter 2 have tried to motivate the multiple semantic readings associated with the PP, but each has found some shortcomings. Even though they were able to rule in the perfect, they did not interact with the rest of the aspectual manifestations within the past system. Thus, I put forth a two-feature [±continuative, ±perfective] proposal in a new account that is capable of motivating the four main aspects in the past: the imperfective [-continuative, -perfective], the perfective [-continuative, +perfective], the continuative [+continuative, -perfective], and the anterior [+continuative, +perfective].

The main focus of this study was to examine the de-learning of the anterior aspect generated by the E-PP and S-PP when resetting the L3 P-PP to exclusively continuative. The general assumption was that L3ers would tap into their previously acquired grammars to transfer facilitative information: the PP morphology and the continuative aspect mapped on it from their L1 and L2. In order to acquire the P-PP, L3ers had to dissociate anteriority and experiential adverbials from the PP morphology and associate them to their L3 preterit, since the Portuguese

preterit is [±continuative, +perfective]. Data indicated that acquisition of abstract functional features, such as aspect, is possible in adulthood, calling into question the validity of the so-called maturational period, after which learners would no longer have access to the universal grammar and have their acquisition severely impaired. In spite of concluding that L3ers performance show that UG-access remains, I found that the P-PP ends up being very difficult for learners. The beginner and intermediate levels were statistically similar in the morphology and semantics tests with very poor performance. Group results pointed out that both mastery of morphology and representation of the semantics of the P-PP begin only at the advanced level, though still with inconsistency. Acquisition of the anterior preterit, on the other hand, may start as early as the beginner level. I concluded that the gap in time of acquisition between these two related phenomena has to do with frequency of input, negative input, and explicit instruction. These findings have direct implications to language teaching, in particular, Portuguese for English and Spanish speakers. Many language programs tend to leave the introduction to compound and more complex temporal-aspectual structures to advanced levels for the sake of not overwhelming students in dealing with both an auxiliary and a main verb as well as for the sake of focusing on the most common tenses, such as simple present, imperfect, and preterit. While this decision is logical from an administrative and nurturing pedagogical perspective, it might negatively influence acquisition. As the data revealed, there are some linguistic phenomena that require longer exposure. Although I believe it would be counterproductive to ask students in their first semester to produce hypothetical sentences, master the subjunctive or any complex morphology, I suggest that L3 learners be exposed to them in their passive skills through reading and listening activities in which they would be in contact with authentic material. If PT takes place

as suggested by the modular models, exposure to different parts of the grammar as early as possible is essential to provide learners with opportunities to parse the novel grammar, especially if their brains do have scalpel-like precision as hypothesized by Slabakova (2017). Negative input is of paramount importance as well in cases in which subtle differences are ignored or misanalyzed by L3ers.

Portuguese classes with Spanish speakers – whether native or sequential –, as well as other pairings of very closely related languages, should give special attention to contrastive analysis and explicit instruction in addition to the communicative approach or any other meaningful pedagogical practice, e.g., task-based approach or content-based approach. L3ers are by nature successful additional language learners, but, as seen in this study and the literature reviewed here, typology is a main effect in L3A, which can enhance the acquisition process while still being prone to negative transfer that might result in late acquisition or even fossilization. In this sense, one of the contributions of this dissertation is to the growing number of multilingual and interdisciplinary programs in US colleges, such as Romance languages, Asian studies, African studies, Germanic and Slavic languages, Latin American studies, among others. These minors and majors have been implementing a series of classes for specific purposes, i.e., Spanish for business and Medical Spanish, in order to draw the attention of students from STEM and social sciences. Additionally, these programs are of interest to heritage speakers who seek (re)connection with their other culture(s) or simply a speedy acquisition of a language similar to theirs. Thus, the audience has significantly shifted from the purely English monolingual one – to which most educational resources and curriculum are dedicated. Studies in L3A are fundamental to inform

what changes must be made to promote better administrative and pedagogical practices for the L3/Ln acquisition public.

In addition to pedagogical implications, this dissertation makes contributions to the field of L3A. I have suggested, for example, that we need not to solely rely on written tests, and therefore look for standardized methods to evaluate participants L3 proficiency and knowledge of the object of study in their L2 without burdening subjects to long and repetitive drills in written tests that do not accurately reflect their proficiency. Secondly, we have the matter of the comparative fallacy above the IS. For studies that analyze the development of subjects across different proficiency levels, simply having mirror-image groups might be insufficient. Acknowledging that the endpoint of non-native acquisition is not becoming the utopic and homogeneous figure of a native speaker, I recommend that the control group consist of multilingual native speakers of the L3, who preferably also speak the experimental group's L1 and/or L2. Thereby, we could see how these languages interact with one another, especially since order of acquisition does not seem to substantially impact L3A. Thus, we can compare learners' performance to the range of variation of the L3 native speakers whose brains are also constantly impacted by additional grammars, and, so, cross-linguistic influence.

I would like to acknowledge the methodological limitations in this study, which overlap in part with the limitations in the area of L3A. It is a challenge in the field to find robust numbers of participants that share similar levels of proficiency in the L3 and the L2. It is even more complicated for the case of L3 Portuguese, whose biggest pool lies in Portuguese programs in US colleges. As brought up by Cabrelli Amaro (2017), these programs are usually small and do not commonly offer advanced classes, making it harder to get data from groups at higher levels.

Given the restricted pool, out of the 72 participants there was not an even distribution to subgroups by order of acquisition, totalizing twice as many subjects in the E-Nats (n = 48) as in the S-Nats (n = 24). Despite this gap, recall that ANOVA tests did not return any statistical difference between them. I should also point out that the instrument has some limitations. Participants' oral production was not tested to compare morphology consistency in spontaneous language versus in writing. Therefore, future research on this topic should analyze L3ers' production of the P-PP. In light of the low accuracy rate with morphology found here in the beginner and intermediate levels as well as the indication of transfer from Spanish, it would be beneficial to examine in spontaneous production how often L3ers use the actual auxiliar *ter* in the P-PP versus being influence by Spanish with either incorrectly using the Portuguese *haver* (e.g., *nós *havemos* feito a tarefa 'we have done the homework') or supplementing P-PP with the Spanish *haber* (e.g., *nós *hemos* feito a tarefa 'we have done the homework'); and examining when insertion of *haver*/*haber* becomes insignificant in production. Moreover, the results indicated that intermediate, and especially, advanced E-Nats performed better than S-Nats. An L2 study could shed some light on this phenomenon by analyzing the L2 acquisition of the P-PP by a group of L1 English L2 Portuguese and another group of L1 Spanish L2 Portuguese to test if there is indeed a negative effect of L1 Spanish, and if English native speakers do tend to rely on grammatical rules due to the lack of native intuition in a Romance language.

The findings in this study have shown some support for modularity, but not to the point to contradict the claims of WT. I addressed in the discussion the need for more L3 research that examine modularity. Though, in part, this is dependent on the next installments of the theory behind it that should provide more specific guidance on how to test the implications of PT. More

L3 studies past the IS are needed for us to better understand L3A beyond transfer and examine the role of UG when more than one grammar is available. Thus, future research in the field should address more extensively phenomena not instantiated by neither the L1 nor the L2.

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