PH.D. DISSERTATION OF HISPANIC LINGUISTICS

LINGUISTIC TRANSFER IN L3 ACQUISITION OF NULL AND OVERT SPANISH SUBJECTS

L3 스페인어 영주어 및 명시적 주어 습득에서의
언어 전이 연구

AUGUST 2022

GRADUATE SCHOOL OF HUMANITIES

SEOUL NATIONAL UNIVERSITY

HISPANIC LINGUISTICS MAJOR

DAHEE AHN

Linguistic Transfer in L3 Acquisition of Null and Overt Spanish Subjects

Thesis Advisor: JyEun Son

Submitting a Ph.D. Dissertation of Hispanic Linguistics

May 2022

Graduate School of Humanities

Seoul National University

Department of Hispanic Language and Literature

DAHEE AHN

Confirming the Ph.D. Dissertation written by

DAHEE AHN

July 2022

Chair	Ko, Heejeong	(seal)
Vice Chair	Shim, Sangwan	(seal)
Examiner	Kim, Sangyoon	(seal)
Examiner	Kim, Ji Young	(seal)
Examiner	Son, JyEun	(seal)

ABSTRACT

Linguistic Transfer in L3 Acquisition of Null and Overt Spanish Subjects

DAHEE AHN

Hispanic Linguistics Major

Graduate School of Humanities

Seoul National University

The primary objective of this thesis is to contribute to our understanding of the role of previously acquired languages in the L3 acquisition (L3A). The past two decades have witnessed a significant increase in the investigations that differentiated the acquisition of L3 from that of L2, setting a proper backdrop to now reckon Third Language Acquisition (TLA) as an autonomous field of language acquisition. The discussion from this nascent field has mainly focused on how pre-existing linguistic representations influence subsequent language acquisition. There are four logical possibilities for transfer in L3A: (a) no transfer, (b) absolute L1 transfer, (c) absolute L2 transfer, and (d) hybrid transfer. Accumulated data on each possible transfer scenario, except for the position (a), has led the researchers to aspire for a more decent and formalized framework to explain and more ambitiously

predict the transfer dynamic in the L3A.

Six models have been put forward to date: the L1 transfer hypothesis (Hermas, 2010, 2014a, 2014b; Jin, 2009; Na Ranong & Leung, 2009), the L2 Status Factor (L2SF) (Bardel & Falk, 2007, 2012; Bardel & Sánchez, 2017; Falk & Bardel, 2010, 2011), the Typological Primacy Model (TPM) (Rothman, 2010, 2011, 2013, 2015), the Cumulative-Enhancement Model (CEM) (Berkes & Flynn, 2012; Flynn, Foley, & Vinnitskaya, 2004), the Linguistic Proximity Model (LPM) (Mykhaylyk, Mitrofanova, Rodina, & Westergaard, 2015; Westergaard, 2021b; Westergaard, Mitrofanova, Mykhaylyk, & Rodina, 2017), and the Scalpel Model (SM) (Slabakova, 2017). From a bird's-eye-view, these models can be categorized into *Default* transfer models, such as the L1 transfer hypothesis and L2SF, or *Competition* transfer models. The latter type divides into a wholesale transfer model, the TPM, and property-basis transfer models, the LPM, and the SM. Specifically, each model offers different answers to the following questions: (a) Is there a default language for the transfer? (b) Which factor triggers the selection of the source language for transfer? (c) How does transfer materialize, wholesale or property basis? (d) Is transfer always facilitative? and (e) Does transfer persist throughout the L3 acquisition or only during the initial stages? Despite these differences, all models agree that the transfer phenomena are not *ad hoc* or arbitrary—instead, they are a systematic behavior triggered by the specific linguistic factor(s). However, none of the models have entirely depicted the ample empirical data reported in the field of TLA, which guided the proponents and their supporters to revise, update and sophisticate their model.

Against this backdrop, this thesis intends to contribute to the current discussion on establishing a robust theoretical L3 transfer model by reporting the data of Spanish subject acquisition from an understudied population in this field: the L1 Korean-L2 English-L3 learners of Spanish. To that end, three research questions were established to serve as the backbone of this dissertation. First, which background language is transferred in the early

stages of L3 acquisition of null and overt Spanish subjects? Secondly, which L3 transfer model best accounts for Korean learners' behavior in the L3 acquisition of null and overt Spanish subjects? Thirdly, what implication does the Korean learners' data offer to the current discussion in the field of TLA on modeling the L3 transfer dynamics? As noted in the first research question, this investigation has selected the Spanish subject realization as its test topic for observing the transfer effect. It is required that in order to trace back and detect the source of transfer by observing L3 data, the background languages must show a contrastive setting in the tested properties—Korean and English exhibit different settings in the Null Subject Parameter (NSP). Korean is a *pro*-drop language [-NSP], while English is a non-*pro*-drop language [+NSP]. This setting brings about other contrastive linguistic behavior in several NSP-related properties, which include the following four properties: (a) the Overt Pronoun Constraint (OPC, Montalbetti, 1984), (b) the Position of Antecedent Hypothesis (PAH, Carminati, 2002), (c) Topic-continuity, and (d) Null Expletives. In these constructions, background languages show a contrastive use of subject forms. Therefore, examining the acquisition of Spanish subjects was deemed an ideal topic for this transfer study.

For the data collection, two questionnaires were executed in this thesis, one that tested the target language and the other that examined the same properties in the background languages. The logic behind testing the background languages is related to the general understanding that the learners cannot transfer what they do not have. In particular, the L2 knowledge is not always native-like, even for highly proficient learners. Therefore, to attribute certain L2-similar behavior found in the L3 data to a valid L2 transfer, the individual must have been confirmed beforehand to hold an L2 native-like linguistic representation of that feature. The first questionnaires consisted of forty-six Spanish items, testing four properties listed above. The data was collected by means of the numerical Acceptability Judgment Task (AJT). The background language questionnaire was composed of forty Korean and

twenty-four English items and was conducted at least two weeks apart from the first questionnaire. However, the result of the second questionnaire was analyzed first and served as a filter to rule out participants that had shown a native-deviant behavior in their background language. The sub-section of each questionnaire respectively included a Background Questionnaire and a Language Relations Questionnaire. A total of eight participants were selected, sixty BGN (3rd or 4th semester) and twenty ADV (more than 5yrs).

The result of the questionnaire, which would address the first research question (RQ 1) of this thesis, is as follows. First, in the OPC Spanish items, a significant L1 transfer was confirmed. The OPC is a universal principle that constrains the use of an overt subject in the subordinate clause to be linked to a variable expression or *wh*-phrase in the main clause. The constraint is operative in the L1 and not in the L2. The acceptability of the OPC option items, given in null and overt conditions, confirmed a drastically strong sensitivity to the constraint in the BGN's result, supporting the facilitative transfer of L1 representation along with UG. Secondly, the PAH items confirmed the activation of both L1 and L2 knowledge in parsing the Spanish PAH input. The PAH is a syntax-discourse interface property that requires the integration of syntax and the discourse, the external linguistic domain. This processing strategy is known to be operative in Korean but not in English. The supporting evidence of hybrid transfer was observed in the overt subject condition where the PAH and the L2's subject assignment rule directly conflicted. Interestingly, the learners who complied with the PAH in their L1 did not show PAH-oriented behavior in their L3. There was no significant difference in the acceptability of the subject and object antecedent option sentences. In particular, an item-by-item analysis showed that the learners' choices were some based on the L1 and others on the L2. The analysis confirmed that the non-facilitative transfer of the L2 mitigated the PAH-friendly behavior possibly driven by the L1 transfer. The third test property regards the use of null subject in the Topic-continuity. This phenomenon is

also an interface property that is known to cause residual optionality in the nonnative acquisition. The learners were again found to activate both L1 and L2, which caused high acceptability to both null and overt conditions in the topic-continuity context. Lastly, the result from the Null Expletive items confirmed no hint of activation from any of the pre-existing grammars. The previous literature has confirmed that the nonnative knowledge of this property is present from the early phases of L2A, which is again confirmed in the L3 context of this thesis. In summary, the result confirmed a hybrid transfer of both L1 and L2 in the L3 acquisition of Spanish subject realization.

These empirical findings were then applied to the predictions made by the current L3 transfer models to answer the second research question (RQ 2) of this thesis. First, let me briefly offer the major tenets of the transferred models. The L1 Transfer Hypothesis is a position that contends a default transfer of the native language following the traditional view on transfer in the Second Language Acquisition (SLA). On the other hand, the L2 Status Factor (L2SF) argues for an absolute transfer of nonnative language to the subsequent language acquisition. The model posits that the native language and all the other foreign languages are stored separately and that the transfer can only happen between nonnative languages. This position predicts that the L2 would serve as a filter to block any possible transfer from the L1. The concept of L2 was later expanded to refer to any languages with high metalinguistic knowledge (MLK). The Cumulative Enhancement Model (CEM) argues that the transfer happens on a property-by-property basis. Interestingly, this model predicts that language acquisition is always cumulative. Therefore, the transfer of background languages can only have a facilitative effect. However, extensive empirical counterevidence to this model's claim on facilitative-only transfer has weakened its explanatory power. The Typological Primacy Model postulates that transfer from background languages is always wholesale and that only one of the background languages is selected for transfer. The first version of the TPM

argued that the perceived typological similarity between one of the background languages and the target language is the cue to make a full copy of the language system and transfer it to the initial hypothesis of L3 acquisition. The author later made a revision to his claim, suggesting that the decisive trigger in the selection of transferred language is the structural similarity, which is decided according to the lexicon, phonology, functional morphology, and syntax cues, in a hierarchical order. The Linguistic Proximity Model (LPM) directly rejects the TPM's claim of wholesale transfer. The model contends that it is not a copy of an entire language representation that is transferred in one fell swoop but an activation of fine-grained properties that influences the L3 acquisition of particular properties. The LPM argues that abstract linguistic similarity is a cue for activation of a property, but it opened room for additional factors to come into play for shaping the activation dynamics of the pre-existing structures. The Scalpel Model (SM) shares the same thread with the LPM and insists that the transfer materializes in a scalpel-like precision, indicating a property-by-property transfer. The empirical finding of this thesis, when applied to the main arguments of currently existing L3 transfer models, is supportive evidence to the claim of the LPM and the SM's property-basis transfer. The influence of the pre-existing grammars on the L3 acquisition happened in a fine-grained level of properties even within the closely clustered properties of NSP. In particular, the concept of co-activation was supported in the PAH and Topic-continuity results, which showed the transfer of both L1 and L2 representations. However, the LPM's claim that abstract linguistic similarity is a critical factor in the activation of a property could not fully grasp the transfer dynamic found in this thesis. The proponent of the LPM also admitted that it is hard to expect one factor to account for the whole process of linguistic transfer, which is a highly complex process.

It is worth highlighting that the evidence of co-activation of both languages was mainly found in the external interface properties. This hybrid

transfer in the interface properties recalled the claims of the Mapping Induced Influence Hypothesis (MIIH, Hulk & Müller, 2000; Müller & Hulk, 2001). This hypothesis predicted a higher vulnerability to crosslinguistic influence in the grammatical phenomena that require a mapping between syntax and pragmatics. Furthermore, this result can be approached in relation to the Interface Hypothesis (IH, Sorace, 2005, 2006a; Sorace & Filiaci, 2006; Sorace & Serratrice, 2009; Tsimpli & Sorace, 2006), which predicted that interface properties cause residual optionality and persistent native deviance due to the added complexity of integrating two representations. Combining the empirical findings of this dissertation with these hypotheses on the acquisition of interface properties from the former literature, I propose that the type of a property, whether it is related to the external interface or not, may be one of the factors that prompt the activation of all the linguistic resources in learner's pre-existing linguistic repertoire. The added acquisitional complexity of the features at the interface seems to have increased the need to resort to more available resources to parse the given input, which brought about a hybrid transfer. This thesis concludes with a proposal that the factor "external interface" should be taken into account as a possible factor that shapes the transfer dynamic in the L3 acquisition.

Keywords: Third Language Acquisition, Linguistic Transfer, L3 Transfer
        Models, External Interface, Null and Overt Spanish Subjects,
        Korean Native Learners of Spanish

Student No.: 2015-30032

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ADV	Advanced level learner
AJT	Acceptability judgment task
BGN	Beginner level learner
CEM	Cumulative Enhancement Model
CLI	Crosslinguistic Influence
EPP	Extended Projection Principle
FTP	Full Transfer Potential
IH	Interface Hypothesis
L1/L2/L3/Ln	First/Second/Third/non-specified language
L2SF	Second Language Status Factor
L2A	L2 acquisition
L3A	L3 acquisition
LPM	Linguistic Proximity Model
MLK	Metalinguistic Knowledge
NSL	Null Subject Language
NSP	Null Subject Parameter
OPC	Overt Pronoun Constraint
PAH	Position of Antecedent Hypothesis
QDP	Quantified Determiner Phrase
SLA	Second Language Acquisition
SM	Scalpel Model
TLA	Third Language Acquisition
TPM	Typological Primacy Model
UG	Universal Grammar

CHAPTER 1. INTRODUCTION

1. Background

The world is populated with more multilinguals than monolinguals, and the understanding of the third language (L3) or Ln acquisition is of great interest in both research and reality. During the past two decades, acquisitional studies have witnessed a sharp increase in the new proposals and novel theories in the field of generative Third Language Acquisition (TLA), setting a rightful backdrop to now consider TLA as an independent field of linguistic inquiry. The abundant empirical evidence of previously acquired languages exerting a significant influence on the subsequent language has led the researchers to theoretically structure these findings into a comprehensive model. Therefore, current TLA research is mainly focused on formulating a theoretical framework that could explain or, more ambitiously, predict the source of transfer during the L3 acquisition. This thesis intends to contribute to the ongoing discussion on establishing a robust theoretical model that can account for linguistic transfer, mainly during the early stages of L3 acquisition (L3A).

The topic of the linguistic transfer itself is nothing new. The generative SLA studies have extensively explored the issue in the nineties. (Epstein, Flynn, & Martohardjono, 1996; Epstein, Flynn, & Martohardjono, 1998; Eubank, 1993, 1994, 1996; Platzack, 1996; Schwartz & Sprouse, 1994;. Schwartz & Sprouse, 1996; Vainikka & Young-Scholten, 1994, 1996a, 1996b). However, as Rothman et al. (2019) noted, no new position on the topic has been advanced in the field of SLA since the 1990s. Therefore, it is fair to say that this topic was no longer at the center of generative L2 researchers' agenda. On the other hand, for the L3 researchers, the critical question directs to the influence of the previous linguistic knowledge on the L3 acquisition.

Rothman, Iverson, and Judy (2011) rightfully pointed out that the most significant attribution that the generative L3 literature has made can be found in the formalization of L3 transfer models. The very reason why TLA studies focus on the transfer is directly related to the initial motivation to separate L3/Ln acquisition research from that of L2 acquisition. There has been an accumulated epistemological and empirical conviction that the existence of another language system at the onset of subsequent language learning significantly conditions the acquisitional trajectory. Therefore, in regards to transfer, the L2A and the L3A start off from a totally different starting point which further diverts the whole later process into a distinct acquisitional panorama.

Rothman and Halloran (2013) emphasize that the research on transfer from a multilingual perspective can better illustrate the transfer dynamic than L2A because it provides an "option" to learners' minds. The authors accentuate that:

> Because in L2 acquisition, transfer either materializes or it does not. When it does, there is no mystery about what the source of transfer is; it must be the L1. However, in the case of multilingualism there exists the possibility of several sources of linguistic transfer. Modeling and predicting the patterns of this transfer relates to larger questions. These questions pertain to what L3 transfer can tell us about mental architecture, linguistic representation, and design as well as the interface of principles of cognitive economy and language in ways that cannot be explored by looking at transfer in various instances of bilingualism.
>
> (Rothman & Halloran, 2013, pp. 60-61)

When learning a second language, there are only two possible layouts at the onset of acquisition, 'no transfer' or 'L1 transfer', and the debate on this issue has a long history in SLA studies (Odlin, 1989; Schwartz & Sprouse, 1996;

Vainikka & Young-Scholten, 1996a). On the other hand, in the L3 learning environment, the learner has more than one linguistic representation available for transfer. As indicated in Bardel and Falk (2007) and Rothman (2013) and many others, there are four possibilities for how the transfer may come to pass: (i) 'no transfer', (ii) 'default L1 transfer', (iii) 'default L2 transfer' or (iv) 'combined/hybrid transfer.'[1] The ample report of empirical data from studies that examined these hypotheses led the researchers to aspire for more formalized models that could expound and scrutinize the selection of transferred language in the L3 acquisition.[2] More importantly, an attempt to design a theoretical frame that could predict how the transfer would materialize in a particular tripartite language pairing became a collaborative research goal.

In this investigation, I will introduce and critically review the fundamentals of the six models constructed to date. The theoretical accounts to be reviewed here are: (a) L1 Transfer Hypothesis (no models have been proposed under this label, but there exist several studies that support this position, Hermas, 2010, 2014a, 2014b; Jin, 2009; Na Ranong & Leung, 2009), (b) L2 Status Factor Hypothesis (L2SF) (Bardel & Falk, 2007, 2012; Bardel & Sánchez, 2017; Falk & Bardel, 2011), (c) Cumulative Enhancement Model (Berkes & Flynn, 2012; Flynn, Foley, & Vinnitskaya, 2004), (d) Typological Primacy Model (TPM) (Rothman, 2010, 2011, 2015), (e) Linguistic Proximity Model (LPM) (Mykhaylyk, Mitrofanova, Rodina, & Westergaard, 2015; Westergaard, 2021b; Westergaard, Mitrofanova, Mykhaylyk, & Rodina,

---

[1] In the further discussion, I will dismiss the possibility of (i) no transfer scenario, which hypothesizes that transfer does not obtain at all. It is logically possible, however there is scarce evidence in the literature that supports this position.

[2] Before any formal theoretical model on transfer was formulated with its own label, there have been a few contemplations on the possible factors that may trigger or guide L3 learners' selection of background language to be transferred. De Angelis (2007) provides a comprehensive review on various factors put forward in the early discussion, which includes but is not limited to the followings: language distance between the language triad, proficiency in the target language and the source language, recency of use, order of acquisition, length of residence and formality of context.

2017) and (f) Scalpel Model (Slabakova, 2017).

Based on this research background, this investigation aims to examine the transfer dynamic in the initial stages of L3 acquisition by testing Korean native L3 Spanish learners on their understanding of properties related to the Spanish subject realization. The very reason that this thesis scrutinizes the null and overt subject alternation is due to the following consideration. The background languages of the participants, Korean and English, show a significant difference in their subject use. The L1 is a *pro*-drop language while the L2 is a non-*pro*-drop language, providing a proper setting to observe how transfer from the previous linguistic representations may affect the subsequent language acquisition. Contemplating that Spanish is also a *pro*-drop language, it is expected that the learner's L1 will exert a facilitative influence while the L2 would have the opposite effect in learning a proper subject use in the L3 context. Among many grammatical properties that are argued to be related to the Null Subject Parameter (NSP), four properties that constrain the correct use of null and overt subjects will be examined: (a) the Overt Pronoun Constraint (OPC), (b) the Position of Antecedent Hypothesis (PAH), (c) Topic-continuity, and (d) Null Expletives.

I believe that the primary contribution of this thesis can be found in its data, which reports Korean learners' early behavior in L3 Spanish acquisition. Because the learner dataset that has been reported within this emerging field lacks diversity in its language combinations. The theoretical discussion has developed mainly based on the evidence from the Germanic and Romance language triad, leaving lingering questions on the universal applicability of these models. The learner profile studied in this thesis is adult L3 learners of Spanish, whose native language is Korean and the first learned foreign language is English, which is unique and rare in this field.[3]

---

[3] Rothman, González Alonso, and Puig-Mayenco (2019) is a milestone study that offered a systematic review of L3 transfer studies to date. According to their analysis, among 92 experiments that tested the L3 transfer, only one case, Park (2016), included Korean data.

To summarize, the primary objective of this thesis is to critically review the latest discussion on the linguistic L3 transfer based on the data of L1 Korean-L2 English learners' L3 acquisition of null and overt Spanish subjects. In particular, this thesis hopes to offer a meaningful proposal for the competing transfer models proposed in the field of TLA by submitting the data from an understudied learner group.

2. Research topic

This study explores the influence of previously learned languages on the L3 acquisition by examining the use of null and overt subjects in properties related to the Null Subject Parameter (NSP). The rationale behind the decision of the test features is attributed to the fact that the background languages of the participants show a contrastive value in the setting of the NSP. In order to examine a transfer effect by observing L3 data, it is imperative that the background languages exhibit a contrastive behavior in the property tested. Furthermore, the difference in the parametric setting further manifests in the distinct realization of subject forms in the following four properties: (a) the Overt Pronoun Constraint (OPC), (b) the Position of Antecedent Hypothesis (PAH), (c) Topic-continuity, and (d) Null Expletives. In this section, let me briefly present the generative approach to the subject realization from a birds-eye-view with an aim to demonstrate the general linguistic difference between Korean, English, and Spanish in the subject use.

Within Government and Binding paradigm, Chomsky (1982) proposed the Extended Projection Principle (EPP) as a universal principle. The Principle stipulates that a sentence must have a subject in the [Spec, IP] position in all languages. However, the exception to this principle can be easily observed that some languages do not require subjects to be phonetically realized, allowing sentences without explicit subjects. To incorporate such

parametric variations within the Universal Grammar (UG) framework, the Null Subject Parameter (NSP) (Chomsky, 1981, 1986; Jaeggli, 1981; Rizzi, 1982, 1986) was proposed, and the concept of an empty category *pro* was articulated.[4]

The NSP or the *pro*-drop parameter is undoubtfully one of the most studied examples of parameterization within the generative Principles and Parameter (P&P) framework in the 1980s. This parametric setting categorizes languages into two types, a language that requires an overt subject and a language that permits subjects to be implicit. The latter type of language is called a *pro*-drop language or Null Subject Language (NSL). However, to fulfill the EPP requirement, even in the NSLs, the [Spec, IP] position cannot be left empty. It must be syntactically filled with an empty category, *pro*. Furthermore, this empty concept must be identified to be licensed for a proper interpretation. The mechanism that each NSL employs for the recovery of a null pronoun varies. According to Camacho (2013), three typologically distinct types of NSLs exist, (a) a consistent null subject language, (b) a discourse-related null subject language, and (c) a partial null subject language. The first type of NSL is the so-called *agreement-based* NSL, which includes Spanish and Italian. This type exhibits a systematic use of null subjects that *pro* is used as a default, but a subject is overtly realized when there is a need to introduce a new referent or to mark a particular shift or contrast between the subjects. The essential tool that allows a subject to be phonetically absent in this type is the rich verbal morphology that encodes the information of the

---

[4] In the Principles and Parameter framework (Chomsky, 1981, 1986), there are four different types of the null elements, which are referred to as empty categories:
  (a) *pro* [+anaphor, +pronominal]: *Carreras sabe que pro es estimado por Domingo.* ('Carreras knows that (he) is respected by Domingo.')
  (b) PRO [+anaphor, +pronominal]: John promised PRO to compose a light orchestral work for his father.
  (c) variable/wh-trace [-anaphor, -pronominal]: Who did Brahms admire *t*.
  (d) NP-trace [+anaphor, -pronominal]: The giant panda seems *t* to live exclusively on bamboo shoots.
                                          examples from (Y. Huang, 2000, p. 17)

missing subject. The second type is a *discourse-based* NSL, such as Korean, Chinese and Japanese. These languages do not show rich verbal morphology, but according to Huang (1984), it is the *topicness* of the null pronoun that licenses a phonetically empty subject. These languages are categorized as topic-prominent languages. In this type, if a subject is set as the topic of the sentence and if it remains as the topic of a sentence or context, it can be null. The third type is the *partial* NSL, which is in between the Spanish and English types. The null subject is available only in the particular expression of person, tense, etc.[5] Following the abovementioned categorization, the languages examined in this research, Spanish, English, and Korean, can be demonstrated as below.

Figure 1.1. NSP setting of Korean, English and Spanish
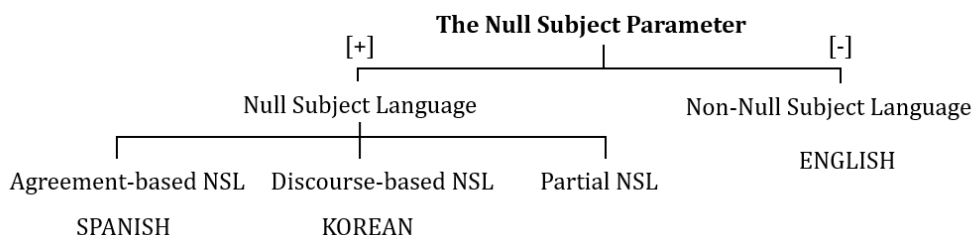
First, Spanish is a language that is positively valued for the NSP, therefore, it allows phonetically null referential subject as well as phonetically articulated overt subject.

(1) a.   Yo   hablo   Español.

         I   speak-1sg   Spanish

         'I speak Spanish.'

---

[5] For example, in Hebrew, *pro* is only available for 1st and 2nd person whereas 3rd person subject must be overtly expressed.

b. *pro*   Hablo   Español.

                   speak-1sg   Spanish

   'I speak Spanish.'

(2) a. Tú   hablas   Español.

        You   speak-2sg   Spanish

   'You speak Spanish.'

b. *pro*   Hablas   Español.

                   speak-2sg   Spanish

   'You speak Spanish.'

(3)   Pedro/Él/*pro*   tiene   mucho   dinero

        Peter/he/*pro*   have-3sg   a lot of   money

   'Peter has a lot of money.'

The omission of a subject in Spanish is available through a rich verbal agreement that encodes the person and number information of the subject. Below is the Spanish subject pronoun system and its verbal conjugation system.

Table 1.1 Subject pronoun paradigm of Spanish

	singular		plural	
1st	yo	*'I'*	nosotros/as	*'we'*
2nd	tú	*'you'*	vosotros/as	*'you'*
3rd	él/ella/Ud.	*'he/she/you'*	ellos/ellas/Uds.	*'they/you'*

Table 1.2. Verbal paradigm of Spanish

	present indicative (-ar)	
yo	habl-o	*'I speak'*
tú	habl-as	*'you speak'*
él/ella/Ud.	habl-an	*'he/she speaks, you speak'*

nosotros/as	habl-amos	*'we speak'*
vosotros/as	habl-áis	*'you speak'*
ellos/ellas/Uds.	habl-an	*'they speak, you speak'*

As seen above, the rich verbal inflection system for person and number, the *phi-feature* in AGR, is the mechanism that makes it possible to retrieve the information of a null subject in Spanish.

Secondly, English is often mentioned as the typical example of the non-NSL, a [-NSP] valued language that requires an overt subject in the [Spec, IP] position all the time to satisfy the EPP.[6] As seen in example (4), English has a weak verbal morphology; therefore, it is impossible to recover the content of a covert subject in a finite clause unless the subject is overtly realized.

(4) a. I speak Spanish.

b. You speak Spanish.

c. *(I)/*(You)/speak Spanish.

d. *(He)/*(Peter)/*(Mary)/*(The director) speaks Spanish.

Lastly, Korean permits phonetically null subjects like Spanish, even though it lacks rich inflectional morphology, as shown in (5). Therefore, the recovery of a null element is pursued by looking for the preceding topic within the discourse. For this reason, Korean is typologically categorized as a topic-prominent language or discourse-oriented language. (Li and Thompson (1976); Huang (1984))

(5) Morphology-Korean

      Subject   *Predicate*

---

[6] In English, as an exceptional case, there are subjectless sentences called diary-drop. ('Saw a good movie yesterday.' 'Miss my friends in New York.') For the syntactic analysis of these constructions, refer to Haegeman (1990) and for the pragmatic analysis, Scott (2010). Furthermore, within the coordinate sentences as in "He woke up and went to school.", the omission of subject is possible.

a. na-nun	nolayhanta.	'I sing.'
b. ne-nun	nolayhanta.	'You sing.'
c. ku/ kunye -nun	nolayhanta.	'He/She sings.'
d. wulitul-un	nolayhanta.	'We sing.'
e. nehuytul-un	nolayhanta.	'You[plural] sing.'
f. kutul-un	nolayhanta.	'They sing'

(6) a. Topic-continuity

yeysnal yeysnaley chelswulanun aika salasssupnita. *pro* enu nal sakwalul mekko issesssupnita.

옛날 옛날에 철수라는 아이가 살았습니다. *pro* 어느 날 사과를 먹고 있었습니다.

'Once upon a time, there lived a boy named ChulSu. One day, he was eating an apple.'

(Park, 2003, p. 121)

b. Topic-shift

yeysnal yeysnaley chelswulanun aika salasssupnita. enu nal yenghuy-ka sakwalul kacyeta cwuesssupnita.

옛날 옛날에 철수라는 아이가 살았습니다. 어느 날 영희가 사과를 가져다 주었습니다.

'Once upon a time, there lived a boy named ChulSu. One day, YoungHee brought him an apple.'

As seen above, identifying a null element in Korean is available through the discourse topic because its morpho-syntactic cue does not provide any information about the null subject. The topic subject can be null as in (6a) in the topic-continuity context, whereas the subject must be explicitly realized as in (6b) when there is a shift or contrast in the subjects. Ahn and Kwon (2012) corroborated that Korean is a proper topic-prominent language, applying Tan (2007)'s three linguistic properties found only in discourse-

oriented languages: topic chains, topic markers, and hanging topics.[7]

The discussion so far depicts how the NSP value regulates the subject realization of each language. However, historically the NSP has been argued to give rise to other keenly associated properties. Below is Quesada (2015)'s contrastive analysis of other syntactic properties related or argued to be clustered to NSP in *pro*-drop language and non-*pro*-drop language.[8]

Table 1.3. Syntactic properties of subjects in *pro*-drop and non-*pro*-drop languages

pro-drop languages (Spanish)	non-*pro*-drop languages (English)
- morphologically rich and uniform verbal agreement paradigm	- morphologically poor and non-uniform verbal agreement paradigm
- overt and null referential subjects	- overt referential subjects
- obligatory null expletive subjects	- overt expletive subjects
- free subject-verb inversion[9]	- strict SVO word order
- violation of *that*-trace filter	- *that*-trace filter in effect
- obeys OPC (no bound variable interpretation with overt)	- OPC has no effect

---

[7] 1. Topic Chains: Topic prominent languages show the phenomenon that chains are active.
ex) Q: *e   ku   sakwa mek-et-ni?*   A: Ung, *e   e   mek-et-se.*
       (you) the apple   eat-PAST-Q   Yes (I) (the apple) eat-PAST-DEC
       'Did you eat the apple?'   *'Yes, I ate the apple.'*
2. Topic Markers: Topic markers are particles that are a diagnostic feature of a topic prominent languages. ex) Korean topic marker: *-nun,* Korean subject marker: *-i/ga*
3. Hanging topics: These are topics that do not relate to a subject or object within the sentence.
   ex) Mikuk-un,   Seattle-e-nun   ka-bo-at-se.
       America-TOP, Seattle-LOC-TOP go-try-PAST-DEC
       'As for America, I have been to Seattle.'   (Ahn & Kwon, 2012, pp. 84-85)
[8] The concept of a *cluster* was first introduced from the acquisitional perspective. The idea of parameter clustering was first conceived by Hyams (1987) to decode the Poverty of Stimulus and untangle the Platon's Logical Problem found in children's First Language Acquisition (FLA) that even with minimal input, children manage to learn beyond what they have received. It led the acquisitional researchers to assume that parameters exist as a particular cluster that once a macro parameter is set, other minor parameters are immediately acquired. Regarding the subject acquisition, based on Jaeggli's and Rizzi (1982)'s claim on *the NSP clustered properties*, a learner only needs to learn that both null and overt subjects are possible in the NSLs to be able to attain the complete knowledge of the other remaining features.
[9] It is well known that Spanish word order is only seemingly "free." There exists extensive literature that studied SV and VS word order variation in Spanish is strictly based on the consideration of information structure of the components. I direct the reader to Domínguez (2013) for the comprehensive review on the topic.

- obeys PAH (division of labor for null and overt subject pronoun) - subject attaches to head of AGR (can check strong EPP feature)	- depends on subject assignment strategy (overt pronouns link to subject antecedent) - subject merges with specifier of AGR (cannot check strong EPP-feature)

<div align="right">(Quesada, 2015, p. 32)</div>

However, it must be noted that over the past few years, many researchers have contemplated that the NSP may be composed of fewer properties than historically argued to be. For example, Rothman and Iverson (2007b) contend that the NSP actually consists of a minimum of two or a maximum of three properties among the above-listed properties, only including the instances of licensing of *pro*, instantiation of the OPC, and perhaps obligatorily null expletive subjects. In this background, this investigation will limit the scope of the investigation to the following four NSP-related properties: (a) the Overt Pronoun Constraint (OPC), (b) the Position of Antecedent Hypothesis (PAH), (c) Topic-continuity, and (d) Null Expletives. A detailed review of each property will be presented from Chapter 3 to Chapter 6.

3. Research questions

The research questions that guided the design and execution of this thesis are as follows.

> **RQ 1.** Which background language is transferred in the early stages of L3 acquisition of null and overt Spanish subjects?

To address this question, two questionnaires will be conducted. The first is the Spanish questionnaire that examines learners' behavior in four grammatical features in the target language. The OPC, the PAH, the topic-

continuity, and the null expletives are included as the test items. The second questionnaire tests the responder's performance in Korean and English and their perception of language relations between the target and the background languages. The result of these questionnaires will confirm the transfer dynamic found in this tripartite language pairing. Also, I intend to confirm whether the learner's perception of language relations corresponds to the selection of the source language for the transfer.

RQ 2. Which L3 transfer model best accounts for Korean learners' behavior in the L3 acquisition of null and overt Spanish subjects?

I will approach this question first by offering a systematic review of six L3 transfer models proposed within the TLA. These models differ in their interpretation of the following issues. (a) Is there a default language for the transfer? (b) Which factor triggers the selection of the source language for transfer? (c) How does transfer materialize, wholesale or property basis? (d) Is transfer always facilitative? and (e) Does transfer persist throughout the L3 acquisition or only during the initial stages? Then, with the purpose to test the validity of transfer models, I will submit possible transfer scenarios in the L3 acquisition of each test property, considering the linguistic value of the language triad of this investigation.

RQ 3. What implication does the Korean learners' data offer to the current discussion in the field of TLA on modeling the L3 transfer dynamics?

Last but importantly, this thesis aims to fill the gap in currently proposed models and contribute to the collaborative endeavor to develop a formal model that accounts for the transfer during L3 acquisition. As mentioned before, the previous L3 studies on linguistic transfer have been mainly guided

by the data from Romance and Germanic languages. In that regard, Korean participants' data is expected to expand the scope of the discussion and hopefully offer meaningful insight into approaching transfer phenomena.

4. Methodology

4.1. The questionnaires

Two questionnaires are conducted for this investigation. The first questionnaire tests the learner's knowledge of the target language, and the second examines the same properties in the background languages. The participants will be asked to take part in the L3 Spanish survey first. Then, they will participate in the L1 Korean/L2 English questionnaire at least two weeks later.

The rationale behind this design is the following. In the field of TLA, it has been emphasized that to reliably identify the source of transfer in the L3 learner's data, it is a prerequisite to confirm whether the studied group actually possesses the knowledge of the test feature in their existing linguistic representations. Because it is simply impossible to transfer what one does not have. The mere fact that L1 and L2 languages exhibit certain grammar representations in the system does not guarantee that the user or learner of that language has the knowledge of that property. Rothman, González Alonso, and Puig-Mayenco (2019) acknowledged that a long history of SLA studies has documented that even the end-state learners or near-native L2 speakers still show native-divergent performance. This proclaims that presuming that advanced learners of L2 English would have acquired the feature being tested, only because they are so-called 'advanced learners' might be too naïve or inappropriate in the transfer studies. Therefore, it is not too much to say that learners' data on the previously learned language may hold more insight than

the native control data in transfer studies.

To address the potential issues pertaining to the appropriateness of the learner's data, this study tests beyond the L3. At the same time, to minimize the priming effect, two questionnaires are conducted at least with two weeks of separation.

Table 1.4. Structure of the survey

Survey	Language	Structure
1st questionnaire	Spanish	Part 1. Language Background
		Part 2. Language Task (n=47)
2nd questionnaire	Korean/English	Part 1. Language Task (n=64)
		Part 2. Crosslinguistic Relations Task

The first Spanish questionnaire consists of two parts: (1) Language Background (see Appendix A) and (2) Linguistic Task with forty-six testing items (see Appendix B). All Spanish stimuli are given as a numerical Acceptability Judgment Task (AJT) in a Likert scale of 5.[10] The second Korean/English questionnaire includes two sections: (1) Linguistic Task with sixty-four testing items and (2) Crosslinguistic Relations Task. The background language data is collected by means of AJT and translation tasks. The result of the second questionnaire will be analyzed first and serve as a filter to exclude those who do not have native-like knowledge of the test features in their background grammars. For the precision of the analysis, the whole dataset of a participant will be dismissed once the learner exhibits incomplete acquisition in any properties tested.

---

[10] According to Jensen (2022), the AJT type of task in the non-native language acquisition is typically "considered a window into speakers' mental linguistic system (Leow, 1996; Sprouse & Almeida, 2011), which has made the AJT methodology a widely used quantitative method within linguistics (p.41)." There are two types of AJT: (a) non-numerical type, which includes a forced-choice task(choose only one), or a binary response task(good/bad or yes/no), or (b) numerical AJTs which applies 5 or 7 Liker scale. In this thesis, numerical AJT is applied to reflect nuanced responses. For the detailed discussion on the judgment task and its effectiveness in acquisitional studies, refer to Schütze and Sprouse (2013).

4.1.1. Language Background Questionnaire

This first section of the Spanish questionnaire is intended to ensure that the participants of this study are adult learners of L3 Spanish with Korean as their native language and English as their first foreign language acquired in a formal setting. First, the questions ask about their L1, L2, and L3. Then, the learners are guided to mark their self-assessed proficiency in L2 English and L3 Spanish in the scale of 1 (beginner) to 5 (advanced) and report the period of learning each language in years. Lastly, they are asked to submit the result of official language exams (TOEFL, TOEIC, SNULT, DELE, FLEX, etc.), if they have any.

The targeted profile is L1 Korean-L2 English learners currently learning or using L3 Spanish at two levels: beginners or advanced. To be clear, this thesis intends to pay close attention to the initial stages of L3A. However, I collected data from the advanced learners to observe the changes in the transfer dynamic, which would bring beginner learners' performance into relief. Furthermore, the data from these end-state learners are expected to substantiate whether any negative transfer effect from the previously learned languages is overcome through acquisition. The detailed learner information will be presented in 4.2.1. of this chapter.

4.1.2. Target Language Task

The second part of the first questionnaire tests learners' acceptability in null and overt subject alternation in Spanish. A total of forty-six Spanish items examining four different grammatical features are presented in the survey. The responders will specify their level of acceptability in each item in five points, from 1 (absolutely not acceptable), 2 (fairly not acceptable), 3 (neutral), 4 (fairly acceptable) to 5 (absolutely acceptable). All stimuli and the option sentences are presented in a randomly mixed order.

Table 1.5. Spanish items in the 1st questionnaire[11]

Test	Number	Type
Overt Pronoun Constraint	n=10	Acceptability Judgment Task
Position of Antecedent Hypothesis	n=20 (pair)	Acceptability Judgment Task
Topic-continuity and Topic-shift	n=5 n=5	Acceptability Judgment Task
Null Expletives - Weather - *Haber* existential	n=3 n=3	Acceptability Judgment Task
	Total: 46	scale: [1 2 3 4 5]

4.1.3. Background Language Task

The first part of the second questionnaire examines the learner's knowledge of the grammatical features in Korean and English. This task aims to confirm whether the learners truly possess these grammatical properties in their native knowledge and L2. This task was necessary because the *nativeness* or high proficiency of a language does not guarantee that the speaker truly exhibits correct use of a particular grammar.

First, forty Korean items were included in the second questionnaire, which consisted of the OPC, the PAH, and topic-continuity and shift context items. Except for null expletive items, the Korean materials are translated from Spanish stimuli in the first questionnaire. All items were given as acceptability judgment tasks asking to mark the feasibility of the following option sentences in the point of 1 to 5, one in null subject condition and the other in overt subject condition.

---

[11] The topic-shift items were included s a pair to the topic-continuity, however in regards to transfer effect, this property does not hold any value because all three languages expect overt subject in the context. Therefore, the topic-shift items included in these tasks are considered fillers.

Table 1.6. Korean items in the 2nd questionnaire

Test	Number	Type
Overt Pronoun Constraint	n=10	Acceptability Judgment Task
Position of Antecedent Hypothesis	n=20 (pair)	Acceptability Judgment Task
Topic-continuity	n=5	Acceptability Judgment Task
Topic-shift	n=5	
	Total: 40	Scale: [1 2 3 4 5]

For the English task, it was considered that the language does not allow a null subject and requires an overt subject in all sentences. Therefore, to test whether the participants are aware that an overt subject is obligatory in English, the translation task seemed as the most appropriate method. Twenty-four English items were included in the second questionnaire.

Table 1.7. English items in the 2nd questionnaire

Test	Number	Type
Overt Pronoun Constraint	n=5	Translation task
Position of Antecedent Hypothesis	n=10	Acceptability Judgment Task
Topic- continuity	n=2	Translation task
Topic-shift	n=3	
Null Expletives - Weather *it* - Existential *there*	n=4	Acceptability Judgment Task & Translation task
	Total: 24	Scale: [1 2 3 4 5]

The stimuli that examine the OPC, topic-continuity, and null expletives are given as translation tasks, and only PAH items are presented as AJTs.

I want to underscore that the English questionnaire holds a significant importance for this study. Because regardless of the L2 proficiency reported by the learners, it is crucial that the responders actually possess the native-like L2 knowledge of the properties tested. If not, it is impossible to attribute any behavior found in the L3 to L2 transfer. In that sense, the result of this English questionnaire will serve as a critical inclusion criterion.

4.1.4. Language Relations Questionnaire

After completing the second questionnaire, the learners will be explicitly questioned about their general evaluation of the crosslinguistic relations between background and target languages. Note that I fully acknowledge that none of the transfer models reviewed in this thesis argue that the learner's selection of transferred language is something intentional, and that they contend that linguistic transfer is an involuntary process. However, this part of the questionnaire was included with an expectation that it would offer a glimpse of the learner's thoughts on the relations between the languages. In fact, Ahn (2015) and María Clements (2017) employed a similar type of questionnaire in their L3 transfer studies.[12] These studies examined the association between the selection of transferred language and the learners' perception of the linguistic relatedness between languages, and the result did offer a meaningful implication on the correlation between learner's perception and the selection of transfer.

The statements included in this task are about the linguistic similarity among languages in pronunciation (phonological), word formation (lexical), grammar (syntactic), sentence structure (syntactic), and language general.[13] The learners are asked to reflect on the crosslinguisic relations between Korean, English, and Spanish and mark the level of agreement on each statement on a scale of 1 to 5. It must be emphasized that the statements

(7) Statements regarding the relationship between Korean and Spanish.

---

[12] According to Nelson, Krzysik, Lewandowska, and Wrembel (2021) there are studies that made empirical attempts to capture learner's perception of the typological similarities through questionnaires, such as Hall, Newbrand, Ecke, Marchand, and Hayes (2009); Lindqvist (2015); Neuser, (2017). These studies are on the lexical acquisition.

[13] It is important to note that in this study, the learners were not expected to hold accurate or a linguist-level knowledge on each linguistic feature asked. Therefore, the purpose of these statements were to encourage the learners to reflect on the linguistic similarity among Korean, English and Spanish in a general sense but in different levels.

a. Korean and Spanish are similar in their pronunciation.

b. Korean and Spanish are similar in their words or how words are formed.

c. Korean and Spanish are similar in their grammar.

d. Korean and Spanish are similar in their sentence structure.

e. Korean and Spanish are similar in general.

f. My knowledge of Korean is helpful when learning Spanish.

□ 1 (Absolutely do not agree) □ 2 □ 3 □ 4 □ 5 (Absolutely agree)

Above is a sample of the statement applied in the language relations task. The full version of this questionnaire is presented in Appendix E.

4.2. The participants

The data from eighty participants are documented in this thesis, including sixty early stages learners and twenty advanced learners.[14] The linguistic profile of the test group is limited to Korean native speakers that are L2 English and L3 Spanish adult learners with no experience of studying abroad. The chronological order of the languages acquired, L1 Korean, L2 English, and L3 Spanish, was a preliminary condition to apply for participation. As mentioned in the previous discussion, this thesis intends to focus on the early learners of L3 acquisition, and for that purpose only, a small number of advanced L3 speakers of Spanish are also recruited for the questionnaire. The result of the higher proficiency group is expected to show beginner learners' behavior more contrastively. The targeted period for the beginner group is learners with less than four semesters of Spanish instruction.

---

[14] In the process, ninety-six participants completed the questionnaire, however, sixteen participants' data were dismissed because they showed divergent L1 and L2 knowledge in the properties tested. In the transfer studies, it is imperative that the participants exhibit a correct understanding of the tested feature in their background language.

The majority of the subjects were recruited at Seoul National University who are in their 3rd or 4th semester of taking Spanish classes. Therefore, it is possible to assume that they have received similar linguistic input during Spanish instruction. In the remainder of this section, I will present the result of the Language Background Questionnaire and the Language Relations Questionnaire to provide an introductory presentation of the tested groups.

4.2.1. Language Background

The first part of the Spanish questionnaire included items that asked about the learner's language background. The purpose of this section was to control the participant's language learning experience that could affect the transfer dynamic in the L3 Spanish acquisition. Below is a summary of the participant's language background.

Table 1.8. Language background of participants

	L1 Korean	L2 English	L3 Spanish
BGN (n=60)			
proficiency (1-5)	*native*	3.80	1.87
age of acquisition		8.18	20.13
learning period (yrs.)		15.43	1.30
ADV (n=20)			
proficiency (1-5)	*native*	3.90	3.95
age of acquisition		9.20	19.05
learning period(yrs.)		19.90	10.85

Both groups consisted of L1 Korean, L2 English, and L3 Spanish learners, who learned English and later learned Spanish in a formal setting. The introduction to Spanish for the beginner group was mainly through university-level introductory courses.

In regards to L2 English, both groups started to receive English

education before they were ten years old in average. The youngest age of exposure was four, reflecting the current English education trend in Korea. In accordance with an extensive period of learning L2 English, the self-reported proficiencies in the language were both high-intermediate, 3.80 and 3.90, respectively, on a scale of 1 (beginner) to 5 (advanced).[15]

Table 1.9. Independent sample test on the self-reported L2 proficiency

	Level	N	Mean	Std. Deviation	t	P
L2 proficiency	BGN	60	3.80	.73184	-.487	.628
	ADV	20	3.90	.96791		

In the independent sample test, the two groups did not show a statistical difference in the self-reported L2 proficiency.

The data of experience in L3 Spanish indicated that the beginners had an average of 1.3 years of Spanish instruction, which approximately translates into two and a half semesters. They were all university student learners that started learning Spanish after puberty. (BGN: 20.13, ADV: 19.05). As expected, the advanced group showed a higher self-reported proficiency (BGN: 1.30 < ADV: 3.95) with a statistically meaningful difference and a significantly longer studying period (BGN: 1.30yrs., ADV: 10.85yrs.) All advanced learners were native Korean that first learned Spanish in an instructional setting in Korea. They majored in Spanish and are currently using the language for their occupation.

Table 1.10. Independent sample test on the self-reported L3 proficiency

	Level	N	Mean	Std. Deviation	t	P
L3 proficiency	BGN	60	1.87	.67565	-12.242	<.001
	ADV	20	3.95	.60481		

---

[15] I believe that the participants were modest in their self-evaluation of L2 proficiency. Because the result of English certificates reported in the questionnaire indicates, their level is advanced. Fifty-seven participants submitted the official English exam result which are highly advanced level: TOEIC (mean. 940.50/990) and TOFLE (mean. 106.84/120).

4.2.2. Perception of the Language Relations

At the end of the second questionnaire, the participants were asked to complete a task about their general understanding of the linguistic similarity among the languages examined. The participants had to mark their degree of agreement with each statement in the scale of 1 (Absolutely do not agree) to 5 (Absolutely agree) that stated the similarity between Korean-Spanish and English-Spanish in five different aspects: pronunciation, vocabulary, grammar, sentence structure and in language general. The result of this section was expected to provide us with information on how Korean learners think about the language relations among languages being tested.

First, the result of the beginner group clearly showed that the statements on the similarity between Korean and Spanish were all negatively evaluated (below 3), while that of English and Spanish were all positively evaluated (above 3) for all linguistic features. This means that the beginners think that English and Spanish are much more similar to each other than Korean and Spanish are.

Figure 1.2. BGN's perception of language relations

	Pronunciation	Vocabulary	Grammar	Sentence structure	General	Helpful
Korean-Spanish	2.35	1.75	1.67	1.90	1.68	2.23
English-Spanish	3.22	4.18	3.70	3.67	3.83	4.47
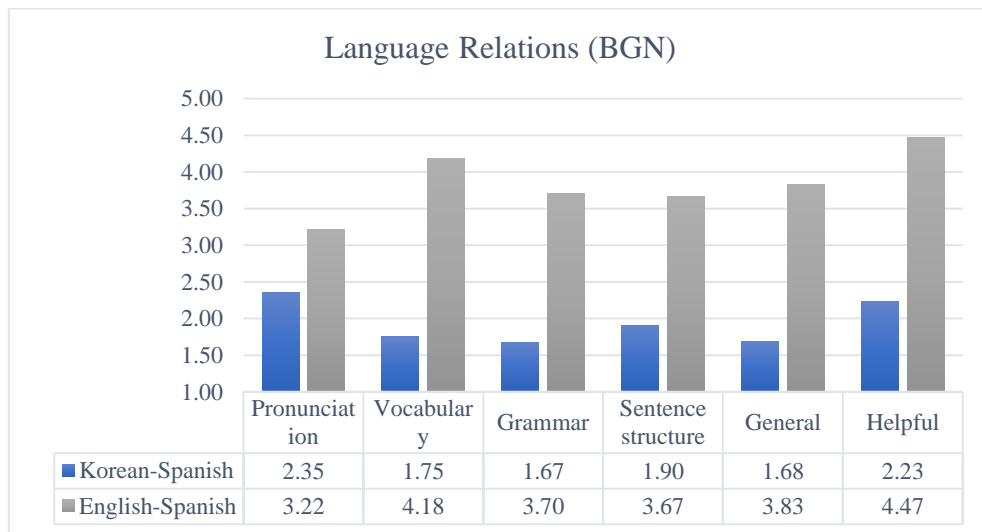
Furthermore, the independent samples test on the evaluation of linguistic similarity confirmed that the differences are statistically significant between groups.

Table 1.11. Paired samples test on BGN's perception of linguistic similarities

	Language	Mean	Std. Deviation	t	p
Pronunciation	KOR-SPN	2.3500	1.21885	-3.889	0.02
	ENG-SPN	3.2167	1.22255		
Vocabulary	KOR-SPN	1.7500	.70410	-17.527	<.001
	ENG-SPN	4.1833	.81286		
Grammar	KOR-SPN	1.6667	.81650	-11.334	<.001
	ENG-SPN	3.7000	1.12446		
Structure	KOR-SPN	1.9000	.96901	-9.647	<.001
	ENG-SPN	3.6667	1.03607		
General	KOR-SPN	1.6833	.67627	-14.940	<.001
	ENG-SPN	3.8333	.88618		
Helpful	KOR-SPN	2.2333	1.07934	-13.051	<.001
	ENG-SPN	4.4667	.76947		

The advanced group evaluated the language relations between background languages and the target language, similar to the beginner group, except for the pronunciation factor.

Figure 1.3. ADV's perception of the language relations

	Pronunciation	Vocabulary	Grammar	Sentence structure	General	Helpful
Korean-Spanish	2.70	1.50	1.50	1.95	1.75	2.55
English-Spanish	2.35	3.75	3.40	3.65	3.75	4.45
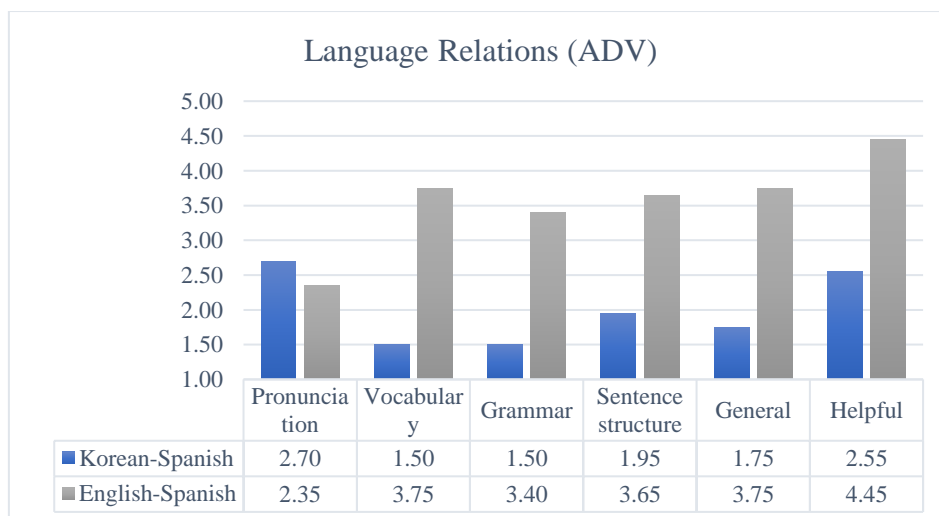
Table 1.12. Paired samples test on ADV's perception of linguistic similarities

	Language	Mean	Std. Deviation	t	p
Pronunciation	KOR-SPN	2.7000	1.17429	1.099	.286
	ENG-SPN	2.3500	1.30888		
Vocabulary	KOR-SPN	1.5000	.60698	-10.411	<.001
	ENG-SPN	3.7500	.78640		
Grammar	KOR-SPN	1.5000	.68825	-9.318	<.001
	ENG-SPN	3.4000	.88258		
Structure	KOR-SPN	1.9500	.94451	-5.667	<.001
	ENG-SPN	3.6500	.98809		
General	KOR-SPN	1.7500	.85070	-6.686	<.001
	ENG-SPN	3.7500	.96655		
Helpful	KOR-SPN	2.5500	1.39454	-4.872	<.001
	ENG-SPN	4.4500	.68633		

As in the beginner group's data, the advanced group did not agree with the statements that argued a likeness between Korean and Spanish, while they agreed with the statements that indicated the linguistic similarity between English and Spanish with a significant difference. The only difference between the two was found in their judgment of pronunciational closeness. The beginner group agreed that their L2 and L3 share similarity in their pronunciation, while the advanced group did not agree with that statement, evaluating both Korean and English as not similar to Spanish in their sounds.

In summary, the result of the language relations questionnaire shows that early-stage learners consider that English is more akin to Spanish than Korean in various linguistic levels: pronunciation, vocabulary, grammar, sentence structure, and general traits.

Table 1.13. Learner's perception of language relations

		Pronunciation	Vocabulary	Grammar	Sentence structure	General	Helpful
KOR	BGN	2.35	1.76	1.67	1.90	1.68	2.23
SPN	ADV	2.70	1.50	1.50	1.95	1.75	2.55

ENG	BGN	3.22	4.18	3.70	3.67	3.83	4.47
SPN	ADV	2.35	3.75	3.40	3.65	3.75	4.45

1 (Absolutely do not agree) to 5(Absolutely agree)

Furthermore, it is interesting that both beginner and advanced groups strongly stated that their knowledge of English would be helpful in learning Spanish while Korean is not. The only difference in the two groups was found in the evaluation on the similarity in pronunciation that the beginners reported that their L2 and L3 are similar in sounds while L1 is not, but the advanced learners reported that both L1 and L2 are not similar to L3. The result of this section will be discussed again along with the transfer data in Chapter 8. I will examine whether the learners' perception of the linguistic similarities and the expectation for facilitative support from the L2 English actually manifests in the selection of the transferred language.

5. Outline of the study

The key objective of this thesis is to critically review the latest TLA transfer models based on the data collected from L1 Korean-L2 English-L3 Spanish learners during the initial stages of Spanish acquisition by testing their knowledge of null and overt subject realization and contribute to the ongoing discussion on L3 transfer. With this goal in mind, the chapters are organized as follows.

In Chapter 1, I presented the core architecture of this thesis: the rationale, research topics, research questions, and methodology. First, an introductory description of the Third Language Acquisition (TLA) was offered to show how recent research in this novel field concentrates on building an L3 transfer model. Secondly, a brief analysis of null and overt subjects in the background languages, Korean and English, and the target language, Spanish, was demonstrated to corroborate why the subject realization can be an adequate

research topic when studying the transfer dynamic in this particular language triad. Thirdly, the main research questions that guided the design of this study were provided, followed by the methodologies taken. Two questionnaires, one in the target language and the other in the previously acquired languages, were implemented, which included the language background survey and the language relations questionnaire. Lastly, a detailed description of the learner group and their linguistic background, along with their perception of the linguistic similarity among languages, was presented in this chapter.

Chapter 2 examines the six latest models on linguistic transfer put forward within the field of TLA. Logically, there are four possible transfer scenarios that one can assume *a priori* in the L3 acquisition: (a) no transfer, (b) absolute L1 transfer, (c) absolute L2 transfer, or (d) combined/hybrid transfer. However, there is scarce research that predicts the (a) 'no transfer' scenario due to rampant counterevidence in the literature. A few studies that favor the possibility of (b) were never formalized as a particular model but are often labeled as 'L1 transfer model'. Advocating (c) is the 'L2 Status Factor (L2SF),' and position (d) is reflected in various models such as 'Cumulative Enhancement Model (CEM)', 'Typological Primacy Model (TPM)', the, the 'Linguistic Proximity Model (LPM)' and the 'Scalpel Model (SM)'. It is important to note that these competing theoretical accounts on L3 transfer agree on one point that the transfer does not materialize randomly nor arbitrarily. Instead, each model articulates that there is a specific linguistic factor that brings about the particular selection of a transferred language. I will summarize the central tenet of each model in a contrastive perspective according to the following criteria.

Figure 1.4. Comparison criteria for L3 transfer models

```
                      ┌ exclusively L1: 'L1 transfer'
           ┌ Selection ├ exclusively L2: 'L2 transfer'
           │          └ combined: 'Hybrid transfer'
           │
           ├ Trigger
TRANSFER ──┤
           │          ┌ one-to-one basis: 'Wholesale transfer'
           ├ Manner   └ property-to-property basis: 'Hybrid transfer'
           │
           │          ┌ promotes learning: 'Facilitative transfer'
           ├ Effect   └ hinders learning: 'Non-facilitative transfer'
           │
           │          ┌ Initial stages
           └ Stage    └ Initial stages and beyond
```
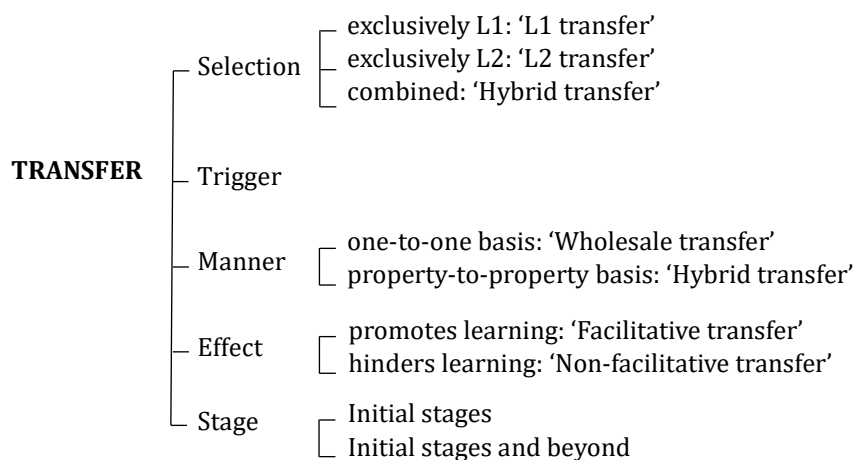
As seen above, the models differ in their central claim on the following points: (a) Selection: Is there a default language for the transfer? (b) Trigger: Which factor triggers the selection of the source language for transfer? (c) Manner: How does transfer materialize, wholesale or property basis? (d) Effect: Is transfer always facilitative? And (e) Stage: Does transfer persist throughout the L3 acquisition or only during the initial stages? Later, this structure will serve to evaluate which model best explains the transfer effect found in the tripartite language pairing of this thesis.

Chapter 3 to Chapter 6, respectively, elaborates on the four linguistic properties related to the Spanish subject realization: (a) the Overt Pronoun Constraints (OPC), a restriction on the overt subject to be linked with a quantified determiner phrase (QDP) in Chapter 3, (b) the Position of Antecedent Hypothesis (PAH), an interpretative bias or strategy between the null and overt subjects in globally ambiguous contexts in Chapter 4, (c) Topic-continuity and topic-shift, how discourse-pragmatics affects the null and overt subject alternation in Chapter 5, and (d) Null Expletive, when the null subject realization is obligatory in Chapter 6. These four instances of the NSP will be tested on the Korean participants of this study to observe the transfer dynamic during the initial stages of L3 Spanish acquisition. Each chapter will begin

with a delineation of the property itself and how it is manifested in Spanish. Then, a brief account of the property in the background language, Korean and English, will follow. This theoretical discussion will provide a proper foundation for plotting a plausible transfer scenario in the L3 acquisition of that particular property. The examples of test items in three languages are presented, followed by the result of the questionnaire. A discussion on the result of the analysis will be provided in respective chapters.

Chapter 7 reiterates research questions established in this investigation and provides a comprehensive discussion on each question. The questions are: (1) Which background language is transferred in the early stages of L3 acquisition of null and overt Spanish subjects? (2) Which L3 transfer model best accounts for Korean learners' behavior in L3 acquisition of null and overt Spanish subjects? (3) What implication does the Korean learners' data offer to the current discussion in the field of TLA on modeling the L3 transfer dynamics? First, the result of the four NSP properties is summarized from a transfer perspective. This will explicitly show which of the learner's background language, or both, exerted influence on the L3 Spanish use. Secondly, I examine the validity of six transfer models proposed to date based on the collected data. To this aim, a hypothetical prediction of each L3 transfer model for each property is provided beforehand. Then, the prediction will be compared to the empirical evidence to confirm which position makes the most fitting explanation of the transfer dynamic found in this thesis. Lastly, I offer an in-depth discussion on the implication that this investigation offers to the field of TLA for a more established L3 transfer model.

Chapter 8 concludes this thesis by submitting the summary of the main findings and highlighting their implication for the current TLA discussion. Lastly, the limitations of this study and the directions for future research are presented.

CHAPTER 2. FRAMEWORK: L3 TRANSFER MODELS

1. Introduction

Since the early 2000s, six L3 transfer models or positions have been formulated: the L1 transfer Hypothesis (Hermas, 2010, 2014a, 2014b; Jin, 2009; Na Ranong & Leung, 2009), the L2 Status Factor (L2SF) (Bardel & Falk, 2007, 2012; Bardel & Sánchez, 2017; Falk & Bardel, 2010, 2011), the Typological Primacy Model (TPM) (Rothman, 2010, 2011, 2013, 2015), the Cumulative-Enhancement Model (CEM) (Berkes & Flynn, 2012; Flynn et al., 2004), the Linguistic Proximity Model (LPM) (Mykhaylyk et al., 2015; Westergaard, 2021b; Westergaard et al., 2017), and the Scalpel Model (SM) (Slabakova (2017). Despite the difference in the micro-level, as remarked in Puig-Mayenco, González Alonso, and Rothman (2018), these theoretical proposals share two common assumptions: "(1) one or more variables determine when and how transfer will take place (i.e., it is not random) and (2) this combination of variables is indeed weighted, such that all things being equal one variable will take precedence over the others (p. 2)." What is important to remember is that a transfer is not an accidental mistake or emergent borrowing. Rothman and Halloran (2013) comment that "despite important differences, all embrace the idea that transfer in multilingual acquisition scenarios is dynamic but ultimately predictable, and, by extension, logical, based on cognitive factors (p. 61)."

Despite the outpouring of studies, the theories and conceptualizations within the L3 literature still lack coherent consensus on the usage of terms. In particular, the definition of "L3" itself is one of the terms that requires a more sophisticated approach. Wunder (2011) pointed out that persisting problematic confusions in the basic concepts and terminologies are the

conundrum of TLA studies. On that account, before presenting the models proposed to date, I will start by addressing the need to clarify and define some central concepts and terminologies of this nascent field in the following section.

1.1. Third Language Acquisition

Shifting from L2 to L3

Over the last decade, there has been a sharp increase in the number of acquisitional research that explicitly focuses on the L3 acquisition. The outpouring literature in the mid-2000s has proven that it is high time to consider Third Language Acquisition (TLA) as an autonomous field of linguistic research with its own right. It is a truism that, technically, it is impossible to separate this emerging field from its mother field, the Second Language Acquisition (SLA), because many fundamental hypotheses, theories, and concepts were adopted and inherited from it. However, accumulating empirical foundations from multilingual studies raised awareness that having more than one background language system at the onset of nonnative acquisition drives the learners to a whole different acquisitional trajectory from that of L2A.

Before the shift of perspectives to separate genuine L3 learners from L2 learners, any studies of nonnative language acquisition or foreign language acquisition were inadvertently collapsed into a single field of SLA. Leung (2007) pointed out that the "third language (L3) acquisition was once subsumed under the field of second language acquisition (SLA) in which a 'second' language meant any nonnative language acquired beyond the first (p.95)." Therefore, intentionally or unwittingly, the SLA researchers dismissed the actual L3/Ln learners to be compounded into a single L2 group. There was no need for the researchers to complicate the discussion by listing

the learners' linguistic backgrounds in detail. De Angelis (2007) showed how problematic such research practice could be.

> It is usually up to the researcher to decide whether learners' prior knowledge has the potential to bias the result of a study or not. Such freedom of choice, needless to say, conflicts with the most basic principles of methodological rigor in language. While it may seem obvious to many that the prior knowledge of a nonnative language is a variable that needs to be properly controlled, the reality is that the control for this specific variable is often poor, inadequate, if not lacking altogether.
>
> (De Angelis, 2007, pp. 5-6)

This implicit overlook in the literature wrongly granted the term 'second' language with a role of umbrella term to cover many different instances of nonnative language acquisition.[16]

One of the critical reasons that some scholars accepted or even advocated such oversight in their research practice dates back to the long-existed 'no difference' assumption. De Angelis (2007) directs our attention to the former presumption that believed, "there is, a priori, no reason to assume that L3 learning is any different from L2 learning. Learning a third language is [...] learning just another second language (Singh & Carroll, 1979, p.51) (p.5)." Such 'no difference stance' was possible because the early SLA studies only focused on the role of universal grammar (UG) in nonnative acquisition. The main research interest was whether adult learners would acquire a nonnative language as children acquire their native language, guided by full access to UG. Therefore, the influence from the formerly acquired languages was deemed trivial.

---

[16] Gass and Selinker (2001), in their seminal book, *'Second Language Acquisition: An introductory course',* defined the TLA as one of the "special instances" of second language acquisition while introducing the term SLA as an autonomous field of research that is well established as a cover term to coin any instances of language acquisition after the L1 acquisition.

A pioneering work of Klein (1995) was the first one to contrast L2 and L3 learners in approaching morphosyntactic acquisition, testing prepositional stranding structure. She confirmed that L3 learners seem to enjoy a particular advantage over L2 learners due to higher metalinguistic awareness, which propels faster parameter resetting. This study pointed out the need to separate L2 and L3 groups in acquisitional studies. However, it was only in the 2000s that researchers eventually reflected such theoretical rationale to separate SLA from TLA into research practice. In the late 2000s, the generative acquisition studies fully acknowledged that having more than one background language at the beginning of new language acquisition makes the later developmental path different (e.g., Cabrelli Amaro, Iverson, & Judy, 2009; De Angelis, 2007; Flynn et al., 2004; Leung, 2007). Now, the academic attempt to offer a more principled distinction between L2 and L3 and to differentiate the scope of research between the SLA and the TLA is strongly supported by both theory and practice (refer to De Angelis & Dewaele, 2011; Rothman, Cabrelli Amaro, & De Bot, 2013) for a detailed discussion).

Interestingly, the most urgent call to differentiate the L2 learners from L3/L*n* learners mainly arose from transfer studies that focused on the role of pre-existing linguistic representations in subsequent language acquisition. The learner's data showed unexpected influence from the previously acquired language systems, shedding light on the role of transfer that was once neglected due to the theoretical emphasis on the role of UG. In the case of a true L2 learner, if any transfer effect was to be detected, the source of such influence was rather evident since there is a single possible option, the L1. However, for the L3 learners, the potential source of the transfer is now two, and the factors that could have conditioned the transfer dynamic are much more complex, and an entirely different research approach is required.[17]

---

[17] Flynn et al. (2004), a study in the vanguard of transfer studies in TLA, emphasized that only L3/L*n* context studies can explore the role of previous language systems in a nonnative

What is L3 anyways?

Even though we acknowledge the need to separate the L2 and the L3, the terminology 'L3' is by no means self-explanatory. When answering the questions like, 'which language can be labeled as a true L3?' or 'who are genuine L3 learners?', the discussion seems to take two different streams: (a) Hammarberg's definition or (b) definition based on the chronological order of acquisition.

The first stance, so-called Hammarberg's definition, defines the L3 according to the cognitive hierarchy of the languages in the learner's linguistic system. Hammarberg (2009) dismissed the labeling based on the linear sequence of acquisition and proposed the use of the term L1 as a primary language in the learners' mind, L2 as a secondary, and L3 as tertiary. He argued that "this could make it easier to avoid the confusion caused by the association of L2 with 'language number two' in a linear sequence of acquisition. Rather than being based on a language-by-language chronology, this terminology expresses a cognitive hierarchy between the languages for the user in the current situation. In this respect, an L2 is secondary to L1, and an L3 is tertiary in relation to L1 and L2 (p. 7)." Therefore, in Hammarberg's definition, the L2 may not be the first nonnative language learned but the language of any order that has secondary cognitive activation in learners' minds. Although it may seem reasonable, this definition is logically feasible but empirically impractical.

The second definition, which this thesis will follow, is a linear one that defines the language numbering based on the order of exposure in the time scale. The learners' native language would be called L1, and the first foreign, nonnative language will be labeled as L2, the next one as L3, and so on (Ln). It may seem like a simple and straightforward way to define an L3, but if we

language acquisition accurately. Because in the study of L3A, there is multifaceted opportunity to observe the true dynamic nature of transfer than in the L2A.

consider proficiency in the L2 (or L_{n-1}), the process becomes quite complicated. The critical question is now whether there is any L2 proficiency threshold that makes the later exposed language an actual 'L3'. There seem to be two routes that researchers generally take. Some researchers require a highly advanced level of L2 knowledge. They consider only those who are brought up in a monolingual environment and later have successfully acquired one or more nonnative second languages as L3 learners. Others assume that the minimum exposure to an L2 is enough to put the later exposed language on the L3 status in learners' minds. This stance argues that "the proficiency in an L2 does not need to be high for transfer from this language to occur, … a low proficiency level in the source language of influence suffices for it to exert a powerful influence on the learning process of the L3 (Sánchez & Bardel, 2017, p. 240)." Rothman (2015) also advocates this definition, questioning that "If indeed L2 grammars are natural grammars, […] How would the mind know that an interlanguage grammar has not yet reached ultimate attainment, and why would this system not be available for transfer? (p. 188)" The essence of this claim is that, for transfer studies, the learner's overall proficiency level in the background language is not a decisive factor.

What truly matters is whether the learners possess the specific L2 knowledge that is being tested in the study. Because even for proficient L2 speakers, if they do not exhibit the L2 knowledge of the tested feature, there is simply no L2 representation to transfer to the L3 acquisition. Rothman (2015) states, "obviously, one cannot expect transfer of something that does not form part of the properties available to the learner from previous acquisition. Furthermore, one cannot assume that each individual has property X in her L2 simply because they are regarded as highly proficient by the general proficiency test (pp. 188-189)." Therefore, if a learner is confirmed to have acquired the [feature A] from both L1 and L2, no matter what stage the learner is actually at, the learner becomes a plausible candidate

for the L3 transfer study. Therefore, in transfer studies, in addition to testing the L3 target feature, it is highly recommended to examine the learner's L1 and L2 knowledge of the target property to the extent that is possible, preferably after testing L3 knowledge to avoid any priming effects.

In summary, it is true that the TLA still did not reach an absolute consensus on the definition of L3, but there is a clear move to separate L3 from L2 for theoretical and empirical prudence. The prerequisite level of L2 proficiency to label the later language learning a genuine L3A differs depending on the research purposes – from a very beginning to a near-native. However, for all cases, the critical inclusion criterion is whether the learner has the L2 knowledge of the target property at hand. As observed by Rothman et al. (2019), "from a research perspective, the choice of who qualifies as a multilingual for any given study needs to be commensurate with the needs and goals of the said study (p. 23)." In this regard, this research will define L3 as a chronologically third language learned. And the prerequisite level of L2 to make the following language an L3 will be barred at a minimum that if learners show L2 knowledge in the tested property, they are qualified to be considered as the L3 learners in that particular property.

1.2. Initial stages

To be clear from the start, this thesis intends to investigate the initial stages of L3 acquisition. The ultimate goal of the TLA research would be to depict the whole acquisition process from the beginning to the end. However, the current research trend in L3A primarily highlights the early phase of acquisition. Some evaluate that such tendency is the theoretical and empirical limitations of this nascent field that should eventually be overcome. In contrast, others assert that the initial stages will continue to be the research priority, especially for transfer studies. I position with the latter stance that the literature is still in its infancy to elaborate on the entire process of L3A,

and even if it is or becomes possible, the understanding of the beginning phase will remain crucial in establishing an appropriate foundation to portray the whole picture of multilingual development. That is, a straightforward explanation of how it all started should precede answering the questions of the later stages in precision. Furthermore, I believe that the dynamic of the phenomena can be most accurately observed during the early phase of acquisition.

<p align="center">*The definition*</p>

It seems fitting that an attempt to define what 'initial stages' means should start from its mother term, 'Initial State (IS).' The IS is a traditionally used term to describe the very first moment of language acquisition. White (2003) defines that "the term initial state is variously used to mean the kind of unconscious linguistic knowledge that the L2 learner starts out with in advance of the L2 input and/or to refer to characteristics of the earliest grammar (p.58)." In the L1 acquisition, the children start with a *tabula rasa,* and it is accepted that the Universal Grammar (UG) constitutes the IS. In the L2 acquisition, there are five different proposals: the Full transfer Full Access Hypothesis (Schwartz & Sprouse, 1994; Schwartz & Sprouse, 1996), the Minimal Trees Hypothesis (Vainikka & Young-Scholten, 1994, 1996a, 1996b), the Valueless Features Hypothesis (Eubank, 1993, 1994, 1996), Initial Hypothesis of Syntax (Platzack, 1996) and Full Access (without Transfer) Hypothesis (Epstein et al., 1996; Epstein et al., 1998). These proposals differ in their interpretation on how UG and previous linguistic representations engage in establishing the initial hypothesis when learning a new non-native language. Some argue that the L2 initial state is a specific grammar (Full Transfer Full Access/Minimal Trees/Valueless Features), while others argue it is the UG itself as in the L1 acquisition (Initial Hypothesis of Syntax, Full Access Hypothesis). Similar to many other terminologies in the TLA literature, the initial state (S_0) is also one of the

terms that firstly originated in the SLA framework and then later imported into the L3A discussion. Hermas (2014a) commented that in the early TLA studies, the IS and the initial stages were often accepted as interchangeable concepts.

In this thesis, I will use the label 'initial stages' to refer to the early learning phase that this work attempts to describe. To my understanding, the very reason why the initial stages is the more accurate candidate to be used in the TLA literature is keenly related to its theoretical emphasis on the role of transfer. The coinage was first introduced in Rothman (2015). He contrasted this concept with the initial state to describe how the transfer manifests in the L3 development. First, Rothman (2015) clarified that the canonical term 'initial state' means, by definition, what a learner possesses at the very first moment of language acquisition when no input has been given yet. But to transfer something, the author asserted that learners need "a minimally sufficient exposure to the L3 (p. 179)", so they can select between the L1 or L2 system and export it to the establishment of the initial hypotheses of L3A. Therefore, the very moment of the first encounter is not sufficiently long enough for a mind to decide or choose the most appropriate language for transfer. By expanding the 'state' into 'stages,' the author intended to incorporate the notion of "minimally sufficient input," which is decisive for a learner to figure out which background language would benefit the future L3 learning process.

Then, the following question arises: how can we define learners in their initial stages of L3 acquisition? Alonso & Rothman (2017) argued that determining the initial stages in actual time, such as hours, days, or weeks, is neither easy nor meaningful.

> Ultimately, stating in absolute terms that the initial stages is wholesale X amount of time after initial exposure would only serve to satisfy an immediate need or desire to have a definition. However, if the reality is that

both the onset and/or length of the initial stages depend on multiple factors
such that it is not exactly the same in all scenarios, then providing an
arbitrary number would be counterproductive. Instead of offering an
absolute time frame for L3 initial stages, we would rather shift the locus of
its definition away from calculable/absolute time towards a linguistically
defined one. The goal is to tap the mental representation of the initial L3
interlanguage grammar and possibly the first few instantiations of
subsequent interlanguage grammars along L3 development. Therefore, we
believe that researchers should instead document the amount of input and
time of exposure that learners have received, and argue why the observed
stage reflects the initial interlanguage grammar in consideration of the
applicable variables for any given reported group.

(González Alonso & Rothman, 2016, p. 687)

Therefore, instead of following an identical time criterion for all the studies,
the researcher must be able to logically render a discernible explanation of
why the particular study group was considered to be at their initial stages in
accordance with the objective of the study, the characteristic of the test feature,
and etc.

Theoretical and conceptual necessity

Then, why specifically should transfer studies focus on the initial stages
of acquisition? First, it is related to the motivation of transfer. A transfer of
previously known language is triggered because the learner does not yet have
sufficient linguistic representation in mind to parse the given input in L3
correctly. Rothman et al. (2019) labeled this particular learning situation an
'underspecification.' Naturally, such a state is most frequent during the
beginning phase of acquisition because the learner has not yet built the
necessary L3 linguistic representations. As the proficiency grows, there will
be a lesser need for a learner to transfer previous language properties to parse
the target input. Therefore, the initial stages is where the transfer is most likely

to materialize. Second, it is related to the complexity of the L3A studies *per se*. The factors that may diverge the path of L3A are not only L1 knowledge and L2 developing knowledge but also the development of L3 knowledge itself. For example, let's assume a case of an advanced L3 learner A with the following linguistic profile.

- L1: Facilitative in learning feature X in L3
- L2: Non-facilitative in learning feature X in L3

Even though the learner's data showed a successful acquisition of feature X, we can't abruptly conclude that this learner experienced a facilitative transfer from L1. There are possibilities that the learner might have had a non-facilitative L2 transfer at first, but with a consecutive negative input, the learner noticed that the L2 transfer was obsolete and learned out of it. If a learner has passed the initial stages, it becomes more difficult or impossible to tease apart the true transfer effect from actual learning achievement or development itself. In that sense, the data collected during the initial stages is less confounded, and therefore, it guarantees a greater possibility of identifying the true impact of the transfer.[18]

The six transfer models that I will review in this thesis are not all initial stages transfer models. There are ones that attempt to model the transfer beyond this stage and incorporate the later stages of acquisition into modeling (e.g., The Linguistic Proximity Model and the Scalpel Model). However, even for these models, the initial stages data is of substantial importance. In transfer studies, I believe that learners' behavior during the first beginning phase of acquisition holds an essential key to understanding the whole process. Therefore, I agree entirely with Puig-Mayenco and Rothman (2020)'s analogy.

---

[18] Puig-Mayenco and Rothman (2020) asserted that "conventional wisdom suggests that examining learners as close to the initial state of nonnative acquisition as possible should help to reduce the noise in the signal of what we seek to capture (p.218)."

Offering an analogy related to the strength of a building being proportional to the robustness and soundness of its foundation/basement, they argue that the success of meaningfully describing, predicting, and explicating L3 development over time is also conditioned on the strength of understanding the target language's foundation, or the initial interlanguage. They also claim that transfer of mental representations—not mere influence from previous linguistic experience per se—is best studied at the L3 initial stages of true beginners, which is when transfer can be meaningfully teased apart from L3 learning/acquisition itself, because only at that stage can we be confident that representational transfer can be meaningfully teased apart from L3 learning/acquisition itself.

(Puig-Mayenco & Rothman, 2020, p. 219)

But at the same time, the emphasis on this phase does not necessarily imply that the transfer will not or cannot last more than the initial stages of learning path. Instead, what is essential is that we must first know precisely how it started to predict how the dynamic will develop in the later stages. Therefore, the study group included in this thesis is set to adult Spanish learners at their initial stages, with less than four semesters of learning Spanish. Considering that the linguistic properties studied in this research require knowledge of complex sentences, a such criterion was deemed appropriate and necessary.

1.3. Transfer, crosslinguistic influence, or interference

The linguistic influence from the formerly acquired language systems in learning a new language has a long history of inquiry in SLA perspectives (Hammarberg & Williams, 1993; Ringbom, 1987, 2001; Schmidt & Frota, 1986; Selinker,1992; Selinker & Baumgartner-Cohen, 1995; Sharwood Smith & Kellerman, 1986; Vildomec, 1963; Weinreich, 1953). However, even within the SLA, there seems to be no complete terminological consensus on

how the phenomenon should be labeled. Because 'transfer,' 'crosslinguistic influence,' and 'interference' are often accepted and used interchangeably. Puig-Mayenco and Rothman (2020) observed that mixed usage of the terms had been rampant in SLA theories and other linguistic paradigms that critical voices that call for refining the terminologies have emerged (e.g., González Alonso & Rothman 2017; Herdina & Jessner 2002; Paradis 2004; Rothman, González Alonso & Puig-Mayenco 2019; Schwartz & Sprouse 1996).

Among the three most frequently used terms, the meaning of 'interference' is relatively easier to grasp than the other two. Following Weinreich's (1953) definition, it means "instances of language deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language (p. 1)." By 'deviation,' we can understand that this term can be translated into 'negative or non-facilitative transfer,' excluding any positive or facilitative transfer, the case when learners experience benefits in learning a new language by relying on their former linguistic knowledge.

Now, limiting the discussion to 'transfer' and 'CLI,' the previous literature has not offered enough guidelines to differentiate these two, that the definition overlapped in many cases. The most traditionally cited definition of transfer is Odlin's (1989), and for CLI, it is Sharwood Smith (1989), Sharwood Smith's (1994) description.

Transfer　　Transfer is the influence resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired.

(Odlin, 1989, p. 27)

Crosslinguistic Influence (CLI)　　It (CLI) is a psycholinguistic term referring to the influence on the learner which one language system he or she possesses may have on another language system. This is irrespective of

whether the language system is mature language or whether it is in a developmental state or fossilized before attaining maturity. The term is meant to cover more than the word "transfer" and includes borrowings, influence on L1 from L2, avoidance of transfer, etc. In other words, it covers a fairly wide range of phenomena.

(Sharwood Smith, 1989, p. 185)

… the influence of the mother tongue on the learner's performance in and/or development of a given target language; by extension, it also *means the influence of any 'other tongue' known to the learner on that target language* (italics in the original).

(Sharwood Smith, 1994, p. 198)

First, in an attempt to describe the concept of transfer, Odlin (1989) pointed out what transfer is not. He presented four instances that should be excluded when defining a proper concept of transfer: (a) "transfer is not simply a consequence of habit formation" to argue that transfer from the behaviorist approach does not apply, (b) "transfer is not simply interference" to include the concept of facilitative transfer," (c) "transfer is not simply a falling back on the native language" to oppose Krashen (1983)'s claim that transfer is a mere production strategy that does not engage in acquisition process itself, and (d) "transfer is not always native language influence" to encompass the cases where a learner has more than one language system. However, as Odlin admitted, providing a complete and adequate definition of transfer is a very challenging one, as coming up with an entirely satisfactory explanation of language.[19]

---

[19] Murphy (2003) evaluated that Odlin's definition includes "both positive, facilitative transfer and negative transfer phenomena such as underproduction or overproduction of a particular structure, production errors such as substitutions, calques, and alterations of a target language item, misinterpretations during comprehension, and, also, the differences in the amount of time needed to acquire the target language by learners of different native language backgrounds (p.3)."

On the other hand, the term CLI was first brought up by Sharwood Smith and Kellerman (1986) in the mid-eighties to comprehensively include all "phenomena of transfer, interference, avoidance, and borrowing, and the L2-related aspects of language loss (p.1)." According to Jessner, Megens, and Graus (2016)'s observation, the term CLI seems to be labeled for use in the theory-neutral texts as a superordinate term, while the term transfer is intended for narrower use. Despite the traditional attempts to polish the meaning and pin down the scope of these terms, the former definitions were not strong enough to designate the phenomena that current generative TLA theories attempted to elaborate on.

Recent TLA transfer models, in their attempt to capture how the linguistic transfer engages in the learning process, search for the right term for their research topic. Rothman et al. (2019) contended that in the case of adult L3A, there are more than one grammar lexicons, which contain a full set of feature specifications. Therefore, they argue that the concept of transfer must be approached from a feature-based model.

> … we take linguistic transfer to be at the level of mental representation of the developing grammar (that is, in terms of competence). This means that transfer differs in nontrivial ways from other subcases of crosslinguistic influence, which sits at the level of performance -real-time language use- even if true transfer and non representational instances that manifests as in-the-moment bleeding over from another language at the level of performance/production. Thus, while transfer is a subtype of crosslinguistic influence, it should be distinguished from other types that map onto more superficial influences.
>
> (Rothman et al., 2019, p. 2)

> As we understand it, the construct of linguistic transfer refers to reduplication of a representation from previously acquired linguistic representations, as an initial hypothesis for a given domain (literally, a copy)

while acquiring a new target language. This definition has two corollary assumptions. (it is clearly not a mere slip of the tongue. CLI corresponds to momentary inconsistent slips)

(Rothman et al., 2019, p. 24)

Following Rothman's definition, Puig-Mayenco and Rothman (2020) clarified that transfer takes place at the level of mental representation, working as a copy or reduplication of the former language system inserted into the developing L3.[20]

Accepting this, the distinctive characteristic of transfer from CLI becomes more apparent: the CLI is a momentary influence from other linguistic systems into the mere performance, while the transfer affects the initial hypothesis of grammatical representation of L3, which sets the point of departure of particular nonnative language acquisition. González Alonso and Rothman (2017) added that while transfer and CLI may affect performance, the level that gives rise to such an outcome differs. In the case of transfer, it would be "a by-product of representational differences," while CLI is not (see González Alonso & Rothman, 2016; Rothman, Cabrelli Amaro, & de Bot, 2013 for a detailed discussion).

Built on the observations stated above, I intend to use the term 'transfer' throughout this thesis, to focus on the influence of former linguistic representation on the L3 syntactic representation. The transferred knowledge will affect the process of learning and developmental task of L3, constituting a starting point or initial hypothesis for L3 acquisition. This thesis finds its foundation in the generative TLA framework. Therefore, it emphasizes the linguistic transfer and how linguistic properties of previously acquired languages would affect the acquisition of newly encountered language.

---

[20] The concept of copy is based on the Full transfer Full Access Hypothesis (Schwartz & Sprouse, 1994; Schwartz & Sprouse, 1996).

In summary, I clarified a few key concepts and terminologies according to the scope and the goal of the thesis. First, I introduced the theoretical framework of this research, the Third Language Acquisition (TLA). This field is a relatively young field of inquiry in the generative approach to language acquisition, and there are some remaining confusion and arbitrary use of terms. I briefly reviewed the critical difference between the TLA and its mother field, the SLA, and underlined the need to study the acquisition of a third language with its own name. And I introduced two ways that the 'L3' or the 'L3 learner' have been defined in the literature and indicated that this thesis would adopt the definition of L3 based on the chronological order of acquisition. Secondly, I reviewed how 'initial stages' distinguishes from 'initial state' and why this specific learning phase deserves a spotlight when studying linguistic transfer. Lastly, I presented how transfer, crosslinguistic influence (CLI), and interference, the terms often used interchangeably, have been portraited in the former literature and showed how the transfer is now delineated in the generative TLA studies to make it clear what the label 'transfer' would mean throughout this discussion. Based on this background, the remainder of this chapter will introduce six theoretical positions on the L3 transfer proposed to date in the field of TLA.

2. The L1 Transfer Hypothesis

In the field of SLA, the role of native language in nonnative language acquisition has been studied from various perspectives. Some TLA studies followed suit of the SLA and initiated the query of transfer from the same position to claim that it is the L1 that exerts a decisive influence throughout the subsequent language acquisition (e.g., Hermas, 2010, 2014a, 2014b; Jin, 2009; Na Ranong & Leung, 2009). In essence, the absolute L1 Transfer Hypothesis advocates for a single, default transfer of the L1 system in the L3

initial stage.[21] The discussion from this position did not develop into any particular theoretical model, but the studies supporting this position implicitly reckon the dominance of L1 as the critical factor for the transfer.

Na Ranong and Leung (2009) collected data from twenty L1 Thai-L2 English-L3 Chinese learners and compared them with seven L1 English- L2 Chinese learners on their use of null object. Both Thai and Chinese license null objects, while English does not allow them. The result pointed to a possible facilitative transfer from L1 Thai that L3 learners were able to interpret Chinese null objects more accurately than L2 learners. Based on this result, the authors concluded that L1 transfer is valid even in the L3A context. However, limitations were found that the L2 Chinese group did not show any statistically significant difference in their behavior from the L3 Chinese group. The authors defended that such a meek difference was due to the small number of data analyzed and maintained that the individual response analysis still attests to the facilitative L1 transfer in the L3 initial stages.[22]

Jin (2009) also examined the transfer effect in the acquisition of null object constructions but with different language combinations: L1 Chinese-L2 English-L3 Norwegian. Learners at three different proficiency levels participated: beginner (9 months), low-intermediate (1.6 years), and upper-intermediate (4.5 years). In this tripartite pairing, the L2 and the L3 are subject-prominent languages that do license object-drop, except for some Norwegian dialects. Meanwhile, the L1 is a topic-prominent language that allows null objects. Contemplating the typological similarity between L2 and

---

[21] There is no formalized model with exact naming, however, for the convenience of comparison with other transfer models, the labels such as "L1 transfer hypothesis" or "the L1 factor model" is often used in the literature. I will follow this research convention and use the term 'L1 Transfer Hypothesis'.

[22] However, the result of this study was later questioned again, after the proposal of the Typological Primacy Model (TPM, Rothman, 2010, 2015). Because the L1 Thai happens to be typologically closer to L3 Chinese, which may have conditioned the transfer. Then, the transfer was not due to an exclusive role of the native language. This example shows that when viewed from other perspectives, evidence of certain transfer model could also support other factors.

L3, the author assumed a facilitative L2 transfer to occur. Jin predicted that the accuracy rate in L3 Norwegian would show a similar pattern to that of L2 English. However, the accuracy rate of L3 (34%) showed a significant difference from that of L2 (72%), noticeably in the beginner group (21%). This result led the author to conclude that it was the L1 Chinese that was transferred and caused a non-facilitative transfer, overriding the typological similarity between L2 and L3 and the L2 status of English.

The first study to explicitly and intentionally set out to examine the 'default L1 scenario' in the morphosyntactic transfer is Hermas (2010). The study tested L1 Moroccan Arabic-L2 French-L3 English beginners' acquisition of verb movement. The languages exhibited differences in the verb movement and the position of frequency adverb. The target language English does not show verb movement and requires frequency adverb to be preverbal. In contrast, both background languages allow verb movement, yet only L1 Moroccan Arabic offers flexibility in positioning the adverb during verb movement without affecting the interpretation of a sentence. While, in French, frequency adverbs are obligated to follow the verb. The author conducted an Acceptability Judgment Task (AJT) and Preference Task (PT) to confirm that the initial hypothesis for L3 English is heavily influenced by L1 Arabic, notwithstanding the typological distance between L1 and L3. However, the author reported that the learners' L2 French might have had L1 influence beforehand, suggesting that the trace of L1 transfer found in L3 may not be directly from L1 but indirectly from L2. Hermas (2014a) studied the same language profile in the follow-up study, testing the acceptability and preference in the subject-verb inversion and the use of null expletives. The author hypothesized that if L1 Arabic were transferred, L3ers would wrongly accept both SV/VS sentences and null/lexical expletives, while the L2 transfer would have a facilitative influence in English, guiding the learners to reject VS and null expletives in the target language. Despite the typological closeness between L2 and L3, the result showed no bootstrapping effect from

L2, consolidating the exclusive L1 transfer hypothesis. The same absolute L1 transfer was further evidenced in Hermas (2014b), which examined the restrictive relative clause to the same learner group.

However, Puig-Mayenco, González Alonso, and Rothman (2018) rightfully pointed out the critical problem of these L1 transfer studies. They note that '*the researchers advocating for this scenario have not yet ventured a detailed explanation: in other words, the mechanisms explaining why this should be so have not been articulated*.' More importantly, what could weaken the validity of the L1 transfer evidence is that the same result could also advocate other models than the L1 transfer. Because except for research by Hermas, the remaining studies reviewed here had been conducted before any of the other transfer models were formulated. Therefore, behind the scene, the reason that the L1 was selected for transfer may not be due to the absolute status of the native language. Instead, the same data can be interpreted through different frameworks, such as typology, order of acquisition, etc.

In sum, the L1 Transfer Hypothesis is relatively straightforward because it claims that the native language has an exclusive status in L3A. Unfortunately, this position did not develop as sophisticated as the other positions that will be reviewed here. It is only implied that this position seems to consider the inherent nature of the L1 as its trigger and that it expects the transfer to be holistic. Such lack of refinement left too much room to interpret its data to advocate other models. More importantly, there is no straightforward explanation of why L1 should take a privileged role over L2.

- Selection: exclusive role of L1
- Trigger: inherent nature of L1 (implicit)
- Manner: wholesale basis
- Effect: facilitative and non-facilitative
- Stage: beginners to upper intermediates

3. The L2 Status Factor

The L2 Status Factor (L2SF) (Bardel & Falk, 2007, 2012; Bardel & Sánchez, 2017; Falk & Bardel, 2010, 2011) advocates for a single source of morphosyntactic transfer of the L2 throughout L3/Ln development. Before the formulation of this model, there has been a noticeable discussion on the learner's preference to rely on their foreign lexicon during multilingual acquisition. According to Bardel and Falk (2012), Meisel (1983) is the first to acknowledge the tendency to activate foreign language during additional nonnative language acquisition. The phenomenon was then called as 'foreign language effect.' Sánchez (2011) also commented that before the establishment of the L2SF, there existed pioneering literature that had raised attention to the reliance on the L2 vocabulary during L3 acquisition, namely Hammarberg (2001), Williams and Hammarberg (1993, 1998), and others (e.g., Dewaele, 1998; Shanon, 1991).

Let's first review what 'L2 factor' or 'L2 status' stands for. According to Hammarberg (2001), the 'L2 status factor' means "a desire to suppress Ll as being 'non-foreign' and to rely rather on an orientation towards a prior L2 as a strategy to approach the L3 (pp. 36-37)." Also, for Leung (2007), "the 'second language (L2) factor' in L3 acquisition refers to the general tendency to transfer (representations) from L2(s) rather than L1. In online processing/ performance terms, 'L2 status' is usually used to express the idea of general tendency to activate L2(s) rather than the L1 (p. 102)."

Based on this unique status of the L2, Bardel and Falk (2007) first proposed that the transfer may materialize exclusively from L2 to L3, questioning the traditional view that exaggerates the weight of the native language during foreign language learning. Then, the authors presented a sample analysis of a small data (9 participants: 5 English L2 group, 4 Dutch/German group) learning negation in L3 Swedish and L3 Dutch. They confirmed that the Dutch/German L2 group enjoyed a facilitative L2 transfer,

placing the negation post verbally. The English L2 group, on the other hand, had a non-facilitative transfer from their L2, displaying incorrect preverbal negation placement in their L3 use. Based on this evidence, the authors raised the possibility of 'L2 serving as a filter' to suppress L1 transfer. In the subsequent research, Falk and Bardel (2011) further investigated the role of L2 in learning object pronouns placement in German with a larger number of participants (L1 French L2 English: 22, L1 English L2 French: 22) with higher L3 proficiency. The data confirmed that L2 exerted an influence on the L3 acquisition beyond the initial stages, affecting intermediate-level learners. The authors formulated this tendency into a model, namely the 'L2 Status Factor.'

The central proposal of this model is that only the L2 system can be transferred during the L3 acquisition because L2 acts as a filter to block L1 transfer. Furthermore, the hypothesis presumes that, unlike the L1, the L2 acquired in adulthood is cognitively akin to the L3 in terms of representation and storage. Therefore, the L2, rather than L1, is the more fitting candidate to be activated for transfer and more readily accessible during the whole process of L3 acquisition. Under this model, such preference toward L2 transfer is derived from fundamental differences between the native and nonnative languages. Therefore, the mechanism is valid even when the L2 proficiency is low and regardless of the typological closeness between the L1 and the target language.

The foundational assumption behind the L2SF is aligned with the Declarative/Procedural model (so-called a D/P model) elaborated by Paradis (1994) and Paradis (2004, 2009). It claims that the nonnative languages acquired after puberty, or the critical period, are stored in a distinct memory system to the native language. Therefore, the L1 knowledge and all the language acquired afterward are considered neurologically different. According to the D/P model, native grammar constitutes an implicit knowledge mediated by the procedural memory system, while all later-

51

learned grammars (L2, L3, and L*n*) are sustained in a declarative memory system as explicit knowledge.

> Paradis (1994) was the first to suggest the fundamental difference between procedural and declarative memory in relation to implicit linguistic competence and explicit metalinguistic knowledge, respectively. According to Paradis (2009), our capacity of verbal communication includes linguistic competence (phonology, morphology, syntax and the lexicon – which contains morphosyntactic properties) and metalinguistic knowledge (conscious knowledge of facts about languages, including vocabulary – word form-meaning relationships). Implicit linguistic competence and explicit metalinguistic knowledge are neurolinguistically distinct (and they may be dissociated by pathology) and have different memory sources (Paradis 2009). Implicit linguistic competence is sustained by procedural memory and explicit metalinguistic knowledge by declarative memory.
>
> (Bardel & Falk, 2012, p. 70)

Following Paradis' argumentation, the L2SF contends that transfer is more likely to occur between cognitively similar nonnative grammars than between L1 and other later acquired languages. The authors maintain that L3 learners already have the experience of learning a nonnative language; therefore, they are equipped with L2 metalinguistic knowledge (so-called MLK or metalinguistic awareness). This factor would make it easier for L3 beginners to contemplate the differences and similarities between L2 and L3 linguistic features and equip themselves with more effective learning strategies.[23]

---

[23] The facilitative effect of explicit MLK and high metalinguistic awareness in learning a nonnative language has been investigated in SLA studies as well. Falk, Lindqvist, and Bardel (2015) note that, in SLA perspective, there have been investigations that reveal how explicit MLK could offer a positive impact on L2 learning (Bono, 2011; Jessner, 2008; Thomas, 1988). Also, Elder and Manwaring (2004) emphasized the role of MLK in the target language grammar and argued that the level of MLK in L2 grammar coincides with overall L2 proficiency. According to Jessner et al. (2016), the "Metalinguistic awareness, or, as Baker (2011: 152) defines it, "thinking about and reflecting upon the nature and functions of

After the first proposal of this model, the empirical studies in TLA proliferated, providing a sharp increase in the number of L3 learner datasets from various linguistic domains. The data guided the transfer models to test their fundamental components and to modify, sophisticate, and elaborate the logic, if necessary. Against this backdrop, Falk et al. (2015) made some essential modifications to the reasoning of the L2SF. In this study, the authors set an intriguing research question: what would happen if an L3 learner develops a high degree of MLK in their native language through a formal learning? Expanding away from the D/P model, the authors posited that the explicit MLK in the L2 might be the critical factor that grants the language with a privileged status over L1. In that case, an L1 with a high level of MLK is expected to obtain a similar hierarchy to that of a formally learned L2. This would neutralize the exclusiveness of the L2 in the selection of source language for transfer. With that in mind, they analyzed two hundred and thirty-nine adjective structures in the oral data of L1 Swedish, L2 English, and L3 Dutch learners in the initial stages. The researchers included a questionnaire that tested the L1 metalinguistic awareness, explicitly asking the learners about their knowledge of adjective positioning in native Swedish. In this tripartite pairing, L1 and L3 show similar patterns in the placement of the attributive adjective; therefore, the L1 transfer is facilitative. The result confirmed that there exists a strong correlation between the high level of MLK and the selection of language: learners with a strong degree of MLK in the L1 showed a higher percentage of correctness while ones with low L1 MLK exhibited a higher error rate in the L3 adjective use. The authors concluded that "L1 in such cases resembles a formally learned L2…

---

language,' is an important factor in the language development of multilinguals (e.g., Bialystok, 2001; Herdina & Jessner, 2002; James, 1996). It can also be described as "the ability to focus on linguistic form and to switch focus between form and meaning."(Jessner, 2008: 277)." Numerous researchers from different academic disciplines have studied the concept of linguistic awareness and the beneficial effect of such awareness in the subsequent language acquisition.

Consequently, it can be argued that in these cases some of the elements specific to the L2 status factor also apply to the L1 (p. 228).”

In the follow-up study, Bardel and Sánchez (2017) elaborated on the meaning of the 'L2 status factor' to reflect the correlation between the high level of MLK and the L2 status. They emphasized that it is the explicit MLK that is a critical factor in governing the transfer. If L1 and L2 grammar have equal status due to high MLK in both systems, now the transfer selection will be constrained by individual differences in cognitive functions such as noticing, attention, and effective working memory, which are inherent variables in declarative memory.

In the latest study, Sánchez and Bardel (2017) studied the relationship between L2 proficiency and L2 status. The authors raised a question of whether the proficiency in L2 German would affect the occurrence of its transfer in the L3 acquisition of English, testing the verb placement. The data analysis revealed two significant findings in regards to the proficiency variable. First, the L2 proficiency does not have to be high to be transferred to L3 that even the low L2 proficiency group showed a significant influence from L2 to L3. Second, the intermediate proficiency in L2 and L3 seems to be a threshold for transfer, which means that once that level is achieved in both languages, the correlation between L2 proficiency and transfer inverses. Therefore, once the L2 reaches the intermediate level, the learners are more likely to control L2 and suppress its activation in L3A. The authors admitted that the so-called 'intermediate' might not be a clear-cut stage in language acquisition. Still, they emphasized the importance of considering the L2 proficiency threshold when investigating the L2 transfer.

The limitation of this model has been pointed out in two ways. First, before the modification of the model, the L2SF had to inherit the criticism laid upon the D/P model. Secondly, even the learners' data points to L2 transfer, Rothman and Halloran (2013) elucidate that the researcher must scrutinize whether the L2 was selected as a “default” as the model predicts,

or whether it was transferred because of other possible reasons, such as typology. After the modification, Rothman et al. (2019, p. 128) argue that the predictive validity of the original proposal significantly diminished because it included the factors that are very difficult to model which are highly subject to individual differences, such as attention, control, and working memory.

- Selection: exclusive role of L2
- Trigger: distinct memory storage system → high metalinguistic
      knowledge of the transferred language
- Manner: wholesale basis
- Effect: facilitative and non-facilitative
- Stage: beginners to intermediate (L2 threshold)

4. The Cumulative Enhancement Model

The Cumulative Enhancement Model (CEM) (Berkes & Flynn, 2012; Flynn et al., 2004) is one of the earliest models that attempted to provide a principled explanation of the linguistic transfer during the L3 acquisition. Unlike previously reviewed models, this hypothesis does not suppose default or absolute transfer. This stance purports that neither L1 nor L2 has privileged status as a source language for transfer. The model assumes that language learning is gradual and cumulative; therefore, either language may selectively exert influence in shaping further L3 development. Interestingly, the model restricts that the transfer is all-time facilitative, that if not facilitative, the background language remains neutral.

Under the CEM, at the beginning point of L3 acquisition, previously acquired languages are represented as equally significant and equally available candidates to play a particular role in the learners' minds. Later, when the process of L3 learning actually starts and the input is introduced, the decision is made. If L1 or L2 has the same target feature, the transfer of

that property from either language will happen to propel the learning process. However, if neither L1 nor L2 has facilitative traits, no transfer obtains that both systems remain neutral. Implicitly, this model prospects transfer to obtain in a property-by-property basis rather than wholesale transfer and to occur throughout the L3 acquisition process.

The logic behind the CEM insists that the human language learning process is inherently "non-redundant" and "cumulative," and such character serves as a cognitive drive. The authors state that:

> Language learning is cumulative, and it excludes redundancy in linguistic representations. One of the logical corollaries of such a hypothesis is that the accumulated linguistic knowledge necessarily enhances subsequent language learning.
>
> (Berkes & Flynn, 2012, p. 114)

By supposing non-redundant acquisition, according to Rothman and Halloran (2013), this model posits that language acquisition shapes up following a reflex of cognitive economy, which guides human mind to avoid any redoing of any task. Thus, the mind will avoid learning anything already acquired before in the subsequent language acquisition. The other essential presupposition this model contends is that language acquisition is always cumulative. Therefore, previous linguistic representations only can have bootstrapping effect in the subsequent language acquisition; otherwise, prior representations stay neutral. This model rejects any possibility of non-facilitative transfer.

The authors reported the first seemingly supportive evidence for their model in the L1 Kazakh-L2 Russian-L3 English young and adult learners' dataset that tested the L3 Complementizer Phrase (CP) development (Flynn et al., 2004). The result hinted that participants' knowledge of L2 Russian CP structure seems to enhance L3 English acquisition of some relative clauses,

disproving the absolute L1 transfer hypothesis. In the follow-up study, Berkes and Flynn (2012) offered further evidence to their model by testing CP development in two different learner groups, L1 Hungarian-L2 German-L3 English learners and L1 German-L2 English learners. The authors reported that L1 Hungarian had a facilitative effect on L3 English and dismissed the possibility of transfer from the L2, insisting that L2 status could not decode the tendency.

With no doubt, the CEM, as the earliest formal model in the TLA studies, had a significant impact on setting and guiding the later discussion within the field. This model still has a milestone significance in the development of L3 transfer models that share the same goal. The advocates of later models, the L2SF, the TPM, the LPM, and the Scalpel Model, all explicitly or implicitly admit that they inherited the insights of the CEM to their reasoning. However, during the past 15 years, the core idea of this model that language learning is only positively cumulative has been logically criticized and empirically falsified. Because the learners' data has exhibited plentiful cases of non-facilitative transfer. The empirical counter-evidence to this claim was statistically confirmed in the seminal study of Puig-Mayenco, González Alonso, et al. (2018). This study reviewed seventy-one up-to-date L3 transfer experimental studies with an aim to evaluate the competing theoretical accounts proposed until now. They confirmed that the facilitative-transfer-only claim of the CEM is denied by more than 92.5% of reported datasets. Therefore, the authors argued that it might be high time to discard this model in the further discussion on establishing the L3 transfer model.

The purported 'only facilitative' argument is also denounced in the logical sense as well. Because, for a beginning learner who does not have sufficient L3 knowledge, it is impossible to judge *a priori* whether the transfer of the previous system will be facilitative or not. Furthermore, Rothman and Halloran (2013) find fault that if the motivation to refer to a formerly learned language system is the cognitive economy, transfer at the property-by-

property level directly goes against the concept of economy. Because selecting a possibly facilitative property from each language would only make the transfer process unnecessarily complex, placing an extra burden on the learner's mind. Amid the criticism, no theoretical modification or refinement has been made since its original proposal, unlike other models that constantly update and articulate the main idea of their formulations.

- ▪ Selection: both L1 and L2
- ▪ Trigger: non-redundancy, maximal facilitation, cumulative language
        learning
- ▪ Manner: property-by-property basis
- ▪ Effect: facilitative or neutral
- ▪ Stage: initial stages and beyond

5. The Typological Primacy Model

The Typological Primacy Model (TPM) (Rothman, 2010, 2011, 2013, 2015), to my knowledge, is the most studied and examined proposal among L3 morphosyntactic transfer models. Unlike the other transfer theories outlined above, the TPM does not consider the order of acquisition nor facilitativeness as a definite factor in the selection of source language.

In the genesis of its formulation, the TPM seemed to share the same thread with the CEM, that in Rothman (2013, p. 232), the author himself affirmed that this model could be viewed as "a more restricted version of the CEM (p.232)." However, there are critically different points between the two models. The CEM expects the transfer to be selective, working on a property-by-property basis, while the TPM predicts the transfer to be complete as a wholesale transfer (full transfer of language system as in the Full transfer Full Access Hypothesis by Schwartz and Sprouse (1996) on the L2 initial state) that the entire "reduplication or copy of one of the previously acquired

languages (Rothman et al., 2019, p. 24)" is transferred to the L3 initial hypothesis of a learner.

The author insisted that if the motivation for transfer is to optimize the cognitive economy, it should lessen or minimize the mind's task burden and avoid redundancy. Considering the economy, the TPM posits that CEM's selective transfer contradicts its central claim because selective transfer inherently increases efforts of the mind, making it more costly and slower.[24] Therefore, the TPM argues that parsers' best decision in selecting the source language is made as early and holistically as possible to be maximally helpful and to meet the fundamental motivation for transfer. The decision on which language to copy was later coined as the "Big Decision" by Schwartz and Sprouse (2021, p. 16), who support this model on L3 transfer. This wholesale transfer assumption gave rise to another crucial difference between these two models. In the TPM's prediction, a holistic transfer of one of the previous systems may result in a non-facilitative transfer at a property level.

The earliest definition of TPM is as follows.

> **Typological Primacy Model**: Initial State transfer for multilingualism occurs selectively, depending on the comparative perceived typology of the language pairings involved, or psychotypological proximity. Syntactic properties of the closest (psycho)typological language, either the L1 or L2, constitute the initial state hypotheses in multilingualism, whether or not such transfer constitutes the most economical option.

---

[24] Rothman et al. (2019) emphasized that if the selection is made property-by-property basis, it requires constant use of two language systems which entails two active sets of representations to compete for selection on multiple levels of language processing and production. This logically supports why TPM maintains transfer to be wholesale. They argued that, if not wholesale, the learner needs to activate all pre-existing grammars at a high degree for an extended time during subsequent language acquisition, which would be too costly and heavy for the cognitive system. This claim is refuted by Westergaard (2021c) who supports property basis transfer. She commented that if economy is the motivation, it is impossible to assume that making the entire copy of a grammar (TPM's understanding of transfer) is cognitively less costly than just accessing the previously acquired grammars whenever is needed.

As we can infer from its label Typological Primacy Model, the (psycho)'typology' was first deemed as the decisive factor in selecting a transferred language. It implied that the learners would cling to their 'best guess' or 'best bet' based on their impression of the typological distance between the source and the target language, which may not necessarily concord with the true typological relationship between them. Furthermore, the learner's best guess is not always correct, which would then give rise to a non-facilitative transfer.

Later in Rothman (2013), the author offered modifications on two critical concepts: 'initial state' and 'psychotypology.' First, the author made it clear that the use of the term initial state in his former definition was misleading and that this model endeavors to illustrate the transfer dynamic during the 'initial stages' of acquisition. By using *stages* instead of a *state*, the author intended to encompass not only the very starting point but also the minimally required period of an early phase of L3A into the scope of his model.[25] The TPM mainly argues that the selection of transferred language is determined based on the learner's unconscious comparison of structural properties between L3 and the background languages. Therefore, when no L3 input is given, it is impossible for a learner to make any decision. Let me reiterate Rothman's (2015) definition of initial stages presented in the introduction of this chapter. He defined the initial stages as "the earliest possible moment when the learners have received a minimally sufficient exposure to the L3 to evaluate the relative structural similarity between the source and target languages (p.179)."

Secondly, Rothman defended that the term *psychotypology* used in the first definition of his model has been misunderstood. He initially insisted that

---

[25] For this reason, some criticize that the TPM is a L3 initial stage model than the L3 transfer model.

pschotypology should be understood in reference to Kellerman's (1983) conceptualization, which referred to a parser's conscious evaluation of the typological similarity or difference.[26] However, Rothman (2013) refined his former argument that a learner does not 'consciously' determine or evaluate the typological similarity. He pinpointed that "by psychotypology, the TPM refers to an unconscious perception, for lack of a better descriptive word, of comparative structural similarity globally, i.e., not in a domain-by-domain sense … In this sense, the TPM claims that the selection of underlying morphosyntactic transfer is an INVOLUNTARY REFLEX dependent on parsing and processing mechanism (p. 235)." By defining transfer as a form of reflex of cognitive economy, the TPM completely rejects the role of consciousness in determining typological similarity. Furthermore, Rothman (2013) stipulated that the more precise word that describes his idea would be '*structural*' rather than '*typological.*' It is the structural proximity that governs the selection of language to be transferred. Then, the next question follows: what are the factors that determine the structural similarities between the languages?

Rothman (2013) and Rothman (2015) proposed a hierarchical continuum of linguistic cues that would affect the parser's (unconscious) assessment of structural similarity between the tripartite grouping.

(1) lexicon → (2) phonological/phonotactic cues → (3) functional morphology and its features → (4) syntactic structure

---

[26] "Perceived similarity is not necessarily the same as the objective similarity between languages that linguists can identify and describe. In classical papers, Kellerman (1977, 1978, 1983) explored learners' projections of similarities and intuitions about language distance. He introduced the term psychotypology to denote 'the learner's perception of language distance' (Kellerman 1983: 114). The empirical issue is to find out what learners' perceptions are in given situations of language acquisition, and how this affects their evaluation of language distance." (Hammarberg, 2009, p.130)

He posited that a more straightforwardly detectable linguistic factor engages earlier in the process in a hierarchical order, noting that morphological or syntactic cues demand more experience and profound knowledge about the L3 to be noticed. The order reflects not only the sequence but also the weight of importance. In this schematization, a learner is expected to subconsciously assess the linguistic similarity among languages at a lexical level first. If this level were sufficient to establish a connection, then the selection of source language would be induced at this level alone. If there were not enough lexical overlap for the parser to establish similarity, the next cue would come into play. Rothman claims that even among the language pairings where neither language is intuitively similar to the L3, the TPM can provide predictions because assessment of structural proximity itself works as a reflex of general cognitive economy.[27]

The first version of TPM was tested by Rothman (2010). The author examined the prediction by the CEM, the L2SF, and the TPM, juxtaposing two mirror-image L3 Brazilian Portuguese (BP) learner groups, the L1 English-L2 Spanish group versus the L1 Spanish-L2 English group, both highly proficient in their L2. He tested the word order differences in declarative and interrogative constructions and the relative clause attachment preference, high or low, in relative clauses in BP. The L3 is typologically more akin to Spanish, but its strictness in the word order in declarative and interrogative construction is similar to English. In addition, BP and English both show low attachment preference for relative clause interpretations. Therefore, in this particular learning situation, the transfer of typologically

---

[27] Rothman (2013) note that "if indeed, as I have suggested, the transfer behavior the TPM attempts to model is essentially a reflex of cognitive economy, then it stands to reason that the parser is indefinitely scanning the input to make decisions about which system is the "best bet" to transfer whether or not there is actual genetic relationship between the target and one of the existing system. In other words, the parser obviously has no preference or motivation to select what seems intuitive based on anecdotal observations of similarity, but rather is charged with determining what would be the most economic choice linguistically. Structural similarities, at least as I mean them here, are linguistic theory internal notions, not intuitive ones necessarily (pp.237-238)."

similar background language would be non-facilitative. Results confirmed that Spanish is transferred in both groups. This result rejected the CEM's claim that transfer can only be facilitative and disproved L2SF's argument that only L2 transfers. Further supportive evidence was reported in other studies that studied the same language pairing in different grammar domains (e.g., Cabrelli Amaro & Rothman, 2015; Giancaspro, Halloran, & Iverson, 2015; Montrul, Dias, & Santos, 2011).

After the proposition of the TPM, the model was tested in diverse language pairings, and solid empirical evidence for its claim was reported. According to Rothman and Halloran (2013), the supporting data is found particularly from language combinations of Germanic and Romance languages, which may question its universal applicability. However, Rothman, Alemán Bañón, and Gonzáles Alonso (2015) claim that recent research with more diverse language pairings (e.g., L1 Tuvan/L2 Russian/L3 English, Kulundary and Gabriele, 2012; L1 Uzbek/L2 Russian/L3 Turkish, Oxcelik, 2018; L1 Polish/L2 French/L3 English, Wrenbel, 2012; L1 English/L2 Spanish/L3 Arabic, Goodenkauf and Herschensohn, 2014), has shown similar support for the TPM.

- ▪ Selection: either L1 or L2
- ▪ Trigger: typological similarity → structural similarity
- ▪ Manner: wholesale basis
- ▪ Effect: facilitative or non-facilitative
- ▪ Stage: initial stages

6. The Linguistic Proximity Model

The Linguistic Proximity Model (LPM) (Mykhaylyk et al., 2015; Westergaard, 2021b; Westergaard et al., 2017) refutes the idea that only one background language system has an absolute or privileged status for

transfer.[28] This model claims that transfer obtains property-by-property, therefore, it could be from both L1 or L2, regardless of the order of acquisition.

The authors explicitly admitted that it builds its discussion on both the CEM and the TPM. First, it incorporated the argument of the CEM that transfer does not necessarily obtain entirely; instead, a domain-by-domain transfer is considered possible over the course of L3 development. However, unlike the CEM, this new model expects misanalysis may give rise to non-facilitative transfer. Secondly, the LPM shares the common core of the TPM that linguistic similarity between the source language and the target language is deterministic in the transfer selection. However, the authors of the LPM interpret that the TPM focuses primarily on typological similarity among languages, while their new model spotlights the 'abstract structural similarity as the decisive factor at the property level.[29]

The original version of LPM is stipulated as below:

Linguistic Proximity Model: L*n* acquisition involves incremental property-by-property learning and allows for both facilitative and non-facilitative influence from one or both previously acquired languages. Crosslinguistic influence occurs when a particular linguistic property in the L*n* input reveals abstract structural similarity with linguistic properties of the previously learned languages.

(Westergaard et al., 2017, p. 670)

It should be highlighted that the LPM allows for hybrid transfer, and the hybridity is available through its presumption of property-by-property basis

---

[28] Unlike TPM, the LPM does not distinguish the concept of transfer and crosslinguistic transfer, which Wrembel (2021, p. 442) evaluates as a 'welcome detour' from the previous approach. Westergaard and her colleagues intentionally used "crosslinguistic influence" to incorporate broader scope of the phenomena, however, for the terminological coherence of this thesis, I will continue to use transfer.

[29] Lastest discussion from Westergaard (2021b) admitted that the typological transfer based on surface resemblance may obtain in the very early stages of L3 acquisition because LPM's abstract structural similarity is hard to be noticed by early beginners.

activation and inhibition of pre-existing linguistic representations. [30] In essence, the LPM contends that transfer materializes on a property-by-property basis, possibly from both languages through "co-activation" of pre-existing grammars throughout the acquisition process, in contrast to the TPM's prediction of a "complete copy" of one language transferred at the initial stages. Furthermore, unlike TPM, the LPM predicts that transfer is available throughout the learning process at any stage of L3 acquisition, although the need to resort to background properties would diminish as the proficiency in the target language grows. [31] Therefore, the activation to a higher level is expected in the early stages because L3 representations are unstable, and in the later stages, the influence from background languages would diminish because accumulated L3 knowledge and experience guide them to "inhibit representations from other languages (Westergaard, Mitrofanova, Rodina, and Slabakova, submitted, p. 9)."

In her recent keynote article, Westergaard (2021b) proposed Full Transfer Potential (FTP) and explicitly opposed the TPM's view that transfer only happens "in one fell swoop" during the initial stages. The FTP positions against the traditional view of Full Transfer (FT), insisting "'anything may transfer,' not that 'everything does transfer'(p.389)." In her understanding, language acquisition takes place by parsing, and the learners incrementally build the new grammar system property-by-property in a step-wise fashion, and the transfer may obtain in any stage of acquisition because all previously acquired languages are "active," and the learners have access to them at all stages of acquisition. The process of how existing properties influence the L3 acquisition can be explained as below.

---

[30] Westergaard et al. (2017) assert that this hybridity is in line with De Angelis's (2007) notion of combined CLI, which refers to a situation where "two or more languages interact with one another and concur in influencing the target language (p.21)."

[31] Rothman et al., (2019) argue that the TPM does not entirely reject the possibility of transfer at the property level. The logic is that if the full transfer of one of background languages causes constant parsing failure, the learners in the later stages may select property of the language that was not formally copied.

> The LPM argues that there is only one mechanism responsible for crosslinguistic influence: parsing. This is, using a structure from a previously acquired language to parse L3 input will result in a temporary, unstable L3 representation that is influenced by that language. Further input conflicting with this representation may quickly wash it out, while further supporting input and use will strengthen it and make it a stable property of the L3 grammar. Thus, parsing will gradually lead to stable linguistic representations.
>
> (Westergaard, 2021b, p. 396)

Furthermore, Jensen (2022) notes that the possible candidate structures of the pre-existing grammars compete with each other through a fine-grained comparison of the features, and the structures that show the best "overall fit to the L3 system" in the property level will be activated in the target language. This means that if a learner knows more languages, it will get easier to acquire another language because of the larger repertoire they have for incremental language acquisition.

It is important to remember that her property-basis-transfer does not mean that the actual effect of both languages is always found. Instead, it means that it is possible to observe them because pre-existing grammars remain active throughout the L3A. Therefore, under LPM transfer, crosslinguistic influence, in her words, is a co-activation of structures in the mind.[32]

> It has been emphasized that according to this model [the LPM], crosslinguistic influence is due to co-activation of corresponding structures in the previously acquired languages, where linguistic proximity of abstract

---

[32] It is important to clarify that the LPM rejects the use of term transfer, and uses the crosslinguistic influence to refer to the phenomena. A word transfer, to the supporters of the LPM, connotes that something was copied and moved as a whole from one system to another, the idea which Westergaard and colleagues refutes. The term transfer was used here for the coherence of the discussion.

structures plays the major role, while other factors may affect the strength of this activation.

<div align="right">(Westergaard, 2021a, p. 514)</div>

The LPM, unlike other transfer models reviewed above, fully embraces the empirical reality that it is hardly possible to account for all the data through one single factor. She maintains that the abstract structural similarity is the decisive factor but definitely is not the only responsible factor for the activation of property for transfer. Other factors include "frequency, availability of clear and unambiguous input, prevalent use, and structural linguistic complexity proposed by Slabakova (2017, p. 673) and age, recency of use, instruction and language dominance, even surface typological similarity (only during the early stages of acquisition) and the order of acquisition (Westergaard, 2021b, p. 399).[33]" And other factors are open for future investigation.

The criticism to the first version of LPM arose mainly from the supporters of wholesale transfer. Rothman et al. (2019) commented that the model is vague in explaining the mechanism that triggers non-facilitation under property-basis transfer. Westergaard (2021b) defended her model that non-facilitative transfer obtains when the parser wrongly analyses the new input to hold similarity to the structures of one of the background languages and then activates the grammar "assuming it is identical (when in fact it is not) (p.389)." Another criticism arose from its elusive stance on the difference between 'transfer' and 'crosslinguistic influence'. Rothman et al. (2019) argued that respecting the history of the generative framework that makes a

---

[33] The author recognizes the possibility of initial stage learners being influenced by typological similarity, especially when faced with a very complex syntax structure that bears a close surface typological resemblance. Which makes same prediction for initial stage learners with the TPM. However, as its original argumentation, the LPM contend that with the advancement to the higher L3 proficiency, the effect of typology on transfer diminishes, and the role of abstract structural similarities increases (Westergaard, 2021b, pp. 394-395).

fundamental distinction between *competence* and *performance* and that the generative approaches have long focused on *competence*, generative attempts to model the influence from prior linguistic knowledge should be of competence rather than performance. For Rothman and his colleagues, the LPM, which analyzes overall L3 behavior, does not distinguish these two basic concepts clearly. Rothman et al. (2019) comment that "If they are targeting different things primarily, such that the LPM focuses on performance across development and the TPM on competence of initial-stages representations, then they are not truly comparable. Evidence in favor of one, in juxtaposition, will not always be relevant to invalidate the other (p. 143)." However, again, Westergaard (2021b) rejects the distinction between the transfer and the CLI due to the lack of theoretical foundation on their difference and argues that it is impossible to make a complete separation between them in reality. Her use of crosslinguistic influence in broader terms is supported by recent works that claim property-basis transfer (Sharwood Smith, 2021; Wrembel, 2021).

Given the relatively shorter history of the proposal, there is a limited number of studies that explicitly set a goal to test the validity of the hypothesis. Mykhaylyk et al. (2015) and Westergaard et al. (2017) are the first datasets reported to support the idea of the LPM. The first study tested Norwegian-Russian bilingual learners of L3 English with L1 Norwegian and L1 Russian control groups. The authors attempted to test the predictability of their claim by contrasting the predictions made by CEM, TPM, and LPM.[34] The two grammatical domains, Adverb-Verb word order (ENG = RUS ≠ NOR) and Subject-Auxiliary inversion (ENG = NOR ≠ RUS), were tested. English and Norwegian are Germanic languages that are typologically close, however, Norwegian (V-adv) exhibits different word order in verb placement, and

---

[34] It is worth taking note that the learner group that participated in this study were early childhood bilinguals, while other transfer studies in the generative TLA framework typically examined adult L3 learners.

Russian (adv-V), the typologically distinct language, is more similar in this grammatical domain. On the other hand, Norwegian is typologically and linguistically akin to English in regards to Aux-S construction. The rate of the correct assessment in the verb placement showed 'L1 RUS group > Bilingual group > L1 NOR group' tendency, which led the authors to reject the typology-based-transfer models. They contended that Russian, despite the typological distance, remained active in the transfer process in a facilitative manner. In the latter study, Westergaard and her colleagues tested the same group with the same grammatical properties. The tendency found in their former study was again confirmed that typologically irrelevant Russian promoted the acquisition of both adverb-verb word order and the subject-auxiliary inversion while Norwegian exhibited a non-facilitative effect in L3 English acquisition. The most recent empirical foundation for the LPM is documented in Jensen (2022). This dissertation combined the result from three articles (Jensen, submitted; Jensen et al., 2021; Jensen & Westergaard, submitted) to answer two overarching research questions, "whether human beings are sensitive to fine-grained linguistic properties in the learning process" and "whether the crosslinguistic influence is a matter of copy or co-activation (p.4)." These two questions roughly translate into the comparison of TPM's wholesale transfer through copy versus LPM's property basis influence of pre-existing grammars based on the co-activation. The data from Norwegian-English sequential bilinguals in the early exposure to the L3 artificial language and that from Norwegian-Russian bilingual learners of L3 English at the intermediate level rendered strong support for the LPM.

- Selection: both from L1 and L2
- Trigger: similarity of abstract linguistic properties/structural similarity
- Manner: property-by-property basis (through co-activation)
- Effect: facilitative or non-facilitative
- Stage: initial stages and beyond

7. The Scalpel Model

Slabakova (2017) proposed the Scalpel Model (SM) to call out the need to build a more comprehensive transfer model that incorporates the later stages beyond the initial state and depicts the entire process of the L3 acquisition. The fundamental idea of the SM refutes the L1-only or L2-only transfer models. To fully grasp what the author intends to propose through the SM, it is crucial to understand her presumption of the linguistic representations in the multilingual brain. Based on the neurolinguistic perspective, the author considers that "the multilingual brain is one human brain operating with multiple grammars (pp.5-6)", therefore, the linguistic representation of a multilingual is a combination of the L1 plus the L2 grammar.[35] As a result, there can be no privileged status for neither L1 nor L2.

> This model incorporates some features of the CEM and some features of the TPM, while crucially parting ways with other claims of these models. In a nutshell, this view of L3A argues that the activated grammatical possibilities of the L1-plus-L2 combined grammar act with a *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, the scalpel can be blunted or shunted or slanted by additional factors pertaining to the relevant properties, such as processing complexity, misleading input, and construction frequency in the target L3.
>
> (Slabakova, 2017, p. 5)

---

[35] Slabakova extended Grosjean's (1989) famous argument "*bilingual is not two monolinguals in one person*" to support her idea that in neurolinguistic perspective, when L1 and L2 are acquired, they exist as one combined grammar competing with and influencing each other.

By using the *scalpel* metaphor, the author intends to show that transferred language can be selected from the combination of L1 and L2 through a scalpel-like precision of the mind to extract or retrieve parametric values from either background language to promote L3 acquisition. It assumes that a bilingual mind is fully equipped to execute the L3 acquisition quite precisely, just like a scalpel. Therefore, this model posits that there is no need for a wholesale transfer because the mind can carve out precisely what they need to acquire a particular property. However, noting that "scalpels cannot cut through bone (p.3)", the SM predicts that in some cases, there can be cases of non-facilitative transfer. Slabakova argues that a structural consideration among languages may be the most relevant factor for transfer while claiming it is not the only factor that may come into play. Other additional factors that may engage in the transfer process include structural linguistic complexity, misleading input, construction frequency in the target L3, and others.

In regards to how transfer obtains, the SM directly opposes the TPM's claim of wholesale transfer. She questions that there is no reason for a full transfer and advances her idea that the transfer can be from both previous language systems through property-by-property transfer. [36] Therefore, acquisition patterns may differ for different properties according to the structural considerations. Meanwhile, unlike the CEM, the model accepts the possibility of non-facilitative transfer. The recent work of Westergaard, Mitrofanova, Rodina, and Slabakova (submitted) clearly shows that the SM and the LPM stances very closely in their understanding of influence from pre-existing languages to L3A.

Clements and Domínguez (2018), to my knowledge, is the only study that explicitly set a research goal to test the validity of the SM. The study

---

[36] While the TPM predicts that wholesale transfer is the most economical option to lessen the cognitive burden during the first stages, Slabakova directly opposes this idea that if a learner has to choose only one, the parser has to suppress or inhibit other languages which will conversely cause additional burden in the later stages. I direct the reader to Rothman et al. (2019) for the refutation on this claim.

examined the acquisition of null and overt subjects, comparing two learner groups: L1 English-L2 Spanish-L3 Chinese learners and L1 English-L2 non-null subject language-L3 Chinese learners. The previously acquired languages were typologically irrelevant, and both L1 and L2 had similarities and differences from L3. Spanish and Chinese behaved similarly in the test items of null subject constructions ('John says that he/*∅ has been to London'). In contrast, English and Chinese behaved alike for embedded overt subject constructions or so-called Overt Pronoun Constructions ('Every student$_i$ says that he$_{i/j}$ wants to come tomorrow'). In the first group, unlike the latter group, the tendency to transfer L2 Spanish value in null subject constructions and to transfer L1 English property in overt subject construction was confirmed, supporting SM's prediction that the transfer can be partial, coming from both L1 and L2 for different properties. The authors reflect that the SM offered an alternative account for L3 transfer, challenging the TPM's assumption of full transfer.

Puig-Mayenco, Miller, and Rothman (2018) and Rothman et al. (2019) criticize that the SM, as a theoretical model, still lacks a precise specification or rubric of decisive factors that it intends to test, and it is not clear on when and by what aspect the *scalpel* would be *blunted*. Many factors may indeed play a role in the selection of a transferred language. However, the factors listed by Slabakova are too extensive in respect of falsifiability. Furthermore, there are not many studies yet, considering the age of the model, to support or verify the central claim of the SM. Notwithstanding the defects mentioned above, this model has put forward a novel claim to come up with a model that could depict the more extended process of L3 acquisition.

- Selection: both from L1 and L2
- Trigger: perceived structural typology, frequency, misleading input
- Manner: property-by-property basis
- Effect: facilitative or non-facilitative

▪ Stage: initial stages and beyond

8. Summary

In this chapter, I outlined the central ideas of the theoretical framework for this thesis, the Third Language Acquisition (TLA), and comprehensively reviewed six positions on L3 transfer put forward until now. The one consensus that all models acknowledge is that the linguistic transfer of previously acquired languages into the subsequent is not a result of *ad hoc* or random impulse. Instead, it is a systematic linguistic phenomenon that predictably materializes according to the trajectory driven by one particular or multiple linguistic factors. The theories and models reviewed in this section will serve as a theoretical framework for analyzing the learners' data collected in this investigation.

The extensive review of the models confirmed the specifications that make each proposal unique and meaningful are based on their respective interpretations and predictions on the following questions: (1) which language system is selected as the source of transfer, (2) what factor triggers such cognitive selection, (3) how does transfer materialize, property basis or wholesale, (4) what is the expected effect of transfer, facilitative or non-facilitative and (5) which developmental stage does it describe (e.g., initial, intermediate, advanced stages or all over the developmental process). The table below contrastively summarizes the main arguments of each model reviewed in this chapter.

Table 2.1. Summary of central tenets of the current L3 transfer models

Model	Selection of transfer	Trigger	Manner	Effect	Stage
L1 transfer (Hermas, 2010, 2014a, 2014b; Jin, 2009; Na Ranong & Leung, 2009)	default L1	inherit nature of L1	wholesale	both facilitative & non-facilitative	-
L2 Status Factor (Bardel & Falk, 2007, 2012; Bardel & Sánchez, 2017; Falk & Bardel, 2011)	default L2	L2 status/high metalinguistic knowledge	wholesale	both facilitative & non-facilitative	Initial & Intermediate
Cumulative Enhancement Model (Berkes & Flynn, 2012; Flynn, Foley, & Vinnitskaya, 2004)	either or both	cumulative & non-redundant language learning	property -by-property	only facilitative or neutral	Initial & Beyond
Typological Primacy Model (Rothman, 2010, 2011, 2015)	either but only one is selected	typological/structural similarity of the languages	wholesale	both facilitative & non-facilitative	Initial stages
Linguistic Proximity Model (Mykhaylyk, Mitrofanova, Rodina, & Westergaard, 2015; Westergaard, 2021b; Westergaard, Mitrofanova, Mykhaylyk, & Rodina, 2017)	either or both (co-activation)	abstract structural similarity and others	property -by-property	both facilitative & non-facilitative	Initial & Beyond
Scalpel Model (Slabakova, 2017)	either or both	structural considerations and others	property -by-property	both facilitative & non-facilitative	Initial & Beyond

The above schematization reveals that the central point of dispute among the models lies in whether the transfer obtains in its totality or by property.

It is true that still no model within the TLA field has been proven to fully describe the transfer dynamics in L3A. The proponents of the models are still actively questioning, defending, and modifying their accounts to achieve the common goal: to design a model that could explain and predict the transfer dynamics in multilingual acquisition. It is promising that recent years have witnessed an outpouring of L3 learners' data that could offer a better chance to refine the main arguments of these models. Against this backdrop, this thesis attempts to contribute to the current academic endeavors by submitting Korean learners' data. With this in mind, the following discussion from Chapter 3 to Chapter 6 will respectively offer an examination of four grammatical features to confirm the transfer dynamic in the acquisition of L3 Spanish by Korean native learners.

CHAPTER 3. THE OVERT PRONOUN CONSTRAINT

1. Introduction

Montalbetti (1984) proposed the principle of the Overt Pronoun Constraint (OPC) to demonstrate that the null subject languages (NSLs) abide by a universal principle that governs the distribution and the interpretation of null and overt subjects in two different contexts: a quantifier/variable binding constructions and referential construction. He captured that null and overt Spanish pronouns behave differently in constructions that require variable interpretation. According to the OPC, the null pronoun allows both referential and variable interpretations. In contrast, the overt pronoun is available only for referential interpretation because the overt subject in the subordinate clause cannot be linked to a variable expression or *wh*-phrase in the main clause. Therefore, a bound variable interpretation of an overt subject is impossible in Spanish.

Let's look at the examples.

(8)   a. Juan$_i$ cree que [*pro*$_{i/j}$ es inteligente]

         b. Juan$_i$ cree que [él$_{i/j}$ es inteligente]

           'John believes that he is intelligent.'

(9)   a. Nadie$_i$ cree que [*pro*$_{i/j}$ es inteligente]

         b. Nadie$_i$ cree que [él$_{*i/j}$ es inteligente]

           'Nobody believes that he is intelligent.'

                        (Montalbetti, 1984, p. 83, p.85)

(10)   a. ¿Quién$_i$ dice que *pro*$_{i/j}$ tiene mucho dinero?

       b. ¿Quién$_i$ dice que él$_{*i/j}$ tiene mucho dinero?

       'Who says that he has a lot of money?'

(11)   a. Cada estudiante$_i$ sabe que *pro*$_{i/j}$ debe estudiar mucho para pasar el examen.

       b. Cada estudiante$_i$ sabe que él$_{*i/j}$ debe estudiar mucho para pasar el examen.

       'Each student knows that he should study to pass the exam.'

                     (Rothman & Iverson, 2007c, p. 190)

In a referential antecedent context, as in (8), where the antecedent is referential, the overt and null pronouns are interchangeable, not affecting the meaning nor the referential properties of the sentence. However, the null and overt subject alternation is not optional in a quantified antecedent context (9), which is the constraint that the OPC attempts to capture. First, in (9a), the null pronoun is potentially ambiguous, and *pro* can receive both referential and bound variable interpretation. The sentence can be understood as that each individual thinks that they are not intelligent (nadie=*pro*), or a referential interpretation, that the null pronoun designates a specific 3rd individual somewhere in the context (a third person=*pro*). There is simply no restriction for a *pro* to co-refer to both an NP or a variable expression in the main clause. Meanwhile, in (9b), the OPC is operative, and the embedded overt subject cannot be linked to bound to the quantified antecedent in the matrix clause: the overt pronoun can only exclusively refer to a particular individual. The same applies to examples (10) and (11).

    Montalbetti (1984) established such asymmetry as below.

 (12) Overt Pronoun Constraint (OPC)

Overt pronoun cannot link to formal variable iff the alternation overt/empty obtains.

<div align="right">(Montalbetti, 1984, p. 94)</div>

Later, Lozano (2002c) summarized the tenet of this constraint as the following.

(13) OPC contexts:

    a. [QDP$_i$ … null$_{i/j}$]

    b. [QDP$_i$ … overt$_{*i/j}$]

<div align="right">(Lozano, 2002c, p. 609)</div>

It suggests that the overt pronoun only allows for disjoint interpretation with a quantified determiner phrase (QDP), quantified or wh-word antecedent as in (13b). In contrast, *pro* permits joint interpretation and can be a bound variable to a QDP as in (13a).

From an acquisitional perspective, two closely related characteristics of the OPC have often been mentioned: universality and learnability. First, this interpretative constraint is considered a part of UG that holds universality. As briefly discussed in section 1.2. of this thesis, this principle is widely accepted as one of the NSP clustered properties. The OPC is instantiated universally in all languages that allow phonetically null subjects.[37] Therefore, the OPC regulates the asymmetric behavior of the null and overt pronoun in both subject-drop languages (Spanish) and topic-drop languages (Korean). Second, another important noticeable acquisitional trait of this constraint is that the OPC construction is the typical case of *Poverty of Stimulus* (POS) problem

---

[37] As reviewed in the introduction of this thesis, the so-called cluster of properties of NSP is not free from debate. The firstly proposed cluster of NSP derived properties included: (a) the co-occurrence of null and overt subject pronouns in tensed clauses, (b) obligatory null expletive subjects, (c) preverbal and postverbal subjects, (d) no *that*-trace effects, and (e) the instantiation of the Overt Pronoun Constraints (Rizzi, 1986). For a detailed review of other properties, I direct readers to Rothman and Iverson (2007a) and Rothman and Iverson (2007c).

that poses a learnability issue both in native and nonnative language acquisition. Since the construction itself is so rare in the learners' input, it is naturally underdetermined. Furthermore, the constraint is not explicitly taught in the classroom nor clearly stated in the textbook. Lozano (2002a) offers supportive evidence to the claim that the OPC is a linguistic universal with POS problem for the following reasons.

(i) Similar effects are found in other *pro*-drop Romance languages like Portuguese, Italian, Greek (Montalbetti, 1984, 1986) and in typologically unrelated languages like Chinese Xu (1986) and Japanese and Korean Kanno (1997).

(ii) In learnability theory, the OPC represents a typical case of poverty of the stimulus phenomenon, since the ungrammatical construction [*QDP$_i$ … overt$_i$] is not present in the Spanish input (neither in L1 acquisition nor in L2 acquisition). Input in the form of positive evidence alone does not contain ungrammatical expression. Therefore, OPC knowledge must be part of UG principles.

(iii) OPC constructions are never explained in textbooks. Kanno (1997) Pérez-Leroux and Glass (1997) Pérez-Leroux and Glass (1999) Therefore, instruction can be discarded as the source of knowledge of OPC.

(Lozano, 2002a, p. 55)

The properties like the OPC formed the grounds for the generativists to argue that some grammars must be innately specified, or at least inherently given irrespective of the acquirer's mother tongue, emphasizing the role of UG in the nonnative language acquisition. Therefore, the previous L2 acquisitional literature has approached the learners' OPC behavior to study the

operativeness of the UG in a nonnative acquisition.[38] The following section will briefly review the OPC acquisition studies that examined the languages of interest in this thesis.

2. Previous literature

2.1. OPC in nonnative Spanish

The studies reviewed here investigated the acquisition of the OPC considering various factors that could shape the learning process, such as the role of UG, frequency effect, L1 effect, L2 learning environment, and the contrastive acquisition pattern of UG constraint versus the interface-related properties. The pioneering study to examine the acquisition of the OPC in a nonnative context is Pérez-Leroux and Glass (1999). The authors investigated how L2 learners behaved in two different constructions, the OPC and the Topic/Focus constructions. The design of the test items was intended to confirm whether language learning develops generatively (guided by the UG) or in a probabilistic manner (guided by frequent input). The OPC constructions are low in L2 input but a part of UG, while Topic/Focus constructions are relatively frequent but require a mapping between the syntax and pragmatics. The generativist approach would expect the OPC

---

[38] White (2003) pointed out that for a researcher to rightfully prove that a particular UG principle governs learners' interlanguage grammar, the examined property must hold the two important preconditions. First, (a)"the phenomenon being investigated must be underdetermined by the L2 input" that no effect from the frequency in the input or analogy or instruction should guide the acquisition of the feature. Second, (b) "the phenomenon should work differently in the L1 and L2" to rule out any possibility of learning via L1 transfer" (p. 23). To abide by these two criteria in testing the OPC, the learner group must have non-*pro*-drop language as their native language to satisfy the ideal research design to probe whether the interlanguage is UG constrained. The exemplary studies of nonnative OPC acquisition have followed the criteria that the native language of the participants is mostly English, and the target languages are various NSLs, such as Spanish (Lozano, 2002; Pérez-Leroux & Glass, 1999; Rothman & Iverson, 2007a, 2007b; Rothman, 2009), Japanese (Kanno, 1997, 1998; Marsden, 2001) or Turkish (Gürel, 2003, 2006) to list a few.

knowledge to be present from the early stages of L2 development through full access to UG. The L1 English and L2 Spanish learners in three different stages participated in the analysis: elementary (4th semester), intermediated (4th yr.), and advanced (at least 7yrs). The participants were asked to read a given context in English and then translate the following sentence into Spanish. The contexts were some referential stories and others bound-variable stories.

(14) Referential story

In the O.J. Simpson trial, it is clear that the press has a negative bias against the defendant in their reporting. Some journalist said that he was a wife-beater.

[To translate] *'But no journalist said that he is guilty'*

(15) Bound-variable story

The court charges that some journalist had been in contact with the jurors. Several of them were questioned by the judge.

[To translate] *'No journalist admitted that he had talked to the jurors'*

(Pérez-Leroux & Glass, 1997, pp. 232-233)

The target translation for (14) type is with overt subject 'él', as in '*Ningún periodista dijo que él era culpable.*', while for (15), the OPC is operative therefore only null subject is possible, '*Ningún periodista admitió que pro le había hablado a los jurados.*' The result supported that the OPC is operative even in the early stages of acquisition and that elementary learners showed meaningful contrast in the use of null and overt subjects in bound-variable stories (Null: 57.7% > Overt: 34.0%) vs. referential stories (Null: 21.2% < Overt: 67.9%). Thus, the authors concluded that it was the UG and not the frequency that drove the L2 acquisition, further advocating for the importance of the UG-oriented approach in nonnative acquisition.

Lozano (2002a) expanded the scope of research to confirm the role of the native language in the L2 acquisition process. He contrasted L1 Greek learners with L1 English learners of Spanish. Greek is an NSL that the OPC is operative. In contrast, the constraint is not instantiated in English grammar.

(16) Context: The government has published a report about students' financial situation. The report concluded that…
a. cada estudiante$_i$ dice que *él$_i$/*pro*$_i$ tiene poco dinero.   (Spanish)
b. o kathe mathtis$_i$ lei *aftos$_i$/*pro*$_i$ ehi liga lefta.   (Greek)
c. each student$_i$ says that he$_i$ /*pro*$_i$ has little money.   (English)

(Lozano, 2002a, p. 55)

The author hypothesized that for L1 English learners, only UG could lead them to a native-like behavior in the OPC. While for L1 Greek learners, it could be either UG or L1 transfer that promoted the native-like OPC behavior. Therefore, if these two groups do not display any difference in the OPC stimuli, one can infer that only UG drives the nonnative acquisition. Based on these assumptions, the hypothesis was set that 'if UG constrains knowledge of the OPC, learners will show sensitivity to it despite their L1s'. The participants were all advanced level in Spanish and were tested using an acceptability judgment test on a Likert rating Scale (-2 (completely unacceptable), -1, 0, 1, 2 (completely acceptable)). The target stimuli were designed as (16), using three conventional quantifiers '*todo el mundo* (everybody)', '*cada* (each),' and '*ningún* X (no X)'.

The questionnaire contrasted the OPC constructions that are purely part of UG with the CFC (contrastive Focus Constraint) constructions that require integration of a pragmatics interface.

(17) OPC   (18) CFC
    [*QDP$_i$ … OVERT$_i$]   [QDP$_i$ … OVERT$_i$]

$$[\text{ QDP}_i \ \dots \ \text{NULL}_i] \qquad\qquad [*\text{QDP}_i \dots \ \text{NULL}_i]$$

As in (18), the CFC requires the subject to be overt because the context requires one of the referents to be contrasted to avoid any possible ambiguity in anaphora resolution.[39] And the OPC only allows the null subject for bound variable interpretation, as seen in (17). First, the mean acceptability judgment in the OPC constructions confirmed that the English and Greek group do not differ from Spanish natives leading the author to suggest that learners have sensitivity to the OPC regardless of their L1 configuration. On the other hand, the CFC stimuli results confirmed that English natives tend to accept null pronouns equivocally even when an overt subject is required, showing over-extension of the null subject. Intriguingly, this study incorporated the effect of native language in the OPC acquisition for the first time. However, the participants were at an advanced stage, which is not the ideal phase for observing the transfer effect, which might have mitigated the possible L1 effect during the early acquisition.

Another factor studied in the nonnative acquisition of the OPC is the influence of the learning environment. Rothman and Iverson (2007a), Rothman and Iverson (2007b), and Rothman and Iverson (2007c) shared the same research question: does the L1 English-L2 Spanish learners' study abroad experience grant the students with a significant advantage in resetting the NSP parameter? The authors presumed that the OPC, as an uncontroversial clustered value of NSP, is the ultimate property that could evidence the successful reconfiguration of the parameter in learners' data.

---

[39] Below is the CFC example from Lozano (2002a, p.59).

El señor López y la señora García trabajan en la universidad y en una famosa editorial.
(Mr.López and Mrs.Garcia work at the university and at a famous editorial.)
No obstante… *(Nevertheless,)*
  (a) cada estudiante dice que él tiene poco dinero. (target acceptability: +2)
      (each student says that he has little money.)
  (b) cada estudiante dice que tiene poco dinero. (target acceptability: -2)
      (each student says that has little money.)

They set out to see whether naturalistic input is critical for parameter resetting and tested thirty intermediate L2 learners before and after a five-month study abroad program in Spain, and in (2007c), classroom-only students were further included in the comparison. A series of tasks probing the cluster of properties of NSP was conducted, but here I will only review the ones that directly tested the OPC property. For the first OPC questionnaire, they adopted Kanno's (1998) modeling: a co-reference judgment matching task.

(19) Overt embedded pronoun (OPC forces (b) as the only answer)
    ¿Quién dice que él lo sabe todo?
    'Who says that he knows it all?'
    (a) the same person as Quién   (b) someone else

(20) Null embedded pronoun with quantified/wh-matrix subject
    (both (a) and (b) is possible)
    ¿Quién no sabe que pro tiene derecho a tomar cervezas a los 21 años?
    'Who does not know that pro(he) has the right to drink beer at 21?'
    (a) the same as Quién   (b) someone else

                               (Kanno, 1998, p. 297)

The second OPC task was a contextualized translation task, a modified version of Pérez-Leroux and Glass (1999). An extended context was given, and two questions later followed.

(21) Initially, who believed she was the inspiration for the idea?
    [Translate] *Each wife believed she was the inspiration for the company.*

(22) What did the wives think about María being the spokesperson?
    [Translate] *Every wife thought that she would do well in that position.*

The result from both tasks indicated that the learners could distinguish the right use of the null and overt pronouns following the OPC restriction. Therefore, the authors suggested that the data proved a successful parameter resetting, thus supporting the Full Access approaches in the adult L2 acquisition. The outcome further fortified the previous findings reported in Kanno (1998) and Pérez-Leroux and Glass (1999). Interestingly, the authors also corroborated that immersion to native input did not directly affect parameter resetting. For example, in one task, twenty out of thirty participants already had knowledge of the OPC even before their study abroad experience, while the remaining ten learners did not show any improvement even after the program. In a similar vein, Rothman and Iverson (2007c) added a classroom instructed-only-L2 Spanish intermediate learners' data to further strengthen their central claims: (a) the OPC property is acquired relatively early despite the fact that this constraint poses a typical POS problem and that (b) the commonly believed advantage of study-abroad experience may not exist at least in the morphosyntactic parameter resetting.

In another study, Rothman (2007) examined the syntax-before-discourse observation in L2 acquisition (e.g., Montrul, 2004; Montrul & Rodríguez-Louro, 2004; Pachecho & Flynn, 2005; Pérez-Leroux et al., 1999; Sorace, 2000, 2003, 2004) by looking into L2 learners' reconfiguration of NSP values from L1 English to L2 Spanish. The syntax-before-discourse observation insists that even with sophisticated native-like knowledge in narrow syntax, the L2 learners may show L2 target-deviant behavior in syntax-pragmatics interface features. Rothman's paper assumed that the acquisition of the OPC is strictly syntax-based; therefore, it is the indicator for a successful resetting of the Spanish NSP value. A total of thirty L1 English intermediate L2 Spanish learners took part in three tests, a logical sentence production task (Task 1 testing discourse-pragmatic knowledge in a null subject vs. overt

subject), a grammaticality judgment/correction task (Task 2 testing expletive subjects and referential subjects), and a co-reference judgment task (Task 3 examining L2 knowledge of OPC). The last task was modeled after Kanno's (1998) experiment in which participants were asked about their interpretation of different types of contextualized sentences, as shown below.

(23) a. Null embedded pronoun with quantified/*wh* matrix subject

¿Quién no sabe que Ø tiene derecho a votar a los 18 años?

'*Who do you suppose does not know that he has the right to vote at 18?*'

a) the same as Quién   b) someone else

b. Null embedded pronoun with DP matrix subject

Ayer todos estábamos hablando en la cocina cuando María nos informó que pronto Ø se mudaría a Japón.

'*Who do you think will move to Japan soon?*

a) María   b) someone else who is not María

c. Overt embedded pronoun with a DP matrix subject

Vicente afirmó ayer que él le había pedido la mano a su novia y que ellos se casarían en julio.

'*Who do you supposed asked his girlfriend to marry him?*'

a) Vicente   b) someone else

d. Overt embedded pronoun with quantified DP/*wh* matrix subject

¿Quién ha dicho que él nunca se enfada?

'*Who do you suppose never gets angry?*'

a) the same person as Quién   b) someone else

The (23a) and (23b) types allow both bound variable interpretation and disjoint referential interpretation. The (23c) also allows two possible interpretations, although the Spanish overt subject has a tendency towards contrastive focus interpretation as in 'b) someone else.' While in (23d), the OPC blocks a bound variable interpretation, and only b) is available in Spanish. The individual data analysis revealed that ten out of thirty participants did not have sensitivity to OPC at all, leading the author to divide the result into two subgroups. The successful OPC group's behavior showed no statistical difference with native results, supporting Full UG in L2 acquisition. However, despite their seemingly successful NSP resetting indicated by OPC sensitivity, the group still showed a nonnative-like behavior in interface-related properties. The author concluded that "the real possibility that L2 target-deviant syntactic performance for particular properties is best explained in terms of deficits in discourse-pragmatic knowledge despite sophisticated native-like syntactic knowledge (p.968)."

The studies reviewed above examined the OPC to the learners with non-null subject L1 acquiring null subject language L2 (OPC: non-NSL (L1) → NSL (L2)). In that regard, Okuma (2014) deserves special attention for it studied the OPC acquisition from a different perspective (OPC: NSL (L1) → NSL (L1)). The author tested the OPC in L2 Japanese by L1 Spanish natives who already have the same set of constraints in their native language, then compared their behavior with L1 English learners who do not have OPC in their mother tongue. It is noteworthy that by including learners with native OPC sensitivity, the design of this study allowed the researcher to shed light on not only the UG access but also on the effect of L1 transfer in the OPC acquisition. Following FT/FA model, the L1 Spanish learners were expected to outperform the L1 English group in the initial stages, but the gap will diminish due to UG-driven acquisition in the later stages. This investigation set two interesting research questions: "(a) Is the OPC truly operative in Japanese as Montalbetti (1984) suggests? and (b) Is the OPC acquirable by

L1 English and L1 Spanish speakers in the same way? (p. 6)." The Japanese distribution and the interpretation of null and overt pronouns show similarity to those of Spanish when null and overt alternation is possible.

(24) Quantified antecedent context

Dare$_i$-ga　　[kare$_{*i/j}$-ga/*pro*$_{i/j}$ kurama-o katta　　to]　　i-tta-no?

Who-NOM　he-NOM　/*pro*　car-ACC　bought　that　say-PST-Q

'Who said that he bought a car?'

(25) Referential antecedent context

Taro$_i$-wa　　　　[Mary-ga　　kare$_{i/j}$-o *pro*$_{i/j}$ stiteriru to]　　i-tta.

Everyone-NOM　Mary-NOM　he-ACC/*pro*　know　　that say-PST

'Taro said that Mary knows him.'

<div align="right">(Okuma, 2014, pp. 3-4)</div>

The L2 Japanese participant group included fifteen L1 English intermediate, fifteen L1 English advanced, fourteen L1 Spanish intermediates, sixteen L1 Spanish advanced, and fifteen native Japanese speakers. The author adopted stimuli from Kanno's (1997) Coreference Judgment Task (CJT) and a Truth Value Judgment Task (TVJ) with illustrations. The first research question confirmed that native Japanese speakers indeed showed OPC knowledge as Montalbetti (1984) suggested. For the second question, the intermediate L1 Spanish group outperformed the L1 English group, hinting at a facilitative L1 transfer in the Japanese OPC acquisition. Although the difference was not as drastic as expected, the author defended that the Spanish group already had English knowledge in their language system, which may have mitigated such difference. The gap between the two groups was no longer found in the advanced group supporting UG access in the adult L2 acquisition.

In a similar vein, Lee and Ahn (2018) tested the Spanish OPC constructions on Korean native L3 Spanish learners with a possible L1

transfer effect in mind. Three points were considered for the design of the study. First, Korean is a *pro*-drop language, and the OPC is instantiated. Second, in Korea, students start learning English from a very early age, and the OPC is not operative in L2 English. [40] Third, as a UG constraint, the OPC has long been argued and reported to be acquired from the very early stage regardless of the learner's native language due to 'Full access to UG' (Lozano, 2002a; Pérez-Leroux & Glass, 1999). We hypothesized that Korean learners must be posed with two competing strategies from their background languages in that the L1 transfer would fortify the UG-driven acquisition process of the OPC in Spanish, while the L2 would weaken the OPC sensitive behavior in their L3. The participants were first asked to take a Korean questionnaire to confirm their OPC knowledge in their native system. After a minimum of a four-month time gap, they participated in the Spanish questionnaire. All stimuli were adopted from Lozano (2003), and the participants were asked to mark the acceptability of given sentences in the scale of -2 (totally unacceptable) to 2 (totally acceptable). First, in the Korean questionnaire, all groups showed a significant OPC sensitivity, indicating that the Korean system complies with the OPC and that the participants of this study have sensitivity to the constraint. Second, the result from the Spanish questionnaire showed that all three groups discriminated the null subject sentences from the overt ones accordingly to the constraint. This tendency coincides with the former finding that the OPC is acquirable despite its learnability issue. However, the between-group analysis confirmed that the beginner learners were native deviant in assessing the null subject sentences, which are entirely grammatical and commonly found in their native language. The participants evaluated the null condition of Spanish sentences with significantly lower acceptability than the natives did (BGN (0.56) > NTV (1.52)). We interpreted that the weaker OPC sensitivity and a relatively lower

---

[40] In the language background questionnaire, the participants reported that they started learning English at 7.6 years old in average.

acceptance of null subject sentences found in the beginners are attributable to the non-facilitative transfer from the L2 English triggered by the typological similarity between the English and the target language. Because learners' L1 and the UG both promote the acquisition of OPC. I believe that this study expanded the scope of OPC studies to include the transfer factor into account, as in Okuma (2014).

2.2. OPC in background languages

As well as in Spanish, the Korean pronoun system allows phonetically null subjects, and it has been studied that the OPC is also operative in Korean (Choe, 1988; Hong, 1985, 1986). As seen below, the Korean overt pronoun '*ku*' cannot take QDP or wh-word as its antecedent, as shown in (26a) and (26b), and only null subject is possible.

(26) a. *Nu_i-ka ku_i-ka   toktokhata-ko malhayss-ci?

      who-NOM he-NOM smart-COMP   said-Q

      'Who said that he was smart?'

   b.*$Nukuna_i$-ka ku_i-ka   toktokhata-ko   malhayssta.

      everyone-NOM   he-nom   smart-COMP   said

      'Everyone said that he was smart.'

                                                                    (Hong, 1986, p. 84)

As in Spanish, the Korean overt pronoun is free from binding referential antecedent in the matrix clause, as shown in (27). What should be underlined is that Korean has a unique reflexive pronoun '*caki*', meaning *self*, same as Japanese '*zibun*', which can be used in a quantified variable binding reading without overriding the OPC as in (28).

(27) John$_i$-un   ku$_i$-ka   toktokhata-ko   malhayssta.
    John-top   he-NOM   be smart-COMP   said
    'John said that he is smart.'

(28) a. Nu$_i$-ka   caki$_i$/*ku$_i$-ka   toktokhata-ko   malhayss-ci?
    who-NOM   self-NOM   smart-COMP   said-Q
    'Who said that he was smart?'

   b. Nukuna$_i$-ka   caki$_i$/*ku$_i$-ka   toktokhata-ko malhayssta.
    everyone-NOM   self-nom   smart-COMP   said
    'Everyone said that he was smart.'

Another unique trait of Korean OPC constructions is that the constraint also applies to null objects. Hong (1985, 1986) confirmed that the constraint is operative for overt and null object construction in Korean.

To my knowledge, Song (2013) is the only work that examined the OPC in Korean from an acquisitional perspective. Considering that Korean allows object-drop as well, the author tested the acquisition of OPC in both subject and object positions for intermediate and advanced English native learners of Korean.

(29) a. Motun haksayng$_i$-un ku$_{*i/j}$-ka sang-ul   ttassta-ko   malhayssta.
    every student-Top he-Nom prize-Acc won-Comp said
    'Every student said that he won the prize.'
   b. Motun haksayng$_i$-un *pro*$_{i/j}$ sang-ul   ttassta-ko   malhayssta.
    every student-Top   (he) prize-Acc won-Comp said
    'Every student said that (he) won the prize.'

(30) a. Nwu$_i$-ka   Mary-ka   ku$_{*i/j}$-lul salanghayssta-ko malhayss-ni?

who-Nom   Mary-Nom him-Acc loved-Comp   said-Q

'Who said that Mary loved him?'

b. Nwu$_i$-ka   Mary-ka   *pro*$_{i/j}$ salanghayssta-ko malhayss-ni?

who-Nom Mary-Nom (him) loved-Comp   said-Q

'Who said that Mary loved (him)?'

(Song, 2013, p. 238)

As seen above, Korean does not allow binding interpretation of overt subject (29a) or overt object (30a) with QDP/*wh*-word in the main clause. In contrast, null subject and null object are both available for binding and referential interpretation as in (29b) and (30b). The test stimuli were formulated in eight different types of sentences based on this resolution behavior in Korean overt and null subject and object.[41] The result confirmed that both intermediate and advanced groups exhibited the OPC knowledge in their L2 Korean in subject position, rendering high correct scores (Intermediate Type 1: 76.32% and Advanced Type 1: 78.79%). These results complied with other OPC studies that corroborated that the L2 learners could acquire the constraint despite the POS issue. The noticeable contribution of this study is that L2ers showed OPC knowledge even in the object position as well (Intermediate: 74.56% and Advanced: 75%). In short, the result of this research indicated that

---

[41] Below are the eight types of test stimuli and how English and Korean behave in the condition examined in Song (2013). Type 1 (subject position) and Type 5 (object position) are the constructions that show that Korean only allows for disjoint interpretation due to the OPC.

Stimuli type	English	Korean
Type 1: QDP/wh + overt subject	bound or disjoint	disjoint only
Type 2: QDP/wh + null subject	not allowed	bound or disjoint
Type 3: RDP + overt subject	bound or disjoint	bound or disjoint
Type 4: RDP + null subject	not allowed	bound or disjoint
Type 5: QDP/wh + overt object	bound or disjoint	disjoint only
Type 6: QDP/wh + null object	not allowed	bound or disjoint
Type 7: RDP + overt object	bound or disjoint	bound or disjoint
Type 8: RDP + null object	not allowed	bound or disjoint

irrespective of learners' proficiency level, English learners of L2 Korean could learn OPC knowledge in both subject and object positions, further supporting that this constraint is a part of UG and that the UG constrains the learners' nonnative interlanguage as well.

Now, let's look at English, a non-null-subject language. Recall that the OPC stipulates that "*Overt pronouns cannot link to formal variables iff the alternation overt/empty obtains*." Considering that such null and overt alternation does not exist in English, the OPC is not instantiated in English grammar.

(31) Referential interpretation

Mary$_i$ thinks [that she$_i$ will win]

(32) Bound-variable interpretation

a. [Everyone$_i$ thinks [that she$_i$ will win]]

b. [Who$_i$ thinks [that she$_i$ will win?]]

(White, 2003, p. 5)

Unlike Spanish and Korean, what is different here is that the overt pronoun in the subordinate clause can also take a quantified variable in the main clause as its antecedent, as shown in (32a) and (32b). There is no difference with the overt pronoun in (31). White (2003) commented that if we further consider the following examples (33a, b, c), it can be inferred that an embedded overt pronoun in English rather behaves similarly to an embedded *pro* in Spanish.

(33) a. Jane$_j$ is a great athlete. Mary$_i$ thinks [that she$_j$ will win]

b. Jane$_j$ is a great athlete. [Everyone$_i$ thinks [that she$_j$ will win]]

c. Jane$_j$ is a great athlete. [Who$_i$ thinks [that she$_j$ will win?]]

(White, 2003, p. 6)

Interestingly, the English overt subject pronoun in an embedded clause can be coindexed with the referential antecedent, quantified antecedent in the main clause, and the inter-sentential antecedent, as the Spanish null subject pronoun in the same context.

3. Transfer scenario

In the previous discussion, I have presented what the OPC is and how it operates in the target language and background languages, followed by a comprehensive literature review on the acquisitional studies that examined the constraint in the languages of interest of this thesis.

The discussion so far confirms that Korean, English, and Spanish exhibit the following.

Box 3.1. Previous findings on the interpretation of null and overt subjects with QDP

L1 Korean	The OPC is operative
L2 English	The OPC is not operative
L3 Spanish	The OPC is operative

The L1 and the L2 show contrastive behavior in the OPC context, making this property appropriate for a transfer study. However, in order to test the OPC with a possible transfer effect in mind, the participants must comply with the preconditions in their L1 and L2 stated below.

Box 3.2. Precondition for proper prediction of transfer in L3 OPC acquisition

L1 Korean	Show adherence to the OPC in the native language
evidence	Acceptability in bound variable construction
	- Null condition > Overt condition
L2 English	Prefer overt subject in bound variable construction in

	L2 English
evidence	Subject realization in the bound variable construction
	- Use overt subject

The native language transfer would guide the learners to correctly reject a bound variable interpretation of the overt subject in Spanish. In contrast, L2 will wrongly lead them to OPC deviant behavior in their L3.

If learners are confirmed to have the correct OPC knowledge in their L1 and an accurate understanding of overt subject realization in the L2, the following transfer scenario can be applied when analyzing their L3 Spanish data.

Box 3.3. Transfer scenario in L3 OPC acquisiiton

L1 Transfer Scenario: Facilitative in the L3 OPC acquisition	
L3 Spanish	If L1 is transferred, learners will show high adherence to the constraint in Spanish OPC construction because both UG and L1 transfer promotes sensitivity to the constraint
evidence	Acceptability in bound variable construction
	- Null condition > Overt condition

L2 Transfer Scenario: Non-facilitative in the L3 OPC acquisition	
L3 Spanish	If L2 is transferred, learners will prefer overt subject condition in Spanish bound variable construction
evidence	Acceptability in bound variable construction
	- Null condition < Overt condition

Since this study examines the learners at their early phase of acquisition, there may be cases where the learner evaluates the null and the overt conditions to have the same degree of acceptability. This type of instance will be categorized as an incomplete acquisition because both L1 and L2 transfer cannot explain such deviant behavior.

4. Task design

The following summarizes the OPC items included in the questionnaires.[42]

Table 3.1. Summary of OPC tasks

	Language		Type
1st Questionnaire	Spanish	n=10	Acceptability Judgment Task (null/overt option sentences)
2nd Questionnaire	Korean	n=10	Acceptability Judgment Task (null/overt option sentences)
	English	n=5	Translation Task (Korean→English)

In the first questionnaire, the participants are guided to read ten OPC contexts in Spanish and judge the acceptability of the two option sentences accordingly to the context given. One of the two option sentences is given in the null condition and the other in the overt condition, as shown below.

(34) Spanish OPC test sample

Juan necesita ayuda para limpiar su dormitorio y decide pedir ayuda a sus amigos. Pero,

  a. nadie dice que tiene tiempo.   □ 1 □ 2 □ 3 □ 4 □ 5 *(null)*

  b. nadie dice que él tiene tiempo.   □ 1 □ 2 □ 3 □ 4 □ 5 *(overt)*

(1: absolutely unacceptable ~ 5: absolutely acceptable)

'*John needs help to clean his dorm and decides to ask his friends for help. However, <u>nobody says that they have time.</u>*'

According to the OPC, only null condition sentences are adequate for the

---

[42] The actual presentation of the items was in a random order. All four test properties, the OPC, the PAH, topic-continuity and shift, and null expletives were displayed in mixed order.

correct interpretation. The violation of the constraint affects the grammaticality of the sentence; therefore, the L3 native-like evaluation is [NULL > OVERT].

The same methodology is applied to the design of Korean items.

(35) Korean OPC test sample[43]

사장님이 직원들에게 신규 프로젝트에 참여할 시간이 있는지 묻습니다.

그러자 갑자기,

a. 모든 직원이 (*pro*) 일이 너무 많다고 말합니다. □ 1 □ 2 □ 3 □ 4 □ 5   *(null)*

b. 모든 직원이 그가 일이 너무 많다고 말합니다. □ 1 □ 2 □ 3 □ 4 □ 5   *(overt)*

'The boss asks his employees whether they have time to participate in a new project. Suddenly,
'every employee says that pro/he has too much work.'

The above is the sample of the Korean OPC item, and the targeted native-like tendency is [NULL > OVERT]. If learners show statistically higher acceptability for the null condition than the overt condition, it will be considered that they have OPC knowledge. The outcome of Korean data will go over an item-by-item analysis, and the participants who did not show compliance with the constraint will be excluded for the Spanish analysis. Because if a learner does not have proper OPC knowledge in the previously learned language, it is impossible to test the participant for a transfer of background language.

For testing the L2 English knowledge, the translation task is applied. This task type was deemed most appropriate because the objective of testing

---

[43] Sacangnim-i cikwentul-eykey sinkyu phuloceykthu-ey chamyehal sikan-i issnunci mwutsupnita. kuleca kapcaki,
  a. motun cikwen-i (***pro***) il-i   nemwu manhtako malhapnita.
    every employee   work *pro* too   much   say
  b. motwu cikwenun **ku**-ka ili nemwu manhtako malhapnita.

learners' L2 is to confirm whether they know that the overt subject is required in the context.

(36) English OPC test item.

Today is the final match of the annual basketball game in my high school. As writing homework, I have to write a short report about this big match. I decided to interview each player on the team. Since their rivals are the winning team of last year's match,

[Translate] 선수들마다   매우   떨린다고   말합니다.

senswutul-mata maywu   ttellintako malhapnita.

player   each very   *pro* nervous   says

'Each player says that pro is nervous.'

Target: Each player says <u>that he/she/they</u> is/are nervous.

As seen above, the participants are asked to read the context in English and translate the completing sentence presented in Korean into English. The Korean sentences are given in the null subject conditions to comply with the grammatical requirement posed by the OPC. Therefore, the learners must figure out that the English translation requires a missing or hidden subject to be overtly realized. The same method of exclusion will be applied, that the participants who translate the given sentences with an ungrammatical null subject are deemed to lack correct OPC knowledge in their L2. Therefore, their entire dataset of the questionnaire will be excluded for further analysis.

From a transfer-oriented perspective, Korean transfer would fortify native-like behavior while English transfer would divert the learners to prefer overt conditions.

5. Results

The result of the OPC data is analyzed descriptively and compared statistically according to the 'L3 level', the beginner learner (BGN) and the advanced learner (ADV), and the 'languages tested,' Korean, English, and Spanish. The items included in the analysis are presented in the table below.

Table 3.2. The OPC items

OPC		OPC context	
	Option	Null condition	*Overt condition
	sentence	*type 1*	*type 2*
Korean	AJT	n=10	n=10
English	Translation	N/A	n=5
Spanish	AJT	n=10	n=10

(BGN=60, ADV=20)

Participants completed the Spanish questionnaire first and then participated in the Korean and English questionnaire later. Here, I will present the result of the background languages first because having OPC-related knowledge in Korean and English was the precondition to observing the transfer effects in the L3 Spanish data.

5.1. Korean OPC result

The data reported here are sixty BGN's acceptability on ten null conditioned OPC sentences and ten overt conditioned *OPC sentences, along with twenty ADV's data on the same test stimuli. The below figure shows the average acceptability for each condition of each group.[44]

---

[44] It was not necessary to present the Korean OPC data divided into two groups because the label BGN and ADV represents the Spanish proficiency, not Korean. Eighty participants that are included for the analysis are native Koreans. Therefore, for Korean data I do not present the statistical analysis of between group difference. However, for the convenience of

Figure 3.1. Group average acceptability in Korean OPC constructions
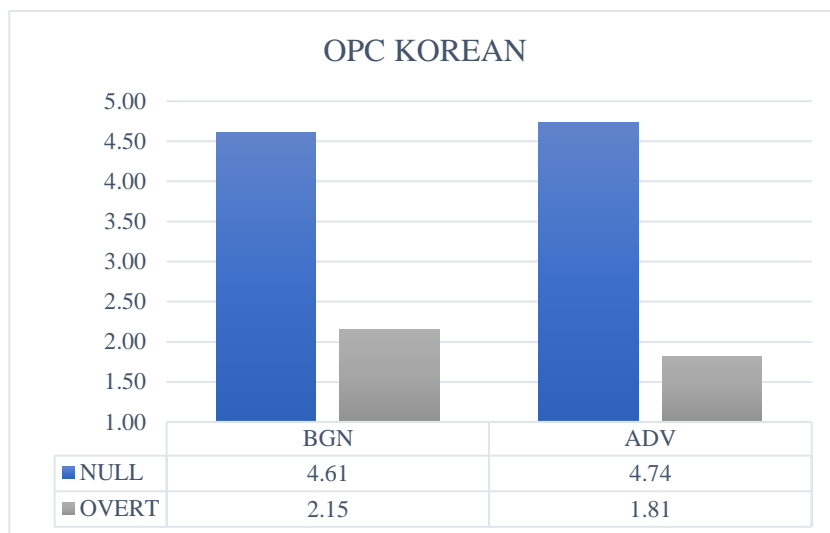
OPC KOREAN

	BGN	ADV
NULL	4.61	4.74
OVERT	2.15	1.81

(1: Absolutely unacceptable 2: Fairly unacceptable 3: Neutral 4: Fairly acceptable 5: Absolutely acceptable)

Table 3.3. Paired samples test on acceptability in Korean OPC constructions

OPC KOREAN		Mean	Std.Deviation	t	P
BGN	Null	4.6083	.72586	40.686	<.001
	Overt	2.1533	1.20509		
ADV	Null	4.7350	.55345	30.595	<.001
	Overt	1.8050	1.06897		

The BGN's average acceptability judgment for the null condition is 4.61, and for the overt condition is 2.15 with statistical significance (<.001). This confirms that the participants evaluated null condition OPC items as acceptable, while they rejected the overt condition *OPC constructions. The ADV's evaluation of the null and overt conditions was 4.75 and 1.81, respectively, with a statically significant difference (<.001). In summary, both groups are confirmed to follow OPC and show sensitivity to the constraint in L1 Korean.

comparison between Korean data with Spanish data, the separate presentation of the Korean data is provided for all properties.

5.2. English OPC result

The results of the English OPC-related items are presented descriptively due to the character of the task taken. The translation task was conducted for the testing, and the participants were asked to translate five Korean sentences in the OPC context into English.

Before presenting the data analysis, I must highlight that in the pre-analysis, four cases of native-deviant behavior were found in the learners' translation. The whole dataset of these participants was excluded from the entire analysis. [45] Following are the actual example of the errors that eliminated participants made.

(37) Incorrect use of null subject

   (a) (Translate) 아무도 창문을 깼다고 인정하지 않는다.

        'Nobody admits that he/they broke the window.'

        Nobody admits that _____.

   (Answer) *Nobody admits that "breaks the window."

(b) (Translate) 모두가 배가 너무 고프다고 불평한다.

        'Everybody complains that they are hungry.'

        Everybody complains that _____.

   (Answer) *Everybody complains that "is too hungry."

(38) Incorrect use of the reflexive pronoun.

   (a) (Translate) 아무도 창문을 깼다고 인정하지 않는다.

---

[45] In the introduction of this thesis, I revealed that ninety-six Koreans participated in this investigation, but sixteen were excluded due to underperformance in their background languages. In the English OPC task, four candidates were eliminated.

'Nobody admits that he/they broke the window.'

Nobody admits that _____.

(Answer)   *Nobody admits that "<u>he, himself broke the window."</u>

(b) (Translate) 누가 상을 탈 것이라 생각할까요?

'Who would think that he/she/they will get the prize?'

'Who would think that _____.

(Answer) *<u>Who would think that oneself gonna take the first place?</u>

Examples (37 a, b) show the two cases of incorrect null subject use, and examples (38 a, b) are the three cases that used the reflexive pronoun '~self.' Both cases are possibly due to L1 transfer because of their resemblance with L1 construction in the OPC context. In particular, the second type of error calls for attention. Recall that in 2.2. of this chapter, it was noted that Korean OPC constructions allow '*caki,*' meaning *self*, to be used in a quantified variable binding reading without violating the constraint. It is highly probable that these learners have transferred the Korean lexical item '*caki*' in a word-by-word translation manner into their L3 Spanish. Except for these four cases stated above, all the translated sentences (n=400, 80 participants * 5 sentences) examined in this questionnaire correctly realized the overt subject. This result confirms that the participants selected are aware that even in the quantifier binding construction, a subject must be realized overtly in L2 English, unlike their native language.

5.3. Spanish OPC result

The result of sixty BGN and twenty ADV learners' evaluation of the acceptability of null and overt option sentences in ten OPC contexts is presented here. The target language data is where the possible effect of the

transfer is observed. Therefore, I will report the multifaceted analysis of the data in the following manner.

(1) Mean acceptability of null and overt conditions of each group
(2) Between-group analysis of each condition
(3) Item analysis of OPC stimuli from a transfer perspective[46]

First, both BGN and ADV's average acceptability show that the participants exhibit contrastive acceptability for null and overt conditions, [NULL > OVERT], following the OPC in Spanish.

Figure 3.2. Group average acceptability in Spanish OPC constructions
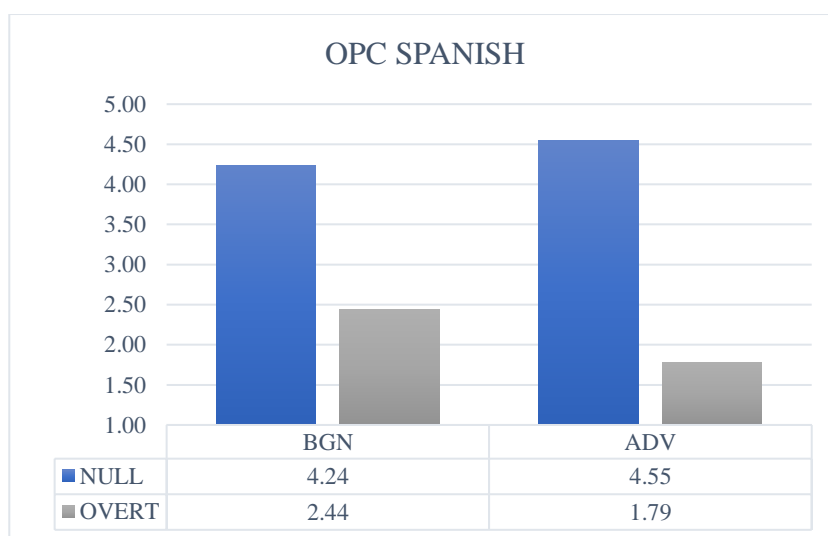
	BGN	ADV
■ NULL	4.24	4.55
■ OVERT	2.44	1.79

(1: Absolutely unacceptable 2: Fairly unacceptable 3: Neutral 4: Fairly acceptable 5: Absolutely acceptable)

---

[46] Westergaard, Mitrofanova, Rodina, and Slabakova (submitted) highlighted the importance of by-participant analysis in TLA studies. They stated that "one of the theoretically plausible explanations of the observed in-between performance of the L3 group could be that the mean is a result of two distinct distributions (half of the L3 participants having comparable to the Language A group and the other half patterning like the Language B group) Therefore, it is important to consider individual deviations from the group mean (p.11)." Based on this account, I believe that to observe a genuine transfer effect from inside and out, both group-level and individual-level merit respective analysis.

Table 3.4. Paired samples test on acceptability in Spanish OPC constructions

OPC SPANISH		Mean	Std.Deviation	t	P
BGN	Null	4.2367	1.00116	23.871	<.001
	Overt	2.4433	1.23396		
ADV	Null	4.5450	1.02137	22.698	<.001
	Overt	1.7850	1.12029		

The average acceptability for the null condition marked 4.24, while the acceptability for the overt condition was significantly lower, scoring 2.44. The paired samples test confirms a significant difference between the two (.<001). It is noteworthy that the BGN group showed sensitivity to the OPC in L3 Spanish despite their very low proficiency (3rd or 4th semester) in the language.

Secondly, the BGN and ADV group's acceptability evaluation in each condition is compared to confirm whether they have any between-group statistical differences.

Table 3.5. Independent samples test between groups

OPC SPANISH		Mean	Std.Deviation	t	P
Null	BGN	4.2367	1.00116	-3.753	<.001
	ADV	4.5450	1.23396		
Overt	BGN	2.4433	1.02137	7.013	<.001
	ADV	1.7850	1.12029		

The result of the independent samples test confirmed that BGN and ADV groups exhibit a difference in their acceptability judgment for each condition.

Thirdly, for more detailed analysis, the participant's response to the null and overt option sentences was coded as a set for each OPC context, which I present as item analysis.[47]

---

[47] For example, the item below would be coded as the following.
Hoy es la gran final del concurso de gimnasia.
(a) Cada finalista dice que está nerviosa.   Answer [Null: 5, Overt: 3] : L1 & UG
(b) Cada finalista dice que ella está nerviosa.   Answer [Null: 2, Overt: 3] : L2
                                               Answer [Null: 5, Overt: 5] : Incomplete

[OPC context, n=10]

- if acceptability is [NULL > OVERT] ➜   L1 & UG
- if acceptability is [NULL < OVERT] ➜   L2
- if acceptability is [NULL = OVERT] ➜   Incomplete acquisition

This coding is expected to reveal more intuitively which language is posing an influence on the L3 OPC initial hypothesis. A total of eight hundred (10 contexts * 60 BGN participants, 10 contexts * 20 ADV participants) pairs were analyzed, and the below is the result.

Table 3.6. Percentage of transfer source in the OPC

OPC SPANISH		L1 & UG	L2	Incomplete
BGN	cases	468	65	67
	percent	78.00%	10.83%	11.17%
ADV	cases	186	12	2
	percent	93%	6%	1%

The result indicates that 78% of BGN's judgment on the two option sentences showed [NULL>OVERT] distribution, following the L1 & UG pattern. In contrast, only about 11% of the cases exhibited [NULL<OVERT], which is the L2 strategy. This analysis further explains the high average in the acceptability judgment for OPC constructions and low acceptability for *OPC sentences in BGN's average acceptability. In the ADV's data, the L2-oriented judgment is rarely found. It is essential for me to clarify that the same coding method was applied to the ADV's data only for comparison purposes. I want to emphasize that I do not believe that learner's behavior beyond the initial stages is guided by the transfer effect. The ADV's data in this analysis should be understood as evidence of a successful acquisition of the OPC in L3 Spanish.

In summary, the analysis of OPC data confirmed the following.

Table 3.7. Summary of OPC task result

	BGN	**ADV**
Korean OPC	Null > Overt	Null > Overt
English Overt subject use	All overt subject	All overt subject
Spanish OPC	**Null > Overt**	**Null > Overt**
group difference	A significant difference in both Null and Overt	
transferred language	L1 Korean	

6. Discussion

The OPC items aimed to examine how Korean participants perform in Spanish contexts where the UG constraint governs the contrastive availability between null and overt subjects from a transfer perspective. Previous literature has emphasized that this constraint is acquired in the early stages despite its learnability issue via Full UG Access. At the same time, there have been a few studies that considered the role of transfer in its acquisition, such as Lozano (2002a), Okuma (2014), and Lee and Ahn (2018). The OPC is operative only in *pro*-drop languages such as Korean and Spanish and does not apply to English, a non-*pro*-drop language. Therefore, for the participants of this study, the L1 transfer is facilitative, while the L2 transfer is non-facilitative.

Let's first consider how learners evaluated the OPC items in their background languages. The result showed that in L1 Korean, the participants exhibited a strong sensitivity to the constraint, accepting the NULL while rejecting the OVERT condition with a statistical significance (BGN: 4.61>2.15, ADV: 4.74>1.81). This result coincides with the former finding that the OPC is operative in Korean. At the same time, the result from the L2 English translation tasks confirmed that the participants correctly realized an overt subject in the OPC contexts, even when the Korean sentences were given in null condition. The fact that this selected group has the proper

knowledge in the previously acquired languages served as a presupposition for the L3 Spanish analysis presented below.

In the Spanish questionnaire, both groups showed a statistically significant difference between the acceptability of null conditions and that of overt ones, indicating that even the beginner group had the OPC knowledge in their L3. They correctly rejected the overt subject in the bound variable interpretation, evaluating the acceptability of this condition below three (BGN: 2.44, ADV: 1.79).[48] Interestingly, the between-group comparison revealed that the acceptability for each condition differed with a statistical significance. The BGN gave relatively lower acceptability to the null condition than the ADV group (BGN: 4.24, ADV: 4.55) while showing less strong rejection to the overt condition (BGN: 2.44, ADV: 1.79). It implies that the OPC knowledge in Spanish is becoming more stable as L3 proficiency grows. Lastly, I have coded each and every eight hundred cases of participants' acceptability judgment in a pair of [NULL versus OVERT]. This coding made it possible to break down every selection of the participants from a transfer perspective.[49] It was assumed that when the learner exhibited [NULL>OVERT] acceptability, the L1 and the UG must have been operating, while [NULL<OVERT] would have been triggered due to L2 transfer. The cases of [NULL=OVERT] were categorized as an incomplete acquisition because none of the pre-existing linguistic representations can explain such OPC-deviant choices. The result of the item analysis reconfirmed a strong L1 and UG effect in BGN's acquisition of L3 OPC that 78% of the learners' choices corresponded to the L1 behavior. The correct relative rejection to the

---

[48] Recall that the acceptability scale was presented as '1: absolutely unacceptable, 2: fairly unacceptable, 3: neutral, 4: fairly acceptable and 5: absolutely acceptable.' Acceptability below three points indicate that the item was not accepted as viable option for the given context.

[49] Westergaard, Mitrofanova, Rodina and Slabakova (submitted) noted that in the transfer studies, by-participant analysis allows for observing transfer dynamics in more detail. Although this thesis adopted an item-by-item analysis, not the individual analysis, the purpose was the same: to offer a more detailed description of the data collected.

overt condition cases reached 93% in the ADV group, indicating a successful acquisition of the constraint in the L3. In short, the Korean learners' data showed an early and stark OPC sensitivity which favors the possibility of L1 facilitative transfer effect along with the UG. However, the BGN and ADV showed a group difference in each condition in that BGN less strongly accepted and rejected each condition when compared to the ADV. The result of item analysis further corroborated the influence of the L1 and UG in the L3 during the early stages of acquisition.[50]

In my former OPC study, Lee and Ahn (2018) documented the same tendency in L3 Spanish beginner, intermediate and advanced learners. We conducted two analyses, a within-group comparison between null versus overt conditions in the OPC contexts and a between-group comparison for each condition. The first comparison revealed that initial stage learners with less than six months of formal instruction in Spanish "accordingly discriminated null and overt condition (NULL>OVERT) as the OPC restricts, with a statistically significant difference (p.187)." However, a statistical difference was found in the between-group analysis on the evaluation of the OPC-null condition, which is totally grammatical in their native language. Again, the lower proficiency group gave relatively lower acceptability judgment to the null condition while marking a relatively higher scale to the overt condition compared to the higher proficiency group. We interpreted that the statistical deviation between the initial stage learner' acceptability and that of the advanced group is possible evidence of non-facilitative L2 transfer. However, it is imperative for me to admit that what we have missed are the cases of incomplete acquisition, which deserve a highlight this time. In my

---

[50] For the future research, the comparison of this result with that of L1 Enlgish-L2 Spanish group is imperative. If the latter group shows lower percentage or rate of compliance to the OPC, it would fortify this interpretation that L1 transfer boosted the OPC acquisition. For now, I resort to the result from Pérez-Leroux & Glass (1997) which reported English native learners of L2 Spanish to chose Null (57.7%) > Overt (34.0%) for the translation in the OPC context.

former study, the L2 was blamed for such deviance. However, based on the data of item analysis of this thesis, I contend that such between-group differences may have been due to the cases of incomplete acquisition. This interpretation is reinforced by the fact that the cases of incomplete acquisition found in this thesis significantly decreased (BGN: 11.17%, ADV: 1%) than the L2 transfer cases did (BGN: 10.83%, ADV: 6%). Therefore, the reason that BGN differed from ADV may have been due to their low L3 proficiency rather than the L2 effect.

Based on this interpretation of the data, I submit high adherence to the OPC found in the L3 learners of this investigation as partial evidence of L1 facilitative transfer in L3 acquisition.

CHAPTER 4. THE POSITION OF ANTECEDENT HYPOTHESIS

1. Introduction

The Position of Antecedent Hypothesis (PAH), set forth by Carminati (2002), is a processing strategy that accounts for different antecedent biases between null and overt subjects in wholly ambiguous intrasentential contexts. Carminati focused on how the pronominal inventory of a language and the syntactic position of the antecedent could affect the prominence and, thus, influence the resolution of an anaphora.

Italian is a *pro*-drop language that allows phonetically null or overt pronouns. Carminati suggested that the existence of two different subject forms in one language system must have reason to be so. The author finds their raison d'être in their 'division of labor' in the processing of an anaphora. She argued that null and overt subjects each serve as a distinct biased cue in retrieving antecedents. The core idea of PAH is that a null subject tends to refer to the most prominent antecedent within the context, while the overt subject prefers the less prominent one. She argued that the syntactic position determines the prominence of an antecedent, and that the Spec IP position is associated with higher prominence than the complement position, which is structurally lower. Filiaci (2010) reflected that "From a syntactic perspective, the hypothesis assumes that the preverbal subject occupies the most prominent position in the sentence and should therefore be relatively more accessible than its competitors, which means that NS is better at retrieving a subject antecedent than an object antecedent (p.174)."[51] From a pragmatic

---

[51] Filiaci, Sorace, and Carreiras (2014) state that "Spec IP is defined according to standard generative linguistic theory as the structural position occupied by the preverbal subject of a tense verb, which is higher in the clause configuration than the position occupied by direct or indirect objects (p.826)."

point of view, speakers tend to link null pronouns to the grammatical subject in the proceeding context, while they interpret overt pronouns to signal a topic-shift. Importantly, Carminati clearly enunciated that the PAH itself is not a core-grammatical rule but a processing preference of a speaker which does not affect the grammaticality of a sentence.

> **The Position of Antecedent Hypothesis** for the Italian null and overt pronouns in intra-sentential anaphora: the null pronoun prefers an antecedent which is in the Spec IP position, while the overt pronoun prefers an antecedent which is not in the Spec IP position.
>
> (Carminati, 2002, p. 57)

As stated above and seen in the examples below, the PAH captures the complementary distribution between the null and overt subject in the Italian anaphoric behavior. In example (39a), 'Ø' is preferably interpreted as '*Marta*,' an antecedent in the Spec IP position (preverbal subject). In contrast, the overt pronominal subject '*lei*' in (39b) tends to be assigned to the component in the lower structural tree, *Piera*.

(39) a.   Marta$_i$ scriveva frequentemente a Piera quando Ø$_i$ era negli Stati Uniti.
'*Marta frequently wrote o Piera when Ø was in the United States.*'

b.   Marta$_i$ scriveva frequentemente a Piera$_i$ quando lei$_i$ era negli Stati Uniti.
'*Marta frequently wrote o Piera when she was in the United States.*'

It is important to remember that Carminati insisted that the biases encoded by the PAH are motivated by universal pragmatic principles. Regarding the character of the PAH as a property operating at the syntax-pragmatics interface, Filiaci et al. (2014) commented that "Position of Antecedent strategy (PAS) is not itself a core-grammatical rule, but a processing preference motivated by enteral cognitive mechanisms, predicting felicity of an expression in context rather than its grammaticality, and that it operates on the basis of prominence relations encoded in the discourse through syntax (p.827)."[52] The authors point out that the PAH is a property that shows that the availability of null and overt subjects in a language system may be set through the parametric setting of its syntactic character, while the actual felicitous use of different pronominal forms is dependent on the contextual conditions in the discourse.

To prove the proposal's validity, Carminati conducted a series of self-paced reading experiments, sentence completion tasks, and comprehension tasks. Below are the samples of the experiment.[53]

(40) a. Quando Maria$_i$ é andata a trovare Vanessa$_j$ in ospedale, lei$_{i(/j)}$ le ha portato un mazzo di fiori.

   b. Quando Maria$_i$ é andata a trovare Vanessa$_j$ in ospedale, Ø$_{i(/j)}$ le ha portato un mazzo di fiori.

   When Maria went to visit Vanessa at the hospital, she brought her a bunch of flowers.'

---

[52] After the formulation of the PAH, extensive follow-up studies tested the hypothesis and validated its claim. Many researchers confimed that the PAH has supported by their data that this hypothesis can be called as strong parsing strategy, the PAS.

[53] Experiments 1 to 14 included referential nominative subjects, dative subjects, expletive, quantified subjects in different constructions such as impersonal constructions, existential-*there* sentences, and etc.

c. Quando Maria_i é andata a trovare Vanessa_j in ospedale, lei_{(i/)j} era già fuori pericolo.

d. Quando Maria_i é andata a trovare Vanessa_j in ospedale, Ø _{(i/)j} era già fuori pericolo.

'When Maria went to visit Vanessa at the hospital, she was already out of danger.'

The four items consisted of semantically disambiguated sentences with two referents of the same gender in the subordinate clause, followed by a main clause where either a null or overt subject could possibly refer to both proceeding subject or object. While these null or overt anaphoric subjects may be temporarily ambiguous, for semantic plausibility, (40a) and (40b) are highly likely to prefer subject antecedent *María* for the anaphoric subject. Meanwhile, in (40c) and (40d), the anaphora would co-refer with *Vanessa*, the preceding object. The PAH predicts that (40b) 'null subject–subject antecedent' and (40c) 'overt subject-object antecedent' will be preferred over their counterparts. Carminati measured the reading time of the conditions that forced interpretation against the PAH to examine whether a longer reading time is found, which indicates a processing penalty. She confirmed that the results supported the processing bias predicted by her hypothesis. However, the data suggested that the bias for the overt pronouns was less significant than the null pronouns. It means that overriding the coreference between the overt subject and the object antecedent is less costly than the null pronoun with the subject antecedent.

2. Previous literature

2.1. PAH in native and nonnative Spanish

After Carminati's proposal, many studies followed to probe the validity of the PAH in other *pro*-drop languages. For the scope of this thesis, here I will only review those that explored the PAH preference in Spanish. The first paper is Alonso-Ovalle, Fernández-Solera, Frazier, and Clifton (2002), where the authors set a goal to test whether the PAH makes correct predictions in native Spanish beyond Italian. As exemplified below, the given items were potentially ambiguous sentences in that null or overt subjects can retrieve either subject or object antecedent without violating any semantic plausibility.

(41)　a. María saludó a Ana. *pro* Está contenta.

　　　b. María saludó a Ana. Ella está contenta.

　　　'María said hello to Ana. pro/She is happy.'

Note that this study did not replicate the experiment items used in Carminati (2002). In the original research, test sentences consisted of intra-sentential anaphora, but Alonso and his colleagues tested the PAH in inter-sentential contexts.[54] The Spanish native participants were asked to read the stimuli in (41) and find out who *'pro'* or '*ella* (she)' refers to, answering the following question, 'who is happy?'. The result showed that 73.2% of the participants identified the preceding subject as its antecedent for the null subject condition (41a). In contrast, for the overt subject condition as in (41b), the rate significantly dropped to 50.2% (<.001), leading the authors to conclude that processing biases proposed in the PAH are applicable in Spanish as well.

---

[54] In this study, five experiments were conducted, but here, I will only review experiment 1, which directly relates to the verification of PAH in Spanish. Experiment 2 consisted of items without ambiguity of reference to test whether the PAH holds true with and without ambiguity. (Teresa llegó al aeropuerto tarde. (*pro*)/Ella estaba cansada. *'Teresa arrived at the airport late. She was tired'*) and asked the participants which one, the null condition or the overt condition is more natural. Experiment 3 was related to variable binding sentences (Ningún estudiante cree que (*pro*)/ él pasó el examen. *'No student believes that he passed the exam'*). Experiment 4 and Experiment 5 captures whether the PAH interacts with the topic-focus articulation of Spanish sentences. (¿Quién vinó? Vino Juan. /Juan vino. *'Who came?/ Juan came.'*) (Pedro piensa que está cansado él./ Pedro piensa que él está cansado./Pedro piensa que ÉL está cansado. *'Peter thinks that he is tired.'*)

Filiaci (2010) focused that the preference in the overt condition reported in Alonso-Ovalle et al. (2002) was at the chance level, unlike the original Italian result. Spanish and Italian are *pro*-drop languages from the same language family, and it has been generally accepted that these languages have a similar pronominal inventory showing the same configuration of the NSP. Based on the result of Alonso-Ovalle et al. (2002), Filiaci questioned that Spanish overt subject might be less restrained than Italian counterpart in retrieving subject or object antecedent. Her paper aimed to directly compare the Italian data with that of Spanish to confirm whether the parsing strategy articulated by Carminati also holds true in Spanish, especially in the overt condition. The author translated the same set of items from Carminati's Experiment 1 (semantically disambiguated stimuli) into Spanish and tested thirty-two monolingual Italian natives and thirty-two native speakers of Spanish.

(42) a. Cuando Ana$_i$ visitó a María$_j$ en el hospital, ella$_{i(/j)}$ le llevó un ramo de rosas.

b. Cuando Ana$_i$ visitó a María$_j$ en el hospital, $\emptyset_{i(/j)}$ le llevó un ramo de rosas.

When Ana visited Mary in the hospital, she brought her a bunch of roses.'

c. Cuando Ana$_i$ visitó a María$_j$ en el hospital, ella$_{(i/)j}$ ya estaba fuera de peligro.

d. Cuando Ana$_i$ visitó a María$_j$ en el hospital, $\emptyset_{(i/)j}$ ya estaba fuera de peligro.

'When Ana visited Mary in the hospital, she was already out of danger.'

(Filiaci, 2010, p. 176)

The context in example (42a, b) forces both null and overt pronouns to co-refer to the subject antecedent, while the context in (42c, d) requires the co-reference interpretation to object antecedent. The author examined the mean reading time for the second clause and the percentage of correct answers in identifying the antecedent. Then, crosslinguistically compared the result of Spanish natives and Italian natives. The analysis revealed that the PAH is clearly applicable in the Spanish null condition. In contrast, the Spanish overt subject did not bear as strong bias as the Italian counterpart, which carries a robust 'switch reference' connotation. This study confirmed that the Spanish overt subject is more compatible with a 'no-switch reference' interpretation than the Italian overt subject. The author concluded that the Spanish null subject holds a strong bias articulated in the PAH while the overt subject may not.[55]

The studies mentioned above examined the PAH in a native Spanish context. Only a few researchers have attempted to test the PAH preference in a nonnative context. Keating, Vanpatten, and Jegerski (2011) is the seminal study to probe whether Spanish heritage speakers and adult L2 Spanish learners follow the anaphora interpretation biases encoded in the PAH. This study tested three different groups: monolingually raised Spanish natives, Spanish heritage speakers (HS), and adult L2 learners of Spanish, all residing

---

[55] In the subsequent research, Filiaci et al. (2014) continued to examine whether the overt pronouns in Italian and Spanish behave similarly in anaphora resolution. The authors employed translated version of Carminati's Experiment 1. The authors reconfirmed that the processing of null subject went through "similar processing penalties when the pronouns were forced to refer to a syntactically non-prominent antecedent (p.831)" in both languages. In contrast, Spanish did not show the penalty in processing comparable to Italian in overt subject conditions. This result corroborated that Spanish overt subject may not be as sensitive to syntactically encoded prominence proposed by Carminati. The authors suggested several possible reasons for this crosslinguistic difference: (a) prominence argued by Carminati is related to the syntactic position, while Spanish overt subjects may be sensitive to linear distance of the antecedents instead of its syntactic position; (b) Italian and Spanish are typologically close, however, Italian overt subject system may be fundamentally different with that of Spanish that Italian *lui* and *lei* is typically considered as strong pronouns, while their Spanish counterpart, despite its formal similarity, is associated with a weak pronoun.

in the United States. By contrasting three groups, the authors seek to examine the following: do early (HS) and late bilingual (adult L2) learners who are dominant in English show similar anaphoric bias stipulated in the PAH as monolingually raised Spanish natives? [56] English is a non-null subject language that exhibits a confronting strategy with PAH's interpretation of pronouns.

(43) John saw Charles when he was walking on the beach.

(44) a. Juan vio a Carlos cuando *pro* caminaba en la playa.

     b. Juan vio a Carlos cuando él caminaba en la playa.

As illustrated above, sentence (43) is ambiguous, and technically, it can be translated in two different ways, (44a) or (44b). However, the authors pointed out that the former literature supports that the overt pronoun is highly likely to be interpreted with matrix subject antecedents in English. Because of a so-called universal strategy of 'the subject assignment strategy' or 'subject rule' of English. Therefore, this English strategy directly conflicts with the PAH because the English strategy promotes [overt-subject antecedent] resolution while the PAH supports the [overt-object antecedent] resolution. [57] For example, when asked, 'who was walking on the beach?', the PAH predicts (44a) would mean Juan was walking on the beach, and (44b) would indicate it was *Carlos*. On the other hand, the English strategy expects (44b) to be interpreted as *Juan* as well. The other research goal of their study was to

---

[56] The result showed that heritage speakers (HS), who are categorized as early bilinguals, performed even more native-deviant than L2 learners confirming that HS's early exposure and naturalistic input does not grant advantage over adult learners.

[57] It is worth mentioning that the competition between the PAH and the strategies of learners' background languages was also studied in Sorace and Filiaci (2006), where L1 English-L2 English learners of Italian were tested. The authors hypothesized that the L1 strategy would become the default strategy for these L2 learners because it is more economical and efficient, thus causing more deviation between the native speakers of Italian and L2 learners, especially in the overt condition. The result showed that even the near-native learners exhibited residual indeterminacy in finding overt subject anaphora, preferring subject antecedent.

confirm whether the heritage speakers of Spanish (early bilinguals) enjoy an advantage in processing anaphora over L2 adult learners (late bilinguals) due to early exposure to the language. The authors employed sentences from Carminati's Experiment 2, globally ambiguous complex sentences in main-subordinate order with different subject conditions.

(45) a. Daniel ya no ve a Miguel desde que *pro* se casó.

'Daniel no longer sees Miguel ever since he got married.'

b. ¿Quién se casó? 'Who got married?'

(i) Daniel   (ii) Miguel

(46) a. Susana llamó a Paola cuando ella estaba en la oficina.

'Susana called Paola when she was in the office.'

b. ¿Quién estaba en la oficina?

(i) Susana   (ii) Paola

Each item was followed by a comprehension question to reveal learners' preferences. Interestingly, even the native control group showed less clear-cut complementary distribution than the Italian natives reported in Carminati (2002). The authors interpreted that English's subject assignment rule must have influenced the Spanish participants due to their long residency in the US. Furthermore, the result of nonnative learners indicated that the heritage speakers and advanced L2 learners of Spanish did not conform to the anaphoric behavior predicted by the PAH. In particular, the heritage speakers made pragmatically inappropriate choices in the overt condition. They showed a strong tendency to follow the subject antecedent rule, overextending the interpretative scope of the overt pronoun to the [Spec, IP] position. As to their first research question, Filliaci and colleagues found out that both groups did not apply the antecedent assignment strategy as

monolingual Spanish speakers.[58] It is noteworthy that the authors argued that the PAH contexts require an understanding of properties situated in the syntax-pragmatics interface, which is generally accepted to pose persisting vulnerability and optionality in nonnative language acquisition. As to their second question, the authors concluded that the result from two bilingual groups goes against the generally accepted notion that heritage speakers enjoy an advantage over L2 learners due to early exposure to the target language. Because the early bilingual's data in their investigation was more native-deviant than the L2 learners.

Other PAH studies in the L2 context are García-Alcaraz and Bel (2014), where the authors employed an AJT to Moroccan Arabic (MA) and Spanish bilingual group, L1-MA, L2-Spanish group, and Spanish native group. This study first confirmed that the MA, as a null subject language, shows evident sensitivity to the PAH biases. However, the data indicated that the MA native Spanish learners did not enjoy positive L1 transfer in anaphora resolution in L2 Spanish, showing low PAH adherence. The preliminary conclusion of this study was that the PAH is an interface property that imposes an additional acquisition burden, resulting in weak PAH sensitivity.

I must emphasize that the previous PAH works in the L2 context have often attributed the non-native-like interpretation biases in the learner's interlanguage to the innate character of the PAH, a linguistic phenomenon at the interface. The idea of interface structures posing extra acquisitional burden is formulated as the Interface Hypothesis (IH) (Sorace, 2004a, 2004b, 2005, 2006b; Sorace & Filiaci, 2006). The IH is an influential theoretical account that has received substantial evidence in the L2 context. It postulates

---

[58] Quesada (2015) commented that "When faced with two processing strategies for anaphoric resolution, the L1 strategy of subject assignment is reinforced by the universal strategy. Advanced L2 learners of *pro*-drop languages eventually sort out the language specific strategy of the PAH for null subjects but for overt subject pronouns continue to rely on the non-*pro*-drop L1 strategy for anaphoric assignment – a hybrid strategy that reflects both L1 and universal tendencies (p.151)."

that the nonnative acquisition of structures operating at the external interface, such as the syntax-pragmatics interface, are generally subject to incomplete acquisition even at the advanced level.

> The strong version of the IH, in the three bilingual domains in which it was proposed, predicts that structures involving an interface between syntax and other cognitive domains present residual optionality (in L2 acquisition), emerging optionality (in L1 attrition), and protracted indeterminacy (in bilingual L1 acquisition), but structures that require only syntactic computations are completely acquired in L2, remain stable in L1, and are acquired early in bilingual L1 acquisition.
>
> (Sorace, 2011, p. 5)

It contends that the interface structures require more cognitive resources to be processed and therefore are more likely to display optionality than the properties that involve syntax only. Because "accessing and integrating two levels of representation is more costly than accessing only the syntactic level (Sorace, 2011, p. 15)." Contemori and Dussias (2020b) comment that the previous L2 literature has shown that the native speakers of a non-null-subject language, when learning a null subject language, exhibit a weaker representation of the pragmatic constraints, especially in the overt pronoun interpretation. They argue that when there are two forms of pronouns, the null and the overt, with the division of labor in function, "L2 learners present more optionality in interpreting the non-default form signaling a topic-shift (i.e., the overt pronoun in Romance languages) (p.4)", which accounts for the former findings of the native-deviant anaphora interpretation, especially in the overt condition.

    Lastly, Ahn (2019) examined the PAH behavior of sixty Korean learners of L3 Spanish at three different proficiency levels: beginner, intermediate and advanced groups. The learners were adult learners of L3 Spanish who had

previous experience of learning L2 English. It was hypothesized that L1 transfer would be facilitative while L2 transfer is non-facilitative in learning anaphoric behavior predicted in the PAH. The test items were sixty globally ambiguous sentences adopted from Cartminati's (2002) Experiment 2. The learners were guided to read the given sentence and later select one correct answer to the following question, as shown below.

(47) Marta le escribía frecuentemente a Paloma cuando estaba en los Estados Unidos.

¿Quién estaba en los Estados Unidos?

□ Marta estaba en los Estados Unidos.

□ Paloma estaba en los Estados Unidos.

The results were first categorized into four types: (a) Null condition – Subject antecedent; (b) Null condition – Object antecedent; (c) Overt condition – Subject antecedent and (d) Overt condition – Object antecedent. The choices that the PAH predicts are (a) and (d). The result confirmed that only intermediate and advanced learners strongly complied with the PAH, while the beginners showed a chance-level selection, showing no apparent bias in the anaphoric resolution

Table 4.1. Percentage of selecting subject or object antecedent in anaphora resolution

| Condition | | L3 Spanish Proficiency | | |
		Beginners	Intermediates	Advanced
Null	Subject antecedent	**59.0%**	**71.3%**	**81.0%**
	Object antecedent	41.0%	28.7%	19.0%
Overt	Subject antecedent	49.7%	36.3%	27.7%
	Object antecedent	**50.3%**	**63.7%**	**72.3%**

The answers were later analyzed again and were categorized as 'Follow PAH' and 'Not Follow PAH'. The early-stage learners followed the PAH

approximately half of the time, while upper-level learners showed substantial compliance to the PAH.

Table 4.2. Percentage of PAH-oriented jugements

Follow PAH	55.0%	67.8%	77.0%
Not follow PAH	45.0%	32.2%	23.0%

I reasoned that it might be due to the L2 transfer that the beginners exhibited a low tendency to follow the PAH. Because the responders were already familiar with the complementary anaphora resolution strategy between the null and overt subject due to their L1. As for upper-level learners who are past the initial stages, it isn't easy to separate the effect of learning from the transfer. However, the comparison of this result with Keating et al.'s (2011) English native advanced learner's data led me to suspect a significant L1 effect that availed learners to learn out of negative L2 transfer. Koreans linked the null subject with the subject antecedent 81% of the time, while English natives did it 60.2% of the time. The contrast becomes more distinctive for the overt subject that Koreans assigned it with subject antecedent only 27.7% of the time while English did it 52.2% of the time. In a simple comparison, the Korean native-L2 advanced learners showed a more native-like behavior than the English counterpart. This result becomes significant if we consider that the PAH is a feature that requires the integration of a syntax-pragmatics interface, which is generally accepted as *loci* of imperfect acquisition even at the advanced level. Koreans seem to enjoy a particular boost effect in the native-like anaphora interpretation due to their L1. The disparate behavior found in learner groups at different stages of acquisition alluded to the possibility of hybrid transfer. This possibility of hybrid transfer in the PAH items in the L3 Spanish acquisition will be reexamined in this thesis.

The findings of the above studies seem to agree that, although not as strong as in Italian, Spanish natives abide by the PAH in the anaphoric resolution. Meanwhile, previous literature has explained the reported divergence of Spanish overt subject in the PAH in three aspects: (a) the pronoun system of Italian and Spanish, even though these languages have been long considered typologically close and therefore syntactically similar, may have micro-variation in their pronominal inventory (in case of native contexts); (b) the conflict between the PAH and the subject assignment rule, a strategy in non-null subject languages due to transfer (in case of nonnative contexts); (c) the persistent vulnerability found in the syntax-pragmatics interfaces during nonnative acquisition, which is postulated in Interface Hypothesis (in the case of nonnative context). Quesada (2015), in her seminal book, offered a summary of the PAH literature as follows.

> …the tendency is stronger in monolingual Italian speakers, among monolingual Spanish speakers overt subject pronouns are less likely to link to non-subject antecedents; in fact, Spanish has proven to be more flexible and the evidence from several studies reveals that overt subject pronouns link equally to subject and object antecedents. It has also been seen that this weaker (or more flexible) bias of the PAH has effects among bilingual speakers and L2 learners. Among bilingual speakers, anaphoric resolution for overt subject pronouns takes longer to sort out. The lack of a clear distinction in the functions of overt subject pronouns may explain bilingual speakers' and L2 learners' continued dependence on the less taxing and more efficient English processing strategy of the subject rule for anaphoric assignment rather than the PAH. This in part explains the persistent over-use of overt subject pronouns in bilingual speaker and L2 learner production.

> (Quesada, 2015, p. 149)

In this regard, the studies that examine the hypothesis from a nonnative context are guided to consider the following two points: (a) transfer from background language grammars, especially the competition with the subject assignment rule, and (b) the additional demand posed by the innate character of the PAH that requires mapping between the syntax and pragmatics interface.[59]

2.2. PAH in background languages

Korean is a *pro*-drop language that allows or requires alternation of null and overt subject pronouns, according to the contextual and discourse constraints. Regarding the PAH, the language displays a similar pattern in the processing of anaphora resolution as Italian and Spanish. Kweon (2011) is, to my knowledge, the first and only research that explicitly set out to probe the applicability of the PAH in Korean. She asserted that the explanatory power of the hypothesis could be fortified if other *pro*-drop languages, especially with typological distance like Korean, show the same processing bias proposed by Carminati (2002). The study tested fifty-two Korean native speakers on their selection of antecedents in null and overt conditions. Korean does not allow main-subordinate clause order, so all the experiment items were ambiguous sentences where the subordinate clause is followed by a main clause with two possible antecedents, as seen below.

(48) a. HyenWu-ka SungGi-lul parapol ttay Ø coffee-lul masye-yo.

HyenWu-N SungGi-A see when Ø coffee-Acc drink

'When HyenWu looks at SungGi, Ø drinks coffee.'

---

[59] According to White (2011b), interface requires "involving interaction or mapping between linguistic modules or reprentations (p.578)" therefore in the L2 context, there is added difficulty to acquire a proper mapping which are reported to be problematic.

(49) b. HyenWu-ka SungGi-lul parapol ttay ku-ka coffee-lul masye-yo.

HyenWu-N SungGi-A see when he-N coffee-Acc drink

'When HyenWu looks at SungGi, he drinks coffee.'

(Kweon, 2011, p. 4)

After reading the stimuli, the participants were asked to select whether '*HyenWu* (the subject pronoun) is drinking coffee' or '*SungGi* (the object pronoun) is drinking coffee' to confirm their preference in the antecedent assignment.[60] The result of this research confirmed a clear division of labor between the Korean null and overt pronouns in the interpretation of anaphora. In the null condition, the participants selected the subject antecedent 81.1% of the time, whereas only 18.9% chose the object antecedent. Furthermore, the participants assigned overt pronouns to an object antecedent 68.6% of the time, while only 31.4% were linked to the subject antecedent. Kweon quoted Carminati's (2002) argument that the assignment of overt pronoun to object antecedent is not as strong as its counterparts since the overt pronoun can be used for more general purposes (p. 33) to support that the overt pronoun showed less strong contrast in its anaphora resolution. She concluded that Korean data in her research fully supported the PAH.

---

[60] The author pointed out that when testing the PAH in Korean complex sentences, only temporal marker -*ttay* (when) is appropriate. Because if the adverbial suffix -*myense* or -*tongan* (while) is used, the complementary interpretation is blocked pragmatically and semantically. (Kweon, 2011, p. 5)

    (a) HyenWu-ka SungGi-lul parapo-myense **Ø** coffee-lul masye-yo.

       HyenWu-N SungGi-A see-at the same time Ø coffee-Acc drink

       'While HyenWu looks at SungGi, Ø drinks coffee.'

    (b) HyenWu-ka SungGi-lul parapo-myense **ku**-ka coffee-lul masye-yo.

       HyenWu-N SungGi-A see-at the same time he-N coffee-Acc drink

       'While looking at SungGi, HyenWu drinks coffee.'

In the examples above, -*myense* only permits both Ø and *ku* to be linked to the subject antecedent, contradicting the prediction in the PAH. Furthermore, she noted that temporal markers -*meynse* and -*tongan* have different semantic properties blocking global ambiguity. Therefore, to test the validity of PAH in Korean, only the neutral affix -*ttay* should be used for the ambiguity.

In the following study, Kweon (2012) tested the hypothesis in a nonnative context in Korean. The author aimed to address whether the L2 learners with L1 English would show a native-like antecedent bias based on the pronoun types in L2 Korean. The L2 beginners with an average of 1.3 years of Korean instruction were compared with the L2 advanced learners with approximately 12 years of exposure. Motivated by Sorace and Filiaci (2006), this research contrasted intra-sentential sentences in four different combinations: forward/backward anaphora x null/overt pronoun condition.[61]

(51) Forward anaphora in Korean

    a. Forward Overt condition (FO condition)

       Joe$_i$-ka Bill$_k$-lul paraponun-tongan ku$_{i/k/l}$-ka coffee-lul masye-yo.

       Joe-N   Bill-A   see-while   ku-N   coffee-A   drink

    b. Forward Null condition (FN condition)

       Joe$_i$-ka Bill$_k$-lul paraponun-tongan ***pro***$_i$ coffee-lul masye-yo.

       'While Joe looks at Bill, he/*pro* drinks coffee.'

(52) Backward anaphora in Korean

    a. Backward Overt condition (BO condition)

       ku$_{i/k/l}$-ka coffee-lul masinun-tongan Joe$_i$-ka Bill$_k$-lul parapoa-yo.

       ku-N   coffee-A   drink-while   Joe-N   Bill-A   see

    b. Backward Null condition (BN condition)

       pro$_i$ coffee-lul masinun-tongan Joe$_i$-ka Bill-lul parapoa-yo.

       pro-N   coffee-A   drink-while   Joe-N   Bill-A   see

       'While he/*pro* drinks coffee, Joe looks at Bill."

                        (Kweon, 2012, pp. 4-5)

---

[61] Sorace and Filiaci (2006) tested the interpretation of Italian anaphora by English native L2 Italian learners at near-native level in forward and backward anaphora in null and overt conditions. The data proved that the PAH is supported only in the forward anaphora condition for overt pronouns and backward anaphora for null subjects.

After reading the given stimuli, the learners were asked to answer the question 'Who is drinking coffee?' and to choose from three options provided: (a) Joe, (b) Bill, and (c) 'a third person not mentioned'.[62] The result demonstrated that all three groups, even the beginners, performed alike in the FN condition, linking null pronoun with a subject antecedent. The author attributed this native-like behavior to the high frequency of FN structure in learners' input. In the BN condition, a significant number of L2 beginners (80%) and advanced learners (73%) again preferred to interpret null subject as subject antecedent, while Korean native controls chose option (c) 'a third person not mentioned' most of the time. Kweon insisted that the L1-L2 difference in the pronominal system, the absence of a null subject in L1 English, plus the scarcity of the BN constructions may have caused additional processing difficulties for L2 learners to behave non-nativelike. Secondly, in the FO and BO conditions, beginners significantly preferred the subject antecedent for overt subject applying their L1 subject rule strategy against the PAH, indicating non-facilitative L1 transfer. However, advanced learners showed native-like antecedent assignments, possibly due to the development of the L2. The author analyzed that overt subject exists in learner's L1 system, and this must have promoted a stronger tendency to transfer their native language in both overt conditions at the beginner's level. This study has compared the learner's data with that of native controls, not with how the PAH predicts. Furthermore, it is questionable why the author used -*tongan* for the design of the stimuli. In their previous study, Kweon (2011) clearly stated, "for adverbs in the subordinate clause in Korea, I used a temporal clause marker -*ttay* to best realize the experimental purpose of

---

[62] It is important to note that in the other PAH studies, only subject and object antecedent options are given to best observe the bias captured in the PAH. However, this study added extralinguistic antecedent following Sorace and Filiaci (2006), which she admited that the tendency to follow the PAH may not be fully observed.

the whole ambiguity for the test items.…There are a few other temporal markers in Korean, i.e., *-myense*, *-tongan*, each of which has slightly different semantic properties (p.5)." It remains open to further discussion whether the same result will be rendered if the stimuli used *-ttay* instead of questionable *-tongan*.

Now, let's take a look at English data. English is a non-*pro*-drop language that does not license phonetically null subjects; therefore, the division of labor in interpreting pronouns envisioned in the PAH is not applicable. Instead, a universal interpretation strategy is operative for the overt pronoun in English, a subject assignment strategy. In this language, an overt pronoun is preferably assigned to the subject antecedent, which is opposite to what the PAH predicts.

(52) John saw Charles when he was walking on the beach.

(Keating et al., 2011, p. 197)

Technically, example (52) is an ambiguous sentence that 'he' in the subordinate clause can equally refer to *John* or *Charles*. However, according to the subject assignment rule, '*John* interpretation' is generally preferred by native speakers.

> A vast literature on the interpretation of pronouns in English has found that adults and children tend to utilize a subject assignment strategy, whereby overt pronouns are resolved in favor of subject antecedents, regardless of their syntactic position in an utterance… The so-called subject rule - a purportedly universal strategy - dictates coreference of the overt pronoun with the subject antecedent, whereas the PAH stipulates resolution of the overt pronoun in favor of the object antecedent.
>
> (Keating et al., 2011, pp. 198-199)

Although the anaphoric bias of the PAH is not instantiated in English, the language has been considered an optimal background language in studying the nonnative acquisition of the PAH. Because of its opposite behavior in the overt condition. The competition between the subject assignment strategy and the PAH can be set, allowing the researcher to shed light on the transfer effect during the acquisition of the processing strategy of null and overt pronouns.

3. Transfer scenario

The previous literature extensively reviewed here confirms the following preference in the anaphora resolution in Korean, English, and Spanish.

Box 4.1. Previous findings in anaphora resolution of null and overt subjects

Korean	Preference following the PAH
English	Preference following the subject assignment rule in overt condition
Spanish	Preference following the PAH

The PAH posits two conditions, the null and the overt. However, in L2 English, the null condition is impossible, and the language complies with the subject assignment rule in the overt condition, preferring subject antecedent over object antecedent in anaphoric interpretation.

To examine the transfer of background linguistic knowledge in L3 Spanish, the participant group must show native-like behavior in the respective languages, as stated below.

Box 4.2. Precondition for proper prediction of transfer in L3 PAH acquisition

L1 Korean	Show PAH preference in anaphora resolution in Korean
Evidence	Complementary distribution in anaphoric resolution
	- Null condition:

	Subject antecedent > Object antecedent
	- Overt condition:
	Subject antecedent < Object antecedent
L2 English	Show adherence to the subject assignment rule
Evidence	Consistent preference for subject antecedent
	- Null condition: N/A
	- Overt condition:
	Subject antecedent > Object antecedent

It is noteworthy that the PAH and the subject assignment rule of L2 English directly conflict in the overt condition. The PAH predicts the overt pronoun to prefer object as its antecedent in a globally ambiguous sentence. In contrast, the subject assignment rule contends that the English overt pronoun is likely linked to the subject antecedent for the interpretation in an ambiguous context with two possible candidates.

- L1 Korean ➔ [OVERT-OBJECT antecedent]
- L2 English ➔ [OVERT-SUBJECT antecedent]

Therefore, the PAH context in the overt condition is where the transfer effect of background languages can be most clearly observed because L1 and L2 perform contrastively. The direct effect of the transfer of L1 or L2 is expected to be manifested in overt conditions.

Box 4.3. Transfer scenario in L3 PAH acquisition

L1 Transfer Scenario: Facilitative in the PAH acquisition	
L3 Spanish	If L1 is transferred, learners will show a strong preference to resolve null subject to subject antecedent and resolve overt counterpart to object antecedent as the PAH stipulates despite

	the former findings that interface features tend to show lagging in the acquisition
evidence	Acceptability in null condition
	- Subject antecedent > Object antecedent
	Acceptability in overt condition
	- Subject antecedent < Object antecedent

L2 Transfer Scenario: Non-facilitative in the PAH acquisition	
L3 Spanish	If L2 is transferred, learners will show a strong preference to resolve both null and overt subject to the antecedent in the subject position
evidence	Acceptability in overt condition
	- Subject antecedent > Object antecedent

Consider that the PAH is a property that requires mapping between syntax and pragmatics, which is argued to pose an extra acquisition burden to the learners, resulting in an acquisitional delay even for the advanced learners. Therefore, the cases where a learner evaluates the null and the overt conditions to have no difference will be categorized as an incomplete acquisition because both L1 and L2 transfer cannot explain such deviant behavior. Such optionality in the null and overt subject alternation will partially support the Interface Hypothesis (IH).

4. Task design

The PAH items are adopted and translated from Carminati's (2002) Experiment 2.[63]

Table 4.3. Summary of PAH tasks

---

[63] Two native speakers of Spanish confirmed the naturalness of the translation.

	Language		Type
1st Questionnaire	Spanish	n=20	Acceptability Judgment Task (subject/object antecedent option sentences)
2nd Questionnaire	Korean	n=20	Acceptability Judgment Task (subject/object antecedent option sentences)
	English	n=10	Acceptability Judgment Task (subject/object antecedent option sentences)

Due to the innate character of the PAH, the testing sentences are designed in [null-overt] pairs but presented separately, one in null condition (example (53A)) and the other in overt condition (example (53B)). Both are followed by a question that asks the responder about their preferred choice in the anaphora resolution, subject antecedent or object antecedent.

(53) Spanish test item

   (A) Null condition

    Marta le escribía frecuentemente a Paloma cuando estaba en los Estados Unidos.

    '*Marta used to write to Paloma frequently when pro was in the United States.*'

    Q. ¿Quién estaba en los Estados Unidos?

    '*Who was in the United States?*'

    a. Marta estaba en los Estados Unidos. □ 1 □ 2 □ 3 □ 4 □ 5

    b. Paloma estaba en los Estados Unidos. □ 1 □ 2 □ 3 □ 4 □ 5

                (1: absolutely unacceptable ~ 5: absolutely acceptable)

  (B) Overt condition

    Marta le escribía frecuentemente a Paloma cuando ella estaba en los Estados Unidos.

    '*Marta used to write to Paloma frequently when she was in the United States.*'

    Q. ¿Quién estaba en los Estados Unidos?

'Who was in the United States?'

    a. Marta estaba en los Estados Unidos. □ 1 □ 2 □ 3 □ 4 □ 5

    b. Paloma estaba en los Estados Unidos. □ 1 □ 2 □ 3 □ 4 □ 5

According to the PAH, the null conditioned ambiguous sentence is likely to be linked with the subject antecedent. In contrast, the overt condition would show the opposite bias towards the object antecedent. Therefore, native-like preference would be [NULL condition: SUB > OBJ] AND [OVERT condition: SUB < OBJ], and the transfer of L1 would fortify such tendency, while L2 transfer would weaken the PAH-friendly behavior in the overt condition.

    The translated version of the Spanish test items is used for the Korean questionnaire.[64]

(54) Korean test item

    (A) Null condition

    결혼한 후 영수는 더 이상 준혁을 만나지 않습니다.

    'Ever since pro got married, Yongsu no longer sees JunHyuk.'

    Q. 누가 결혼을 했나요? *'Who got married?'*

      a. 영수가 결혼했습니다. (SUB)　□ 1 □ 2 □ 3 □ 4 □ 5

      b. 준혁이 결혼했습니다. (OBJ)　□ 1 □ 2 □ 3 □ 4 □ 5

                    (1: absolutely unacceptable ~ 5: absolutely acceptable)

    (B) Overt condition

    그가 결혼한 후 철수는 더 이상 민혁을 만나지 않습니다.

---

[64] As mentioned in the literature review, Korean disallows main-subordinate clause order, therefore, all the stimuli were given as subordinate-main clause order as in Kweon (2011). In this regard, the effect of clause order in Spanish stimuli, comparing the Korean learners' behavior between *"Marta le escribía frecuentemente a Paloma cuando estaba en los Estados Unidos"* and *"Cuando estaba en los Estados Unidos, Marta le escribía frecuentemente a Paloma"* would be an intriguing future research topic.

'Ever since he got married, Chulsu no longer sees MinHyuk.'

Q. 누가 결혼을 했나요? *'Who got married?'*

 a. 철수가 결혼했습니다. □ 1 □ 2 □ 3 □ 4 □ 5

 b. 민혁이 결혼했습니다. □ 1 □ 2 □ 3 □ 4 □ 5

(1: absolutely unacceptable ~ 5: absolutely acceptable)

The target pair of native-like preference in the anaphora resolution is identical to that of Spanish: [NULL condition: SUB > OBJ] and [OVERT condition: SUB < OBJ].

The English PAH items are provided only in the overt condition sentences, as shown below.

(55) English test item

 John plays golf with David if he has time.

 Q. When does John play golf?

 a. If John has time.   □ 1 □ 2 □ 3 □ 4 □ 5

 b. If David has time.   □ 1 □ 2 □ 3 □ 4 □ 5

If the participants have acquired the native-like L2 English strategy in the anaphora resolution, it is expected that the result shows a strong tendency to link the subject antecedent with the overt subject, thus showing [OVERT condition: SUB > OBJ].

5. Results

The Korean and English data is analyzed first descriptively and statistically to confirm whether the participants exhibit PAH-oriented interpretation of antecedent in their L1 and show preference according to the subject assignment rule in the L2. Then, the L3 Spanish data is analyzed to

observe transfer from background languages. The summary of data applied in the analysis is provided below.

Table 4.4. The PAH items

PAH	Null condition		Overt condition	
option sentences (AJT)	SUB antecedent *type 1*	OBJ antecedent *type 2*	SUB antecedent *type 3*	OBJ antecedent *type 4*
Korean	n=10	n=10	n=10	n=10
English	N/A	N/A	n=10	n=10
Spanish	n=10	n=10	n=10	n=10

(BGN=60, ADV=20)

5.1. Korean PAH result

The data presented here are from sixty BGN and twenty ADV and their acceptability in twenty Korean PAH contexts.[65] The half is null conditioned, and the other half is overt conditioned, and the option sentences are given subject antecedent and object antecedent for each condition.

Figure 4.1. Group average acceptability in Korean PAH constructions

PAH KOREAN

	BGN NULL	BGN OVERT	ADV NULL	ADV OVERT
■ SUBJECT	4.60	2.96	4.66	2.45
■ OBJECT	2.31	3.99	2.01	4.09

---
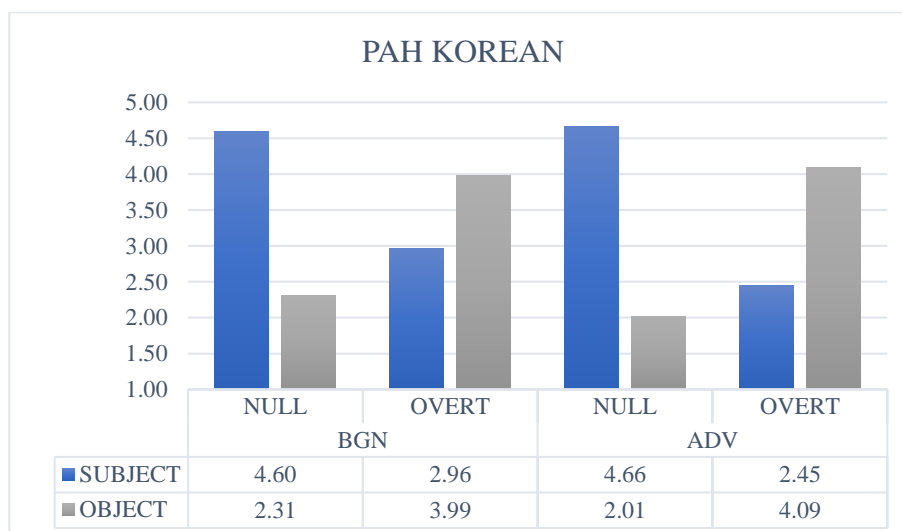
[65] Note that seven participants were excluded from this task because they showed PAH-deviant preference in the overt condition, evaluating the subject antecedent significantly more acceptable than the object antecedent in Korean.

Table 4.5. Paired samples test on acceptability in Korean PAH constructions (BGN)

PAH KOREAN			Mean	Std.Deviation	*t*	*P*
BGN	Null	subject	4.6083	.75225	36.271	<.001
		object	2.3071	1.12075		
	Overt	subject	2.9633	1.32851	-12.692	<.001
		object	3.9900	1.08560		

Table 4.6. Paired samples test on acceptability in Korean PAH constructions (ADV)

PAH KOREAN			Mean	Std.Deviation	*t*	*P*
ADV	Null	subject	4.6600	.56212	31.179	<.001
		object	2.0100	.93502		
	Overt	subject	2.4472	1.26170	-12.548	<.001
		object	4.0905	.93304		

The BGN's anaphora resolution tendency in both null and overt conditions shows a contrastive preference, [NULL: SUB (4.60) > OBJ (2.31)] and [OVERT: SUB (2.96) < OBJ (3.99)], according to the PAH's prediction with a significant statistical difference (<.001). The same tendency was confirmed in the ADV group. Therefore, the selected sixty participants are guaranteed to exhibit sensitivity to the PAH in their L1.

5.2. English PAH result

Ten globally ambiguous sentences in overt conditions were tested to confirm whether this group prefers subject antecedent over object antecedent, as suggested in the subject assignment rule.[66] The figure below shows that both groups showed significantly different acceptability for each antecedent.

Figure 4.2. Group average acceptability in English PAH (overt) constructions

---

[66] Two participants were excluded in this task because they did not perform as predicted by the subject assignment rule. Both showed no difference between the two antecedents.

PAH (overt) ENGLISH

	BGN	ADV
SUBJECT	4.35	4.41
OBJECT	2.83	2.71
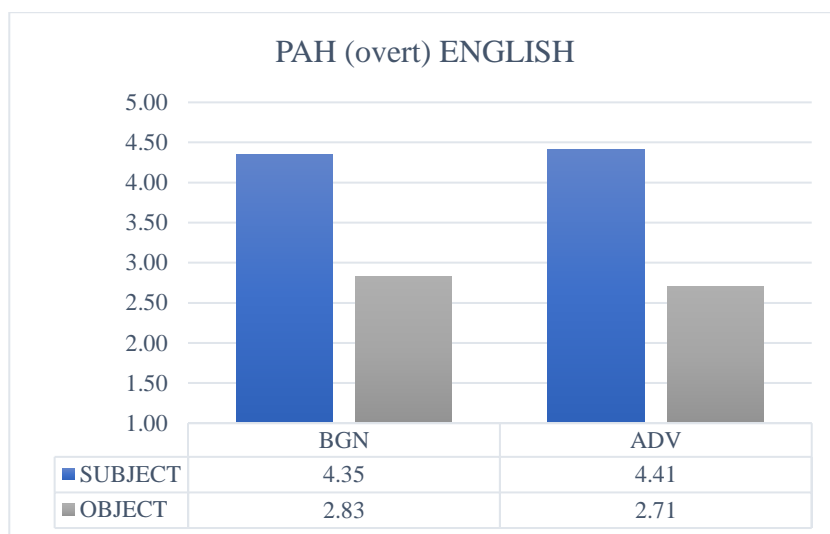
Table 4.7. Paired samples test on acceptability in English PAH constructions (overt)

SUBJECT RULE ENG		Mean	Std. Deviation	t	P
BGN	subject	4.3467	.90620	19.574	<.001
	object	2.8300	1.29894		
ADV	subject	4.4100	.86930	12.434	<.001
	object	2.7100	1.44789		

This analysis confirms that the selected participants of this study show a native-like strategy when looking for an antecedent in the globally ambiguous context in their L2, preferring subject antecedent over object antecedent.

5.3. Spanish PAH result

The result of sixty BGN and twenty ADV participants' Spanish data is reported here. Each participant evaluated twenty PAH contexts, half in null condition and another half in overt condition composed of two option sentences. The presentation of the result is organized as the following.

(1) Mean acceptability of each group

(2) Between-group analysis of each condition

(3) Item analysis of overt conditioned PAH stimuli from a transfer

perspective

First, the mean acceptability indicated that the BGN group complied with the PAH's prediction only in the null condition. They showed a higher acceptance of the subject antecedent with a statistically significant difference over the object antecedent in the null condition [NULL condition: SUB(4.30) > OBJ(2.99), p.<001]. However, in the overt condition, learners accepted both subject and object antecedent [SUB(3.60), OBJ(3.72)], and the difference between them was not significant (p=.185). This indicates that the BGN group's acceptability pattern in the overt condition was not L1-like nor target-like. The difference was mostly due to the high acceptability of the subject antecedent in the overt condition, as the L2 pattern.

Figure 4.3. Group average acceptability in Spanish PAH constructions

SPANISH PAH				
	NULL	OVERT	NULL	OVERT
	BGN		ADV	
SUBJECT	4.30	3.60	4.55	2.63
OBJECT	2.99	3.72	2.35	4.62
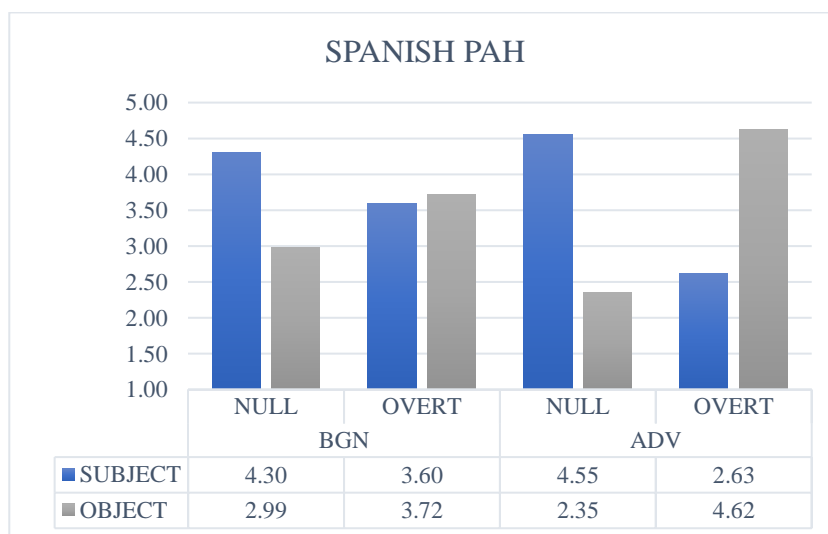
Table 4.8. Paired samples test on acceptability in Spanish PAH constructions (BGN)

PAH SPANISH			Mean	Std.Deviation	t	P
BGN	Null	subject	4.2983	.96828	16.932	<.001
		object	2.9867	1.34269		
	Overt	subject	3.5967	1.36397	-1.327	.185
		object	3.7200	1.30810		

Table 4.9. Paired samples test on acceptability in Spanish PAH constructions (ADV)

PAH SPANISH			Mean	Std.Deviation	t	P
ADV	Null	subject	4.5500	.80044	1.73042	<.001
		object	2.6250	1.28555		
	Overt	subject	2.3500	1.16373	1.49273	<.001
		object	4.6200	.65402		

Meanwhile, the ADV group showed a significant difference in the antecedent assignment on both conditions, evaluating the acceptability of [NULL condition-SUB antecedent] and [OVERT condition-OBJ antecedent] combination higher than their counterpart, as the PAH predicts. The most standing-out difference between the two groups was found in the [OVERT condition-SUB antecedent], where the L2 strategy directly conflicted with the L1 preference.

Secondly, a between-group independent sample test was conducted. The BGN's choice in all four types of items was distinct from ADV, with a significant difference.

Table 4.10. Independent samples test between groups

PAH SPANISH			Mean	Std.Deviation	t	P
Null	subject	BGN	4.2983	.96828	-3.645	<.001
		ADV	4.5500	.80044		
	object	BGN	2.9867	1.34269	3.334	<.001
		ADV	2.6250	1.28555		
Overt	subject	BGN	3.5967	1.36397	12.547	<.001
		ADV	2.3500	1.16373		
	object	BGN	3.7200	1.30810	-12.740	<.001
		ADV	4.6200	.65402		

Lastly, each participant's evaluation of the option sentences was compared as a pair (SUB*OBJ). It is important to mention beforehand that the PAH contends a contrasting anaphora resolution between null and overt conditions. However, from a transfer perspective, only overt condition data

hold validity for testing. Because, as seen in table 4.11, the null condition is impossible in L2 English, and even if it is forced as a null subject sentence, the L2 would prefer the subject antecedent, an identical strategy of the L1, following the subject assignment rule.

Table 4.11. The PAH's prediction in background languages

	NULL condition	OVERT condition
L1 Korean	[subject>object]	[subject<object]
L2 English	N/A	[subject>object]

Therefore, the data from the null condition is not directly helpful in observing the transfer effect in this particular language triad. Based on this consideration, only the overt condition's two option sentences (BGN: n=600, 10 PAH Overt conditions * 60 participants and ADV: n=200, 10 PAH Overt condition * 20 participants) are coded as the following.

[PAH, OVERT condition, n=10]
- if acceptability is [SUB < OBJ] ➔ L1
- if acceptability is [SUB > OBJ] ➔ L2
- if acceptability is [SUB = OBJ] ➔ Incomplete acquisition

This coding will allow us to observe which language influences the L3 Spanish at a glance.

Table 4.12. Percentage of transfer source in the PAH overt condition

PAH SPANISH		L1	L2	Incomplete
BGN	cases	228	217	155
	percent	38.00%	36.17%	25.83%
ADV	cases	165	4	31
	percent	82.50%	2.00%	15.50%

The BGN's item analysis showed that both previously acquired languages had

influenced learners' parsing of L3 PAH sentences. In the BGN's analysis, among six hundred set items compared, 38% followed the Korean PAH pattern, while 36% followed the English pattern of the subject assignment rule. The remaining cases evaluated that both subject and object antecedent are identical in their acceptability. It is noteworthy that in the ADV's data, the trace of L2 transfer diminished drastically compared to the BGN (36%→2%), while the instances of incomplete in the ADV persisted.

In summary, the analysis of the PAH data confirmed the following.

Table 4.13. Summary of PAH task result

	CONDITION	**BGN**	**ADV**
Korean PAH	Null	SUB>OBJ	SUB>OBJ
	Overt	SUB<OBJ	SUB<OBJ
English PAH	Overt	SUB>OBJ	SUB>OBJ
Spanish PAH	Null	SUB>OBJ	SUB>OBJ
	Overt	**SUB=OBJ**	**SUB<OBJ**
group difference		A significant difference in all four types	
transferred language	Overt	L2 English and L1 Korean	

6. Discussion

Testing the Position of Antecedent Hypothesis (PAH) to Korean native learners of Spanish was expected to shed light on how the L1 anaphora resolution strategy engages in the L3 when their L2 poses the opposite antecedent assignment strategy. The PAH encodes interpretation preference of both null and overt conditions. However, in the Korean-English-Spanish pairing, only the overt condition can hold validity for examining the transfer effect. In the overt condition, Korean and Spanish exhibit object antecedent preference while English follows the subject assignment rule. The previous acquisitional literature has approached the PAH with two considerations in mind: a transfer of non-facilitative grammar (English) and the acquisitional

delay found in the acquisition of interface property, formulated as the Interface Hypothesis (IH).

First, in the background language questionnaire, the Korean natives complied with the antecedent biases based on the type of pronouns as the PAH predicted. In the globally ambiguous null condition, they preferred the subject antecedent over the object antecedent with a statistically significant difference. And at the same time, they showed starkly contrastive acceptability in the overt condition, following the hypothesis. These results confirmed that the PAH is valid in Korean, as previous literature has shown, and also that the participant group of this study has the proper PAH-based preference in anaphora resolution in their L1. The English questionnaire tested whether the participants complied with the subject assignment rule, a universal strategy that promotes anaphora resolution between [overt condition-subject antecedent]. Korean natives included in the analysis demonstrated anaphora resolution preference following the subject assignment rule in L2 English. The acceptability difference between the subject and object antecedent was statistically different, thus confirming that this group holds a native-like anaphora resolution strategy in their L2. Based on this, the following Spanish data analysis was conducted for the PAH overt condition.

The mean acceptability of subject and object antecedents in Spanish PAH items showed that the learners did not conform to what the PAH predicts nor to how their native language works. The acceptance for the [OVERT-SUB] combination, which is expected in the English subject assignment rule, was much higher than that of the L1 result. This suggested that the L2 subject assignment behavior was active in L3 Spanish anaphora resolution. Furthermore, there was no statistical difference in interpreting the ambiguous overt pronoun as subject or object antecedents.

To probe a possible L2 effect in more detail, the participant's answers were coded in pairs. The cases when the subject antecedent was accepted with a higher scale than the object pronoun were categorized as L2 transfer

evidence and the opposite cases as L1 evidence. The instances when the participants evaluated both subject and object as having the same acceptability were categorized as an incomplete acquisition, being mindful of the previous literature that argues for the difficulty caused by the interface relatedness of this property.

The result from item analysis through coding eight hundred answers in pairs further confirmed that the L1 pattern of anaphora resolution for the overt condition marked 38% in the BGN's choice, confirming the early learner's activation of L1 in the L3 anaphora resolution. At the same time, the L2 cases accounted for 36% in the BGN's choice, which later in the ADV's choice drastically dropped to 2%. I take this result as an indicator of L2 non-facilitative transfer during the initial stage of anaphora resolution in the L3. Furthermore, ADV's results imply that the non-facilitative transfer of wrongly-activated background knowledge (the L2 in this case) is being corrected as the L3 grammar develops. I submit this result as an empirical foundation for the hybrid transfer of both L1 and L2 in the initial stages of L3 acquisition of PAH. The result of this study resonated with my former investigation, Ahn (2019), which confirmed that 49.7% of the beginner level participants oddly chose the [OVERT-SUB] interpretation in processing L3 Spanish ambiguous sentences following the L2 English strategy. The L1 transfer would have facilitated the acquisition of complementary biases in anaphora resolution predicted by the PAH in their L3.

Meanwhile, the instances of incomplete acquisition analyzed in this thesis did not diminish as the L2 cases did, that BGNs showed 26% of [SUB=OBJ] cases, while the 16% of ADV's choices evaluated the same acceptability for both conditions. I believe this data indirectly confirms the residual optionality and instability in the ADV's behavior in the acquisition of interface-related properties, which is repeatedly documented in the former literature as evidence of the IH.

In summary, the result of the PAH task substantiated that both L1 and L2 knowledge engage in the learner's anaphoric behavior in the early L3 acquisition. Particularly, the transfer of L2 deserves a highlight considering its detrimental role in the native-like interpretation of anaphora. The hybrid L2 transfer led the beginner learners to divert from their L1-like and possibly target-friendly interpretation of anaphora in the overt condition.

CHAPTER 5. TOPIC-CONTINUITY AND TOPIC-SHIFT

1. Introduction

In the view of the universal economy, a least phonetically elaborated form of subject is preferred over an overt subject or full form of NP. This pragmatically universal idea was formulated as Avoid Pronoun Principle (APP) by Chomsky (1981). The APP is a conversational principle that restricts the use of overt subject pronouns to "only when the null subject is impossible." In a similar vein, Saunders (1999) proposed a universal anaphoric hierarchy of pronouns and noun phrase (NP), which correlates to the amount of contextual information that a speaker or a writer presumes that the listener or the reader already have in mind.

(56) Indefinite NP>definite NP>proper noun>overt pronoun>null pronoun

(Saunders, 1999, p. 51)

As seen in (56), an indefinite NP introduces a new referent that the speaker assumes that the listener has no former knowledge of. In contrast, a null form will be preferred for a highly salient referent when speakers can safely presume their counterparts share sufficient information. Therefore, a phonetically minimal form is economically preferred to designate a referent with higher saliency. The application of this hierarchy to the languages of interest in this thesis can be given as follows.

(57) (a) L1 Korean

Indefinite NP>definite NP>proper noun>overt pronoun> null pronoun

han namca-ka > ku namca-ka > proper noun > ku-ka   > *pro*

(b) L2 English

 Indefinite NP > definite NP > proper noun > overt pronoun

 a man   > the man   > proper noun > he

(c) L3 Spanish

Indefinite NP>definite NP>proper noun>overt pronoun>null pronoun

un hombre   > el hombre >proper noun> él   > *pro*

However, the APP and Saunders's hierarchy only depict a partial picture of the null and overt subject alternations. They do not fully explain the specific situation where the null subject is preferred over the overt subject in NSLs. Rothman (2007) maintains that although the APP holds universality, the presence of the APP in learners' native language does not guarantee the native-like distribution of null and overt pronouns. He argued that for both child and adult nonnative acquisition, learners must acquire the specific conditions that make a particular form of a subject possible or impossible. In Spanish, this crucial layer of complexity in the subject realization requires learners to integrate morphosyntactic modules with discourse-pragmatic features.[67] Null and overt subject alternation in Spanish is not optional, but rather it abides by a strict consideration of the pragmatic weight of each referent within the context, and of course, it poses extra learning challenges to both native and nonnative speakers.

This complex and delicate alternation in the use of Spanish subjects can be first approached from the 'topic-continuity' and 'focus or topic-shift'

---

[67] Languages, including Spanish, also use other mechanisms to encode the pragmatic weight of a referent (*topicness* or *focusness*), such as prosody, morphology, syntax, or combinations of these. For example, Spanish also applies prosodic stress to mark contrastive focus. More importantly, the manipulation of word order is another research area of Spanish with a long history of research. However, for the scope of the thesis, only syntactic realization of null and overt subject will be studied here.

paradigm. The following section will provide a quick review of how discourse-pragmatics affects the null and overt subject realization from an acquisitional perspective. The need for this section is adequately in line with Quesada's (2015) observation that "an understanding of these discourse-pragmatic notions is essential in detecting and analyzing deficits in the interpretation and production of pronoun distribution in L2 Spanish (p.35)."

The linguistic mechanism that each language applies to encode the pragmatic weight of a referent, such as [+topic], [+focus], and [+contrastiveness], is crosslinguistically articulated through various linguistic devices, such as morphological marker, prosodic contours, syntactic mechanism, or a combination of these.[68]

In Spanish, when a referent has a *topic* status or remains as the topic of a context, it is pragmatically felicitous to realize it with a null subject. Using an overt subject in this context is not impossible, but it is pragmatically anomalous to use an overt pronoun to refer to the same topic referent. According to Zagona (2002), the topic is determined based on the presupposition of the context by the speaker and hearer. The topic represents discourse-old, known, shared information that the preceding context has already evoked, such as '*Pepe*' in the example below.

(58) Pepe no vino   hoy   a trabajar. *Pepe/?él/∅ estará   enfermo.

Pepe no came today to work   Pepe he ∅ will be sick

'Pepe did not come to work today. He must be sick.'

(Montrul & Louro, 2006, p. 404)

In contrast, when a referent is newly introduced into the context, it appears

---

[68] The labels that have been used to refer to the linguistic theory that investigates how discourse or pragmatic status affects prosody, morphology, and syntax are: information structure (Halliday, 1967), Information packaging (Chafe, 1976) and Informatics (Vallduví, 1990).

with a *focus* status.[69] Zubizarreta (1998) defines focus as a constituent of a sentence that is not presupposed. Since no referring expression has been set within the preceding discourse, it is grammatically correct to realize it with a complete noun phrase. There is a specific discursive environment where the use of an overt subject is obligatory in Spanish: (i) introducing a new referent as in example (59), (ii) referring to a contrastive focus subject by assigning focal stress as in (60), (61a) and (61b) and (iii) to answer topic questions in (62).

(59) New referent: [+overt]

Hoy   no fui   a trabajar. Pepe/él/*∅ pensó   que estaba enferma.

today no I went to work   Pepe/él/*∅ thought that I was   sick

'Today, I did not go to work. Pepe/he thought I was sick.'

(60) Focal stress: [+overt]

El   periodista$_i$ dijo que él$_i$ no   había escrito ese reporte.

the journalista said that he (himself) not had   written that report

'The journalist said that he had not written that report.'

(Montrul & Louro, 2006, p. 404)

(61) Contrastive focus

  a. Todo el mundo opina que él tiene toda la razón y no ella.

  "Everyone thinks that he is completely right and not her"

  b. Nunca pensé que tuvieras que cocinar esta noche. Juan$_i$ me dijo que **él**$_i$ lo haría.

  'I never thought you would have to cook tonight. John told me he would do it.'

---

[69] Traditionally, the difference in the information load or flow between the topic and focus has also been coined as "old and new information," "topic and comment," or "theme and rheme." Here I will use the terms topic-continuity and topic-shift (focus).

(62) Answer to a topic questions

¿Quién habló con María José anoche? Yo/*∅ hablé con ella.

'Who spoke to María José last night?' ' I/∅ spoke to her.'*

(Rothman, 2007, p. 303)

Interestingly, the use of overt subject in the topic-continuity context does not cause any syntactic violation. Instead, it gives rise to *redundancy*, whereas the use of a null subject in topic-shift or focus context causes *ambiguity*. Montrul and Louro (2006) summarized the countereffect of using a wrong form of a subject against the context as follows.

A. Overproduction of OS: redundant OS

If an overt subject did not introduce a new referent in the narrative or was not used for emphasis, it will be considered redundant.

B. Overproduction of NS: illicit NS

It was clear from the storyline and the agreement morphology on the verb that there was a switch of reference, but the speaker did not use an overt subject, the null subject was considered illicit.

(Montrul and Louro, 2006, p. 412)

A simple summary of the Spanish alternation of null and overt subjects can be given below.

Table 5.1. Distribution of null and overt subjects and discourse-pragmatic notions in Romance languages

Subject type	Pragmatic notions	Related terminology	Function
Null	Topic (topic-continuity)	- same referent - non-focus	refers to old/shared information in discourse

		- non-contrastive focus	
		- non-topic shift	
Overt	Focus (topic-shift)	- change of/switch referent	introduces new information or serves to
		- contrastive focus	mark a specific contrast

<div align="right">(Quesada, 2015, p. 36)</div>

Interestingly, Domínguez (2013), in a broader perspective, offered a more comprehensive analysis of how the distribution of null and overt Spanish subjects is governed by the syntax-pragmatics interface. She set off from the traditional pragmatic approach stated above in Table 5.1. that a null subject indicates [-topic-shift] while its overt counterpart marks [+topic-shift].

(63) a. Juan no viene. *pro*/*Él está enfermo.   [-topic shift]

      *'Juan is not coming. pro/*He is sick'*

  b. Eva come conmigo pero **pro*/Rosa come sola.   [+topic shift]

      'Eva eats with me but *pro/Rosa eats on her own'

However, the author further pointed out that "an account of the use of overt and null subjects based on whether they merely encode a syntactic [+/-topic shift] feature may not be completely satisfactory (p.106)." Her data were from the actual native usage of the null and overt Spanish subjects reported in former studies, such as Silva-Corvalán (1994), Quesada and Blackwell (2009), and Liceras, de la Fuente, and Sanz (2010). In her study, Domínguez asserted the complexity of analyzing the alternation of null and overt subjects in Spanish.

A null subject can be used in a [+topic shift] context if it refers to a new referent which can be identified from the context; it can be used in a [-topic shift] context if it refers to an existing referent; it can also be used non-referentially as an epistemic parenthetical (e.g., *No sé* 'I don't know'; *Digo*

'I say').

> An overt subject can be used in a [+topic shift] context if it introduces a
> new referent in the context; it can be used to mark the subject with focus or
> contrast; it can also be used non-referentially to add pragmatic weight (e.g.,
> *Yo creo* 'I think').
>
> <div align="right">(Domínguez, 2013, p. 111)</div>

Based on the data from the actual use of null and overt subjects of native speakers, she suggested a new summary of their distribution.[70]

Table 5.2. Summary of pragmatic properties of null and overt subjects

	[+topic-shift]	[-topic-shift]	Non-referential
Null	Yes	Yes	Epistemic parenthetical (*'No sé, Digo'*)
Overt	Yes	Yes	Pragmatic weight (*'Yo creo'*)

<div align="right">(Domínguez, 2013, pp. 111-112)</div>

As seen above, the traditional approach to the Spanish subject pronoun system, which frames the use of subjects by applying the [+/-topic shift] paradigm, might not always coincide with the actual native use of the pronoun. However, it must be taken into account that the counter-evidence to this traditional categorization, where these two forms overlap, is mainly from a colloquial context.

In essence, these former studies confirmed that many factors pose challenges and confusion to nonnative learners when learning Spanish subject alternation: the integration of two linguistic modules (syntax and discourse) and confusing input from the colloquial use. Furthermore, as remarked in Quesada (2015), the fact that learners' textbooks are far from offering a

---

[70] For the native oral data, a sub-corpus of SPLLOC (Spanish Learner Language Oral Corpora) corpus data was used. SPPLOC mainly offers oral non-native Spanish data collected by researchers in the UK. (www.splloc.soton.ac.uk.)

comprehensive explanation of the distribution of Spanish subject pronouns imposes an additional challenging learning task even for advanced learners of Spanish.

2. Previous literature

2.1 Topic-continuity and topic-shift in nonnative Spanish

The acquisition of pragmatic features in Spanish subject realization has been studied in-depth since the late 1980s. Lozano (2009) provided a birds-eye review of former L2 literature on subject acquisition. He demonstrated that in the 80s, the studies predominantly reported early and successful acquisition of null subjects by non-NSP natives. However, investigations in the late 90s started to notice persistent deficits in the nonnative acquisition of null and overt subjects, significantly when features outside of syntax engage, such as [+topic] and [+focus]. Lozano summarized two significant findings reported in the nonnative acquisition of Spanish subjects as follows.

    (i) native-like knowledge of formal features operating at the narrow syntax from early states

    (ii) divergent knowledge and deficits when features operate at the syntax-discourse interface, which appears to be persistently problematic even at end-states

Pérez-Leroux and Glass (1999) is, to my knowledge, the first study to tap the question of acquiring syntax-pragmatics interface features of Spanish subjects in a nonnative context. They administered two translation and elicited production experiments to three different proficiency L2 groups, elementary, intermediate, advanced, and native controls. The study contrasted

the generative approach versus the probabilistic one by testing the Overt Pronoun Constraint (OPC) constructions and Topic-Focus constructions. The former is less frequent, but it is part of the UG, while the latter is more easily found in the learner's input but falls into the syntax-pragmatic interface property. The second task was to test the null and overt alternation in topic story (null preferred) and focus (overt required) story. The result of the first experiment confirmed that the learners showed the OPC effect in their subject use from the very early stages, supporting UG-driven L2 acquisition. In contrast, the study claimed that L2 learners showed gradual development and lingering deficit in topic-focus constructions that the accuracy rate was relatively low even at the advanced level. This study is the first one to mark that acquiring discourse-related features may pose additional learning tasks for nonnative learners.

Montrul and Louro (2006) is another study that confirmed the difficulty of learning discourse-pragmatic features of subject realization in the L2 context. The authors questioned whether morphosyntactic features and the discourse-pragmatic properties of Spanish subjects are acquired simultaneously or not. Based on the Full Transfer/Full Access Hypothesis (White (1989), Schwartz and Sprouse (1996)), the authors assumed that the L1 transfer would be observed in both syntax-only and interface features of the L2 Spanish from the earliest stages. English native-L2 Spanish learners at three different proficiencies participated: intermediate, advanced, and near natives. The oral task confirmed evident non-facilitative L1 influence in the intermediate group's behavior in syntactic and pragmatic properties of L2 Spanish subject realization. They showed absolutely no use of postverbal subjects and a strong preference for overt or pronominal subjects (22.9% of errors with a redundant overt subject) and verbal agreement errors. The proper parameter resetting and adherence to discourse rules were evidenced in the advanced group. Still, as in the Pérez-Leroux and Glass (1999) study, the group continued to show ungrammatical overproduction of *pro* in topic-shift

contexts, again confirming acquisitional lag in the discourse-pragmatic values. The authors concluded that when it comes to Spanish subject acquisition, the added difficulty in the discourse domain does cause an inevitable delay in the complete acquisition of subject distribution even at the advanced level.

The reported evidence on the delayed acquisition of pragmatic features of the Spanish subject was further advanced to argue that the apparent morphosyntactic errors found in the adult nonnative acquisition may also be attributable to the incomplete acquisition of discourse-pragmatic features. Rothman (2007) embarked on his discussion from the *syntax-before-discourse observation* perspective in the L2 acquisition (Montrul, 2004a, 2004b; Pérez-Leroux & Glass, 1999; Sorace, 2000, 2004b), which affirms that the pragmatic competence emerges later than narrow syntax knowledge. [71] This observation encompasses the former findings on the delayed acquisition of interface features that the formal features are mastered early with less effort while the discursive features are persistently problematic. In this respect, Rothman noted the target deviant syntactic behavior in the learner's performance might also be the manifestation of pragmatic deficits. He argued even with native-like NSP syntactic knowledge, L2 pragmatic deficits may evoke another syntactic error. This study called for the importance of considering the problems arising from the syntax-pragmatic interface when analyzing the target-deviant performance in learners' interlanguage.

Lozano (2009) set out intriguing research questioning whether reported residual pragmatic deficits in the L2 Spanish subject use would be evidenced equally in all *phi*-features of the pronominal paradigm. He called attention to the 'Feature Geometry Analysis' (Harley & Ritter, 2002a, 2002b), which suggests that the pronominal features are systematically and hierarchically

---

[71] This observation attempts to explain some developmental delays or non-native-like behavior reported in the literature by suggesting that properties in the syntax-pragmatics interface may be acquired after the narrow syntax features.

organized. For example, the 1st and the 2nd person correspond to deictic use, while the 3rs person is related to the anaphoric use of the pronoun. This analysis made the researcher question that the inventory of pronominal features may not exist as an 'unordered bundle.' He claimed that the 3rd person might be selectively impaired compared to the 1st and the 2nd person due to their hierarchical difference in the learners' minds. Lozano analyzed the CEDEL2 text of three groups, lower advanced, upper advanced L1 English-L2 Spanish learners, and Spanish natives.[72] He analyzed the pragmatically right use of the null and overt subject, and the result indicated that the native-deviant behavior at the interface does not happen to all *phi*-features of the pronominal system. The proposed interface vulnerability was selectively found in 3rd person animate pronouns in both topic and topic-shift contexts.

Table 5.3. Likely mental representation of discursive pronominal features

	Topic contexts		Topic-shift contexts	
	Discurs. Feature	Realization	Discurs. Feature	Realization
Spanish natives	[topic]	*pro*	[topic-shift]	overt
Spanish L2ers	[topic]	*pro* #*overt*[3][+anim]	[topic-shift]	overt *$*pro$*[3][+anim]

(Lozano, 2009, p. 26)

Based on the result, the author proposed a hypothetical mental representation of L2 learners shown above. It indicated that the learners wrongly perceive both forms of the third animate subject to be available for both topic continuity and shift contexts, unlike 1st and 2nd subject pronouns.

The previous literature reveals that the features operating at the interface cause persistent native-deviant behavior in nonnative language acquisition. Even though this thesis focuses on the early stages of acquisition, it would be

---

[72] CEDEL2 (Corpus Escrito Del Español L2) is a L2 Spanish written learner corpus developed by the Universidad Autónoma de Madrid.

prudent to mention again Sorace's Interface Hypothesis (IH) (Sorace, 2004a, 2004b, 2005, 2006b; Sorace & Filiaci, 2006), which accounts for the residual indeterminacy and persisting acquisition difficulty found in the highly proficient or end-state L2 learners' acquisition (the highest possible level of ultimate attainment in L2, in her own wording) of features operating at the interface. In its original proposal, the IH attempted to interpret the acquisition lag found in the syntax-pragmatics interface.[73] Sorace and Filiaci noticed those Italian L2 learners, even at a near-native level, demonstrated nonnative behavior in their interpretation of overt subjects, which is determined in the syntax-pragmatics interface.

> Residual optionality primarily affects morphosyntactic features that are interpretable at the interface with conceptual systems (LF). The affected features may remain underspecified, giving rise to optionality. Thus residual optionality affects the use of overt subjects and preverbal subject in L2 Italian, which is regulated by the interpretable [topic-shift] and [focus] features. If these features remain underspecified, overt subjects in near-native Italian are not necessarily being interpreted as shifted topics of foci.
>
> (Sorace, 2005, p. 62)

It must be accounted that the interface-related features pose acquisitional challenges even for advanced learners, not to mention early-stage learners.

2.2. Topic-continuity and topic-shift in background language

---

[73] According to Sorace (2011), "the concept of interface also enjoys wide currency in linguistic frameworks of different theoretical orientations, where linguists have dealt with the interface between syntax and information structure (see Erteschik-Shir, 2007 for a review), the semantics–pragmatics interface (Kamp & Reyle, 1993), and the syntax-semantics–pragmatics interface (see, e.g., Van Valin, 2006; Van Valin & La Polla, 1997) (p.6)." In the later discussion the author clarified that not all types of interfaces are equally problematic that only external interfaces which relates syntax and discourse domain are vulnerable.

This section reviews how information structure affects the subject use in the background languages. From a typological perspective, Korean and English belong to fundamentally different groups regarding information structure. Li and Thompson (1976) presented a linguistic typology based on the 'topic or subject prominence' of languages. According to this typological category, Korean is categorized as a 'topic-prominent language' while English is sorted as a 'subject-prominent language'. A widely accepted evidence supports such typological categorization that (i) Korean allows zero anaphora for both subject and object with *topicness* (example (64)), whereas English requires the subject to be overtly expressed in every sentence, (ii) Korean applies topic marker or contrastive focus marker *-(n)un* to mark the information weight of a constituent whereas English does not have a such device (example (65)), and lastly, (iii) Korean word order is flexible that it encodes old information at the beginning of the sentence and introduce the new information in the last (example (66)), whereas English has rigid word order SVO and a prosodical device mainly marks the old and new.

(64) - ne   ikes philoyohani?   너 이것 필요하니?

    you this   need?

    'Do you need this?'

  - Ø *philyohay* Ø.   필요해.

    Ø need   Ø

    'I need it.'

(65) Sayngsen-un   yene-ka   massissta. 생선은 연어가 맛있다.

    Fish-Topic   salmon-Subject   delicious

    'As for fish, Salmon is delicious.'

<div align="right">(Jung, 2004, pp. 720-721)</div>

(66) a. ecey   mikwukeyse chanjoka[F]   tolawassta.
     yesterday the US-from   chanko-subject-Focus came back
     'Yesterday, CHANHO came back from the US.'
     어제 미국에서 찬호가 돌아왔다.

   b. chanjoka mikwukeyse ecey[F] tolawassta.
      'Chanho came back from the US YESTERDAY.'
      찬호가 미국에서 어제 돌아왔다.

   c. chanjoka ecey mikwukeyse[F] tolawassta.
      'Chanho came back from THE US yesterday.'
      찬호가 어제 미국에서 돌아왔다.

                                            (Park, 2003, p. 101)

In correlation with such typological differences, each language applies a different mechanism in marking the topic-continuity and the topic-shift.

   Let's take a look at [topic-continuity] context in Korean. As well as in Spanish, it is natural to drop the topic subject if there is an appropriate context.

(67) A: Peter-ka   nukwu-lul saranha-ni? 피터가 누구를 사랑하니?
        peter-NOM who-ACC   love-interrogative
      'Who does Peter love?'

    B: Ø   Mary-lul   sarangha-n-ta.   메리를 사랑한다.
       (peter) mary-ACC love-pres.-declarative
      'Peter loves Mary.'

In example (67), the null subject in B's answer can be identified by the subject in A's question.

Unlike Spanish, Korean lacks rich morphology, and the verb does not conjugate with the person and the number of the subject.

(68) Morphology-Korean

Subject	Predicate	
(a) na-nun	nolayhanta.	'I sing.'
(b) ne-nun	nolayhanta.	'You sing.'
(c) ku/ kunye -nun	nolayhanta.	'He/She sings.'
(d) wulitul-un	nolayhanta.	'We sing.'
(e) nehuytul-un	nolayhanta.	'You[plural] sing.'
(f) kutul-un	nolayhanta.	'They sing'

For this reason, Shim (2003), in his comparative study on Spanish and Korean *pro*-drop mechanisms, remarked that subject could be null only when there is a specific device that allows the retrieval of the lacking subject information. In Spanish, rich morphology guides such a process, while in Korean, it is the context that makes it possible to identify the missing subject. Therefore, a null subject is possible even in a single sentence in Spanish, but in Korean, there must be a presupposed context, such as conversation (69a), coordinate structure (69b), or complex sentence (69c), to license a null subject *pro*.

(69) a. A: ne   mwe hani?   너 뭐하니?

  you what do-question

  'What are you doing?'

  B: Ø swukcey-hako isse   숙제하고 있어.

  homework-do present

  'I'm doing my homework.'

159

b. ku-nun ilkkoissten chaykul naylye nohko Ø changmwunul palapoassta.

he-SUB read　　book　put　down　window　　look

'He put down the book he was reading and looked at the window.'

그는 읽고있던 책을 내려 놓고 창문을 바라보았다.

c. chelswu-nun Ø nayil　　　 tolaokeysstako malhayssta.

chelwu-SUB　　tomorrow　return　　　　said

'Chelswu said that he will return tomorrow.'

철수는 내일 돌아오겠다고 말했다.

<div align="right">(Shim, 2003, p. 121)</div>

To introduce a subject with [+focus] or [+contrastive] in the Korean [topic-shift] context, the component must be overtly realized. The focus subject is usually accompanied by a subject marker *-ka* as in example (70), while the contrastive topic subject is typically realized with contrastive marker *–(n)un* as in (71).

(70) A: nu-ka　　　Mary-lul　sarangha-ni?　　누가 메리를 사랑하니?

　　who-NOM　Mary-ACC　love-interrogative

　'Who loves Mary?'

　B: Peter-ka (Mary-lul saranghan-ta).　　피터가.

　Peter-NOM

　'Peter loves her.'

(71) nay-ka　　　nolayhalkkey. Ne-nun　　chwum-ul chwe.

　I　-NOM　sing　　　　　You-NOM dance-imperative

　'I will sing. You dance.'

'내가 노래할께. 너는 춤을 춰'

The case for English is quite evident. A null subject is not possible except for very limited contexts. Therefore, even a subject with topic status must be overtly expressed for both [topic-continuity] and [topic-shift] situations.[74] We have seen in section 1.2. of this thesis that English requires a subject in every clause. Therefore, there will be an overt subject as a default. The informational weight of a subject is generally expressed through prosody.

(72) a. Who called you this morning? [+focused subject]
      (a) MARK called me.
      (b) *HE called me.
  b. Who did Mark$_i$ call this morning? [+topic subject]
      (a) He$_i$ called ME.
      (b) *∅ called ME.
  c. What did Mark$_i$ do this morning? [+topic subject]
      (a) He$_i$ CALLED ME.
      (b) *∅ CALLE ME.

In the case of contrastive focus as well. Again, the subject is explicit regardless of its informational weight, and it is the prosody that plays a critical role.

(73) What did the children and the parents do?
    The CHILDREN went to SCHOOL and the PARENTS went to BED.
                        (Casielles-Suárez, 2004, pp.129-132)

---

[74] English does allow phonetically null topic subject within the coordinate sentence. "The boy wakes up in the morning. He$_i$(*∅) has his breakfast and ∅$_i$ goes to school (Quesada Calvo de Mora, 2021, p. 58)."
Also, if the referent is clearly based on the preceding *wh*-question, the subject in the answer can be null. (ex) "What's John doing?' '∅ eating."

Casielles-Suárez (2004) comments that "in English we can basically focus in-situ any element whatsoever, if the right context is provided. That is, we can allow phonology to do the job of marking the focus and not worry about a non-focused element occurring to the right of a focused one in the syntax (p.132)."[75]

(74) a. - I heard he has given his house to his wife

- He has given EVERYTHING[F] to his wife

b. - Has he cooked the chicken?

- No, he has BURNT[F] to chicken.

c. - Who called you this morning?

- MARK[F] called me.

3. Transfer Scenario

The literature review on the null and overt alternation of L1 Korean, L2 English, and L3 Spanish states the following.

Box 5.1. Previous findings on the subject realization in topic-continuity/shift context[76]

---

[75] In Casielles-Suarez's view, even in Spanish *in-situ* focus is not completely impossible when the correct prosodical accent is given. However, it is more common to use word order to show the information packaging in Spanish.
  (1) He oído que le ha dado su casa a su mujer
     A su mujer le ha dado TODO. (Le ha dado TODO a su mujer)
  (2) ¿Ha cocinado el pollo?
     No, el pollo lo ha QUEMADO (No, ha QUEMADO el pollo)
  (3) ¿Quién te llamó esta manana?
     Me llamó MARK (MARK me llamó)
[76] Unlike the OPC, the use of overt subject in the topic-continuity context in both Korean and Spanish does not affect the grammaticality nor the correct semantic understanding of the sentence. Therefore, it is expected that the difference between the [NULL > OVERT] may not be as drastic as the OPC constructions.

Korean	Topic-continuity:	Null subject > Overt subject
	Topic-shift:	Null subject < Overt subject
English	Topic-continuity:	Null subject < Overt subject
	Topic-shift:	only Overt subject
Spanish	Topic-continuity:	Null subject > Overt subject
	Topic-shift:	Null subject < Overt subject

It is important to note that background languages exhibit contrastive behavior only in the topic-continuity context. In a topic-shift context, both Korean and English require a subject to be overtly realized to avoid ambiguity. Therefore, for the objective of this thesis, only topic-continuity constructions will be analyzed. To fulfill the inclusion requirement, each individual is expected to demonstrate proper knowledge of the null and overt subject alternation in the previously learned languages.

Box 5.2. Precondition for proper prediction of transfer in L3 PAH acquisition

L1 Korean	Show syntax-pragmatic sensitivity in the null and overt subject alternation
evidence	Acceptability in the following context
	- Topic-continuity: Null subject > Overt subject
L2 English	Comply with EPP in English
evidence	Subject realization in the following context
	- Topic-continuity: use overt subject

It is essential to reiterate here that the purpose of this study is to observe the transfer of Korean or English in the learner's Spanish data. For that purpose, the test item must have a different pattern in background languages. However, the topic-shift contexts in L1 and L2 require the subject component [+focus] to be overtly realized. The effect of L1 or L2 transfer would both trigger the learners to use the overt subject correctly in L3 Spanish. Therefore, it would be impossible to tease apart the source of transfer by observing L3 data in the

topic-shift context. Therefore, the topic-shift items are included in the questionnaire only as distractors.

The following transfer scenario will be applied in the analysis of the L3 Spanish data.

Box 5.3. Transfer scenario in L3 topic-continuity acquisition

L1 Transfer Scenario: Facilitative in acquiring null/overt alternation	
L3 Spanish	If L1 is transferred, learners will show high adherence to the syntax-pragmatics constraints in Spanish subject alternation and prefer null subject in the topic-continuity context
evidence	Acceptability in the following context - Topic-continuity: Null subject > Overt subject

L2 Transfer Scenario: Non-facilitative in acquiring null/overt alternation	
L3 Spanish	If L2 is transferred, learners will prefer overt subject regardless of the given context
evidence	Acceptability pattern in the following context - Topic-continuity: Null subject < Overt subject

The cases where the learners evaluate the null condition and the overt condition to have no difference will be categorized as an incomplete acquisition for L1, nor L2 transfer cannot explain such deviant behavior.

4. Task design

The topic-continuity and topic-shift items included in the questionnaires are as follows.

Table 5.4. Summary of topic-continuity task and topic-shift distractors

	Language		Context	Type
1st Questionnaire	Spanish	n=5	Topic-continuity	AJT

		n=5	Topic-shift	
2nd Questionnaire	Korean	n=5	Topic-continuity	AJT
		n=5	Topic-shift	
	English	n=2	Topic-continuity	Translation
		n=3	Topic-shift	

For Spanish and Korean, the participants will read a preceding sentence and mark the acceptability of a possible succeeding sentence presented in two conditions: null subject and overt subject.

(75) Spanish test item

Hay mucho tráfico y además empieza a nevar. Por eso,

a. Marta cree que va a llegar tarde a la oficina.   □ 1 □ 2 □ 3 □ 4 □ 5

b. Marta cree que ella va a llegar tarde a la oficina. □ 1 □ 2 □ 3 □ 4 □ 5

(1: absolutely unacceptable ~ 5: absolutely acceptable)

'There's heavy traffic, and it even starts to snow. Therefore,'
a. 'Marta thinks that pro will arrive late to the office.'
b. 'Marta thinks that she will arrive late to the office.'

Within the option sentence, 'Marta' has the weight of referential antecedent. Thus, it is more natural to receive the component with a *pro*.

The same applies to Korean subjects with [+topic]. Korean items are translated versions of Spanish items.

(76) Korean test item

교통체증이 매우 심한데 다가 갑자기 눈까지 오기 시작합니다. 그러자

a. 미희는 사무실에 늦게 도착할 것이라 생각합니다. □ 1 □ 2 □ 3 □ 4 □ 5

Mihuy-nun samwusiley nuckey tochakhal kesila sayngkakhapnita.

b. 미희는 그녀가 사무실에 늦게 도착할 것이라 생각합니다. □ 1 □ 2 □ 3 □ 4 □ 5

Mihuy-nun kunye-ka samwusil-ey nuckey tochakhal kesila sayngkakhapnita.

165

As mentioned in the previous sections, the use of an overt subject in the topic-continuity context does not necessarily affect the grammaticality of the sentence. However, repeating the same referent when a *pro* is available would be redundant in Korean. Therefore, from a transfer perspective, the L1 transfer of this property would be facilitative in the L3 Spanish acquisition.

For the L2 task, the translation task is chosen. The objective of testing the L2 in this property is to probe whether this group correctly realizes an overt subject in L2 where the *pro* is used in the L1 sentence. Therefore, the Korean sentence presented for translation is with a *pro*, as in '*After pro has dinner, read books and go to bed around 12.*' [77]

(77) English test item

I am very strict about my schedule. I wake up at six and go to the gym to work out until seven. And then I go to school to study and come back home around eight at night.

[Translate] 그 후 저녁을 먹고 책을 읽다가 12시쯤 잠에 듭니다.

'*After, I have dinner, read books, and go to bed around 12.*'
After, _____.

The Spanish data from the participants who did not adequately use the overt subject in this item will be excluded from further analysis.

Let me briefly go over the items that tested the topic-shift (contrastive focus) context. The same strategy applies to L1 Korean, L2 English, and L3 Spanish to avoid any possible ambiguity.

(78) Spanish item

---

[77] I must clarify that only the first subject, 'I' in the translation will be checked. Because English allows coordinate subject-drop.

Aunque Julio y Marta han estado casados por 20 años y tienen 3 niños,

  a. todos creen que lleva una vida muy triste.

  b. todos creen que ella lleva una vida muy triste.

'Even though Julio and Marta have been married for 20 years and have three children,'
  a. *'everybody thinks that pro lives a very sad life.'*
  b. *'everybody thinks that she lives a very sad life.'*

(79) Korean item

  철수와 미희는 항상 A+의 성적을 받습니다. 그럼에도 불구하고

  a. 그 어떤 교수님도 성실하다고 생각하지 않습니다.

  b. 그 어떤 교수님도 그가 성실하다고는 생각하지 않습니다.

'Chelwu and Mihyu always get an A+.'
  a. *'However, no professor thinks that is smart.'*
  b. *'However, no professor thinks that he is smart.'*

(80) English item

Mary and John are the top students in my department. They both got three A+ and two A- in the final exam. The Committee gathered to select the scholarship beneficiary for the next semester. However,

[Translate] 그 어떤 교수님도 그녀가 똑똑하다고 말하지 않습니다.

      'None of the professors evaluates that she is smart.'

None of the professors evaluates that _____.

Although topic-shift context can not offer any insight into the transfer dynamic in this language pairing, these items were included as distractors, considering their structural similarity with the OPC items and the topic-continuity items.

5. Results

Here, I report the result of the topic-continuity in the background languages and the target language by BGN and ADV. The items included in the analysis are presented below.

Table 5.5. The Topic-continuity items

	Topic-continuity context	
option sentences	Null condition	Overt condition
	type 1	*type 2*
Korean AJT	n=5	n=5
English Translation	N/A	n=2
Spanish AJT	n=5	n=5

(BGN=60, ADV=20)

5.1. Korean topic-continuity result

The data presented here are from sixty BGN's acceptability of null and overt option sentences in the five topic-continuity contexts. The purpose of these items is to confirm whether the participants truly show [NULL > OVERT] tendency in their native knowledge.[78]

Figure 5.1. Group average acceptability in Korean Topic-continuity constructions

---

[78] Note that two participants were found to accept the overt condition more than the null condition. The dataset of these participants were excluded in the data analysis.
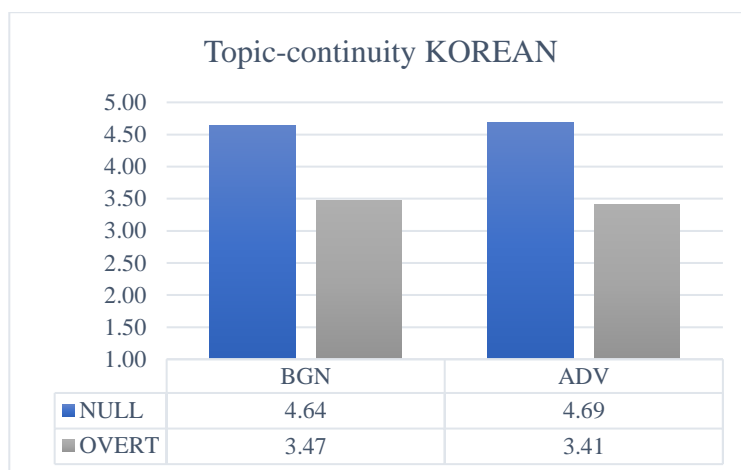
Topic-continuity KOREAN

	BGN	ADV
NULL	4.64	4.69
OVERT	3.47	3.41

(1: Absolutely unacceptable 2: Fairly unacceptable 3: Neutral 4: Fairly acceptable 5: Absolutely acceptable)

Table 5.6. Paired samples test on acceptability in Korean Topic-continuity items

Topic-continuity KOREAN		Mean	Std. Deviation	T	P
BGN	Null	4.6367	.68280	12.796	<.001
	Overt	3.4700	1.39124		
ADV	Null	4.6900	.56309	8.957	<.001
	Overt	3.4100	1.35658		

Both BGN [NULL (4.64) > OVERT (3.47)] and ADV [NULL (4.69) > OVERT (3.41)] showed contrastive acceptability on the null and overt conditions with statistical significance (<.001). The result indicates that these groups perceived the null condition sentence to be more acceptable than the overt counterpart in the topic-continuity contexts. However, it is noteworthy that the average acceptability scale for the overt condition was rated above three, which suggests that this group considered that the use of overt subjects in the topic-continuity context is not completely impossible.

Recall that for the OPC context, where the use of overt subject affects the grammaticality of the sentence, the average acceptability was lower than three. Below is the comparison between learners' acceptability in the [OPC-OVERT] and [Topic-continuity-OVERT]. The statistical analysis confirms the significant difference between the two items.

Table 5.7. Independent samples test between OPC and Topic-continuity in overt condition

Overt condition KOREAN		Mean	Std. Deviation	t	P
BGN	OPC	2.1533	1.20509	13.978	<.001
	Topic-continuity	3.4700	1.39124		
ADV	OPC	1.8050	1.06897	-10.335	<.001
	Topic-continuity	3.4100	1.35658		

This result confirms that the Korean participants differentiated the acceptability of the overt Korean subject accordingly to the linguistic mechanism, whether it was the OPC (grammaticality) or the topic-continuity (pragmatically proper).

5.2. English topic-continuity result

The purpose of testing English translation in this property is to confirm whether the participants of this study correctly use overt subject in the topic-continuity context where their native language permits or prefers a null subject.

Two topic-continuity contexts were given, and the test sentence for the translation was presented in Korean null condition sentences. Among sixty BGN and twenty ADV participants' data (n=160, 2 sentences * 80 participants), only one case omitted the subject, and the whole dataset of this participant was excluded in the data analysis. The same participant did not use the overt subject in the other translation item as well as shown in (81).

(81) a. After, <u>eat</u> dinner at 8, read books and go to sleep around 12.

b. Not only <u>is</u> good at sports but also speaks English, Spanish and Korean.

Excluding this one case of misuse of the null subject in L2 English, all the participants of this thesis correctly applied overt subject when their native

language did not require one, showing a native-like L2 knowledge.

5.3. Spanish topic-continuity result

The result of sixty BGN and twenty ADV learners' acceptability judgment on the null and overt option sentences in five topic-continuity contexts is presented here. I will approach the data from three perspectives, as stated below.

(1) Mean acceptability of each group
(2) Between-group analysis of each condition
(3) Item analysis of Topic-continuity stimuli from a transfer perspective

First, the BGN group is found to rate a high acceptability judgment to both null and overt subject option sentences [NULL (4.25), OVERT (4.04)] with no significant difference between the two (p=0.14). In contrast, the ADV correctly showed a contrastive acceptance scale for the two option sentences.

Figure 5.2. Group average acceptability in Spanish Topic-continuity constructions
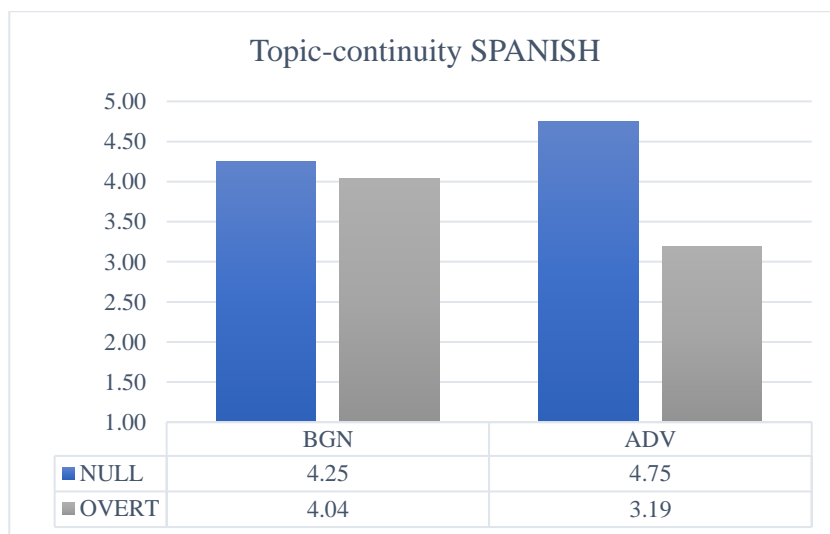
	BGN	ADV
Topic-continuity SPANISH		
■ NULL	4.25	4.75
■ OVERT	4.04	3.19

(1: Absolutely unacceptable 2: Fairly unacceptable 3: Neutral 4: Fairly acceptable 5: Absolutely acceptable)

Table 5.8. Paired samples test on acceptability in Spanish Topic-continuity

Topic-continuity SPANISH		Mean	Std. Deviation	t	p
BGN	Null	4.2500	.91850	2.471	.14
	Overt	4.0400	1.10566		
ADV	Null	4.7500	.626	10.221	<.001
	Overt	3.1900	1.42627		

Secondly, the comparison of the BGN and the ADV's acceptability judgment shows that both groups significantly differed in null and overt conditions, respectively.

Table 5.9. Independent samples test between groups

Topic-continuity SPANISH		Mean	Std.Deviation	t	p
Null	BGN	4.2500	.05303	-6.097	<.001
	ADV	4.7500	.06256		
Overt	BGN	4.0400	.06384	5.440	<.001
	ADV	3.1900	.14263		

Lastly, each individual's evaluation of the ten option sentences, half in null condition and the other half in overt condition, were compared as a set. The acceptability of two option sentences in each topic-continuity context is coded as below. (n= 400, 5 contexts * 60 BGN participants, 5 contexts * 20 ADV participants)

[Topic-continuity]
- if acceptability is [NULL>OVERT] ➔ L1
- if acceptability is [NULL<OVERT] ➔ L2
- if acceptability is [NULL=OVERT] ➔ Incomplete acquisition

This coding is expected to highlight the possible linguistic transfer in the L3 Spanish data at a glance.

Table 5.10. Percentage of transfer source in the Topic-continuity

Topic-continuity SPANISH		L1	L2	Incomplete
BGN	Cases	113	82	105
	Percent	37.67%	27.33%	35.00%
ADV	Cases	68	8	24
	Percent	68%	8%	24%

The analysis of the BGN's set evaluation on [NULL versus OVERT] reveals that both background languages exerted influence in the L3 Spanish. Among three hundred set items, about 38% followed the L1 pattern [NULL>OVERT], while 27% abided to the L2 pattern [NULL<OVERT]. In addition, a significant number of incomplete cases (35%) were found.

There are two interesting points that I want to underline. First, the comparison between the BGN and ADV's percentage of L2 transfer cases significantly diminished (27.33% → 8.00%), which I submit as evidence of L2 transfer being corrected in the advanced stages. Second, the instances of incomplete acquisition, which are the cases where learners evaluated both conditions with equal acceptability scale, persisted even in the ADV's data, marking 24% of the answers provided. Recall that a similar tendency was confirmed in the PAH data: L2 transfer cases drastically dropped (36.17% → 2%) while the optionality remained significant even in the ADV's data (25.83% → 15.00%).

In summary, the analysis of the topic-continuity data confirmed the following.

Table 5.11. Summary of Topic-continuity task result

	BGN	ADV
Korean Topic-continuity	Null > Overt	Null > Overt
English Overt subject use	All overt subject	All overt subject
Spanish Topic-continuity	**Null = Overt**	**Null > Overt**
group difference	A significant difference in both Null and Overt	
transferred language	L1 Korean and L2 English	

6. Discussion

The topic-continuity items were expected to confirm which background language exerts influence in the discourse-proper use of L3 Spanish null subjects. Korean applies the same strategy as Spanish in treating the referential antecedent subject in the topic-continuity context, while English obligates the use of an overt subject in the same context. Therefore, the transfer of L1 knowledge is expected to be facilitative, whereas that of the L2 would be detrimental in acquiring this property. However, one important factor that comes into play is that the discursive features have long been argued to cast an extra burden on non-native learners, as stipulated in the Interface Hypothesis (IH).

Let's first take a look at how the participants behaved in their native language. Be mindful that the use of overt subject in the topic continuity does not affect the grammaticality of the sentence; instead, it affects the naturalness of the sentence. This was reflected in the Korean native's evaluation of acceptability for the overt condition. The learner's tolerance to the use of overt subject in the topic-continuity context marked above three acceptability on average (NULL: 4.64, OVERT: 3.47). This indicates that the use of overt pronouns in topic-continuity was deemed acceptable or neutral to the natives. Recall that the use of overt subject was rejected in the Korean OPC condition (OVERT: Topic-continuity: 3.47 vs. OPC: 2.15). Nonetheless, a statistically significant difference was confirmed between the null and overt conditions in topic-continuity. This means that the participants still evaluated the use of null subjects in the topic-continuity context as more acceptable than the overt counterpart. This result confirms that the overt subject was considered to be possible, but the null subject was more accepted in the topic-continuity context by native Koreans. In English constructions, all learners, except for one participant whose dataset was dismissed for further analysis, abided by

the overt subject requirement in the referential context in their L2. Based on the fact that this group showed native-like behavior in L1 and L2, the Spanish data was analyzed from a transfer perspective.

The result of the Spanish questionnaire showed that the BGN group accepted both null and overt subjects in the topic-continuity context with the above three in acceptability (NULL: 4.25 OVERT: 4.04), with no statistical difference (p=.14). This tendency confirms that the learners were not available to differentiate the pragmatic weight of the null versus overt subjects in L3 Spanish according to the context, unlike in their native language. In Korean, a statistically significant difference was found between the null and the overt subjects, even though both conditions were marked above three. The acceptability difference between these two conditions narrowed due to the higher acceptability of the Spanish overt subject condition. The participants evaluated the overt subject as acceptable as the null subject in L3 Spanish. I report this higher (than their L1) and statistically identical (to the L3 null condition) acceptability of overt condition in topic-continuity context as the evidence of L2 transfer in learner's L3 data. Such interpretation of the result is reinforced in the following item-by-item analysis.

For the item analysis, I coded each participant's evaluation of the acceptability of null and overt option sentences for each context into L1 [NULL>OVERT], L2 [NULL<OVERT], and incomplete [NULL=OVERT]. It showed that among three hundred answer pairs, approximately 27% percent showed [NULL<OVERT] tendency. Such bias is not in the BGN's native language nor in the target input, which coincides only with the L2 behavior. The comparison with the ADV's result reinforces this interpretation of non-facilitative L2 transfer: the L2-oriented choices strictly diminished to 8% as the proficiency grew. In contrast, the cases of incomplete acquisition where the parser considered the null and overt subject to have an equal acceptability scale occupied 35% of BGN's answers and continued to hold a significant portion, marking 24% of the ADV's choice. The L1-oriented tendency

[NULL>OVERT], which also corresponds to L3 target bias between the null and overt, accounted for approximately 38% of the BGN's choice and then increased up to 68% of the ADV's answers. This corroborates that the L2 non-facilitative transfer decreased as the proficiency grew, increasing the L1 tendency, which is the L3 behavior, while the cases of incomplete acquisition persisted as predicted by the Interface Hypothesis (IH).

In summary, both L1 and L2 seem to exert influence on the learner's parsing of a null subject in the topic continuity. However, I would like to spotlight the non-facilitative influence of the L2 in the L3, which diverted the participant's choice to the opposite direction. Furthermore, the percentage of incomplete acquisition remained significant in the learners' choice even in the ADV group, which coincides with the long-argued acquisition delay and instability found in the acquisition of discursive features.

CHAPTER 6. THE NULL EXPLETIVES

1. Introduction

The Extended Projection Principle (EPP) requires all sentences to have [Spec, IP] position filled in all languages, and the Null Subject Languages apply the concept of *pro* to fulfill this universal requirement. Non-*pro*-drop languages like English have expletives for similar needs, 'it' and 'there'. These items are also known as pleonastic or dummy subjects. These semantically empty subjects are applied solely for the syntactic reason with no semantic value for particular cases, such as in meteorological constructions ('It is raining.'), extraposed clause ('It is important that you come.'), and existential construction ('There are two students in the classroom.'). According to Svenonius (2002), the traditional grammar of English has assumed three types of dummy subjects: extraposition 'it', weather 'it', and impersonal 'there', which is different from locative 'there'.

(82) a. It is obvious where you got that hickey.

   b. It gets dark in November.

   c. There's a fly in your soup, isn't there?

   d. There's our bus (*isn't there?)

(Svenonius, 2002, pp. 5-6)

Interestingly, the NSLs also apply a silent counterpart for these constructions, so-called null expletives or expletive *pro* (*pro*expl). But, then, one may wonder what is the need to assume another type of empty category to designate another kind of null subject? Oshita (2004) mentioned that the theoretical benefit of using this concept is that "assuming the existence of null expletives, whose syntactic function corresponds to that of their overt

counterparts in non-null-subject languages, a systematic account becomes possible crosslinguistically as well as structurally (p. 101)." Despite their similarities on the surface level, there is a significant difference between a referential pronominal *pro* and the expletive *pro*. As we can see in (83) and (84), the former is licensed with person and number information while the latter is not *theta*-marked, lacking such information.

(83) Referential *pro*

a. *pro*referential   Salió   de la   casa.

    3RD SING.   went out   of   the house.

    'He/She went out of the house.'

b. *pro*referential   Salieron   de la   casa.

    3RD PLR.   went out   of   the house.

    'They went out of the house.'

(84) Expletive *pro*

a. *pro*expletive Llueve mucho en primavera. [weather verb]

    'It rains a lot in spring.'

b. *pro*expletive Hay poco trabajo. [existential]

    'There is little work.'

(Montrul & Louro, 2006, p. 405)

Therefore, in *pro*-drop languages, a referential *pro* can be null or overt according to the pragmatic value of the subject, but an expletive *pro* is obligatorily null in all contexts. Haegeman and Guéron (1999) elucidated why expletives cannot have their overt counterparts in [+NSP] languages based on the principle of economy. For the NSLs, since they have a null subject device, it is a more economical choice to use a phonetically null subject as a default

unless there is a need to mark specific contrast or *focusness*. However, expletives innately lack semantic content to be contrasted or focused; therefore, they have no information to phonetically manifest.[79]

The commonly found types of null expletive subjects in learners' Spanish input are as follows.

(85) Weather-verb expletives

Aquí *pro*expletive siempre llueve.

here   always   rains

'*Here, it always rains.*'

(86) Existential-verb expletives

*pro*expletive Hay unos visitantes en la   puerta.

            are   some visitors   in the door

'*There are some visitors at the door.*'

(Camacho, 2013, p. 17)

In the following, with an acquisitional purpose in mind, I will briefly review these two types of null expletives frequently found in the learners' input and their English and Korean equivalent to predict how L1 Korean and L2 English may interfere in acquiring Spanish null expletives. And the former literature on the acquisition of Spanish null expletives will follow.

---

[79] A Spanish dialect spoken in the Dominican Spanish of El Cibao (DSEC) interestingly utilizes an expletive pronoun *ello* which corresponds to English overt expletives, *it* and *there*. It has long been in linguists' puzzle that DSEC, which is also an NSL, should have an expletive that is absolutely devoid of thematic role or force. This dialect uses *ello* in constructions which are ungrammatical in general Spanish. Below examples are from Bullock and Toribio (2009, p. 57).
　(a) Weather: Ello no está lloviendo aquí pero allá sí.
　　　　　　'It's no training here, but there, it is.'
　(b) Existential: Ello hay personas que lo aprenden bien (el inglés).
　　　　　　　'There are people who learn it well (English).'
It is important to remember that though *ello* is accepted in general its use is not mandatory. For more details, I guide the reader to Pérez (2014).

1.1. Weather-verb expletives

The generative program has traditionally analyzed that Spanish meteorological or weather verbs do not require phonetically realized expletives like English '*it*' or French '*il*'. Instead, a lexically and phonetically empty $pro_{\text{expletive}}$ was applied to fulfill the EPP requirement.[80]

(87) a. $pro_{\text{expletive}}$ Es primavera.

 '*It is spring.*'

 b. $pro_{\text{expletive}}$ Hace frío/calor.

 '*It is cold/hot.*'

 c. $pro_{\text{expletive}}$ Llueve mucho.

 '*It rains a lot.*'

 d. $pro_{\text{expletive}}$ Está tronando/escarchando/lloviznando.

 '*It is thundering/frosting/drizzling.*'

 (Bosque & Demonte, 1999, p. 1744)

As for Korean, there are scarce studies that attempt to analyze Korean weather expressions from a generative approach. To the best of my knowledge, Kang and Kienpointner (2020) is the only research that completed a crosslinguistic comparison of Korean weather constructions

---

[80] Following Chomsky's (1981, pp.323-325) analysis that weather *it* is not an expletive, there exist studies that approach the subject of weather verb as *quasi*-argument *pro* which lack person but has number value. In this case, the feature specification of *pro* will be as follows. (Table from Sheehan (2016, p.333)

Interpretation of *pro*	Person	Number
$pro_{\text{referential}}$	+	+
$pro_{\text{quasi-argumental}}$	-	+
$pro_{\text{expletive}}$	-	-

However, the weather expressions that will be analyzed in this thesis do not include metaphoric weather expressions such as 'Le llovieron las críticas.'. 'Llueven piedras.', which require number agreement with the following argument. Therefore, I will adhere to the traditional view and use $pro_{\text{expletive}}$ for the weather construction.

from a syntactic and semantic perspective. The authors pointed out three most significant traits of Korean weather expression: (a) Korean does not show verbal basic weather term, that is, there is no specific weather verb, (b) no expletives subject is used, rather *meteospecific* general noun forms are used as a valid subject, such as *pi* (rain), *nwun* (snow), *posulpi* (drizzle), *isulpi* (thaw), *cheondung* (thunder), *hay* (sun), *tal* (moon), and *nalssi* (weather) followed by non-meteo-specific verbs such as *onta* (come), *naylinta* (fall), or *chinta* (shine), (c) one-word sentences such as *chwupta* (lit.cold-DECL) or *tepta* (lit.hot-DECL) are possible, with the omission of *nalssika* (weather) subject (Kang & Kienpointner, 2020, pp. 185-186).

The noticeable structural trait is that the Korean weather expressions typically take [subject + predicate] form, the weather phenomena in the subject position of the sentence and the status/adjective/action verb as the predicate, as in the examples below.

(88) a. pi-ka   onta.   *'It's raining.'*   비가 온다.
       rain-SUB   come

    b. pi-ka   naylinta.   *'It's raining.'*   비가 내린다.
       rain-SUB   fall down

    c. nwun-i   onta.   *'It's snowing.'*   눈이 온다.
       snow-SUB   come

    d. nwun-i   naylinta.   *'It's snowing.'*   눈이 내린다.
       snow-SUB   fall down

(89) a. hay-ka   nassta.   *'It's sunny.'*   해가 났다.
       sun-SUB   come out

    b. palam-i   pwunta.   *'It's windy.'*   바람이 분다.
       wind-SUB   blow

(90) a. kwulum-i   manhta.   *'It's cloudy.'*   구름이 많다.

　　　 cloud-SUB many

　　 b. kwulum-i   kkyesta.   *'It's cloudy.'*   구름이 꼈다.

　　　 cloud-SUB put

Therefore, Korean does not apply expletives or null expletives to form a weather expression. The optional omission of a subject is possible when '*nalssi* (weather) itself is the subject of the sentence.

(91) a. onul   (nalssi-ka)   malkta.   오늘 (날씨가) 맑다.

　　　 today   weather-SUB   clear

　　　 'The weather is clear today.'

　　 b. onul   (nalssi-ka)   cohta.   오늘 (날씨가) 좋다.

　　　 today   weather-SUB   good

　　　 'The weather is good today.'

　　 c. (nalssi-ka) tepta.   (날씨가) 덥다.

　　　 'The weather is cold.'

　　 d. (nalssi-ka) chwupta.   (날씨가) 춥다.

　　　 'The weather is hot.'

In summary, Spanish applies null expletives, and English requires expletives in the subject position of weather expressions. On the other hand, Korean shows an entirely different structure, placing a meteospecific noun in the subject position.[81]

---

[81] There is one study that argued that the Korean weather construction is also a subjectless construction equivalent to 'it rains' or 'llueve'. Mok (2016) insists that the weather constituent in 'pi-ka oda' functions as a predicative noun in a complex predicate and not as a proper participant 'agent/patient' subject. According to his analysis, the weather expression 'pi-ka oda' is not a simple sentence; instead, it is a complex predicate.

1.2. Existential-verb expletives

The contrastive difference between Spanish and English existential constructions is also found in the use of the null expletives or the expletives like weather constructions reviewed above.

(92) a. *pro* Hay muchos estudiantes en la clase.
    'There are many students in the class.'
    b. *Lo/*Ello hay muchos estudiantes en la lase.
    'There are many students in the class.'

As seen in (92), the subject position for the Spanish existential verb *haber* is occupied by a null expletive *pro*. In contrast, in English, the position is occupied by a phonetically overt expletive subject 'there' to fulfill the EPP. Another difference is that the Spanish verb *haber* in existential construction does not show number agreement, unlike the English *be* verb.

(93) a. Hay una silla en la habitación.
    'There is a seat in the room.'
    b. Hay unas sillas en la habitación.
    'There are some seats in the room.'
    c. *Hayan unas sillas en la habitación.
    'There are some seats in the room.'

Interestingly, both English and Spanish are under the definiteness effect that only weak determiners 'a/some…' can appear, whereas strong determiners 'the/every/most/both' cannot.

(94) *Hay la silla en la habitación.
    'There is the chair in the room.'

(95) a. There are some/two/at least four mighty grass snakes (in the moor).

b.* There are the/every/both mighty grass snakes (in the moor).

<div align="right">(Maleczki, 2010, p. 25)</div>

Meanwhile, the Korean existential constructions take a completely different sentence structure.

(96) a. Hay un perro en la calle.

   b. *(There) is a dog on the street.

   c. keliey kay   han mali-ka issta.   거리에 개 한 마리가 있다.

     street   dog one-SUB   is

(97) a. A: ¿Hay algo para comer?

     B: Sí, hay pan.

   b. A: Is there anything to eat?

     B: Yes, there is some bread.

   c. A: mekul kes-i   issni?   먹을 것이 있니?

       to eat   thing-SUB is?

     B: ung, ppag(-i)   isse.   응, 빵(이) 있어.

       yes   bread-SUB   is

<div align="right">(Lee, 2000, p. 498)</div>

As seen in examples (96c) and (97c), a subject marker '-*i/ka*' is used, and there is practically no other way to form an existential construction in Korean than the [PP-*ey* NP-*i/ka issta*] form.

2. Previous literature

The studies that have tested the acquisition of Spanish null expletive usually incorporated the property mainly to compare its acquisitional pattern with that of other NSP clustered properties or referential *pro*. Liceras (1989) tested the natives of [-NSP] language acquiring L2 Spanish to explore their learning tendency of NSP clustered properties. Her data on null expletives confirmed that only 20% of the beginners wrongly accepted the overt expletives, and none of the advanced learners approved it. Based on the data, the author concluded that knowledge of the null expletives *pro* might be present from the very early stages of acquisition. Al-Kasey and Pérez-Leroux (1998) compared the acquisition of the referential *pro* and expletive *pro* by the L1-English and L2-Spanish learner groups. They confirmed that the acquisition of two *pro*s seems to develop together, which made the author argue that these constructions are clustered as part of the same parameter, the NSP.

Based on the former literature, Lozano (2002b) developed L2 research that specifically focused on the syntactic difference between Spanish pronominal subject (ProS) and expletive subject (ExpS). He noted that only the former could be realized in a null or overt form by option [±], while the latter is compulsorily null [-] all the time in Spanish.

(98) Spanish

    a. Él/Ella salió.   (overt ProS)

    b. *pro* salió.   (null ProS)

    c. *pro* llueve.   (null ExpS)

    d. *Lo llueve.   (*overt ExpS)

(99) English

    a. He/She left.

    b. **pro* left.

    c. It is raining.

d. *pro* is raining.

The key question was whether English native learners of L2 Spanish could perceive and treat overt/null ProS differently from overt/null ExpS and if they understood that overt ProS and overt ExpS have different acceptability. The participants were divided into three groups *post facto*, depending on the length of exposure to L2 Spanish. Task 1 tested learners' acceptability on the null and overt ExpS distribution, and Task 2 examined that of null and overt ProS, as shown below.

(100) a. *Lo nieva   en Finlandia en invierno.

        it   snows   in Finland   in winter

    b. *pro*expletive Nieva   en Finlandia en invierno.

              snows in Finland   in winter

    'It snows in Finland in winter.'

(101) a. Yo voy a la   universidad en coche.

        i   go   to the university   in car

    b. *pro*referential Voy a   la   universidad en coche.

              go to the university   in car

    'I go to university by car.'

The result confirmed that the learners are capable of distinguishing the ExpS from ProS and that they are sensitive to the syntactic difference between them. Lozano remarked that the former literature supports his finding that expletive *pro* is "early incorporated in the learner's interlanguage (p.12)" which concords with the previous findings in Liceras (1989) and Phinney (1987). Contemplating that the L2 data has been considered a valuable tool to

backtrack the mental representation of syntactic features, the author argued that this data indicated that the L2 learners' could perceive the syntactic difference between the ExpS and ProS from the early stages of acquisition.

Although not an L2 Spanish study, Oshita (2004) is worth mentioning. He embarked on an interesting corpus study that compared natives of *pro*-drop languages (Italian and Spanish) with speakers of *topic*-drop languages (Japanese and Korean) in their use of overt expletives in L2 English. Unlike Lozano (2002b), where the possibility of transfer was ruled out beforehand, Oshita took 'L1 transfer possibility' into account. His principal idea was that even though both language types do not exhibit overt expletives, the null expletives might be '*psychologically real*' for L1 *pro*-drop group, while for those of *topic*-drop language speakers, it may not be. The author drew on the former findings (e.g., White (1985, 1986); Phinney (1987); Tsimpli & Roussou (1991)) that reported the *pro*-drop language natives' tendency to show the omission of overt expletives in English sentences. The author quoted examples from White (1985, 1986) where *pro*-drop language native learners wrongly accepted constructions with ungrammatical null expletives such as '*Seems that Fred is unhappy' '*Is raining very hard today' '*In winter, snows a lot in Canada.' Oshita contemplated that the omission of overt expletives indicated the following: for *pro*-drop language natives, a null expletive *pro* is psychologically real (although not visible), and if the such L1 value is transferred to their L2, they would feel no need to overtly fill the [Spec, IP] position with dummy subjects in an L2 context. Instead, they would fill it with an invisible *pro*expletive. In contrast, the previous literature and corpus have reported that the *topic*-drop language speakers master the obligatory use of overt expletive subject and optional use of null subject much earlier than *pro*-drop speakers when learning non-*pro*-drop L2. Oshita interpreted that the null expletives do not exist in *topic*-drop language. Therefore, there is simply nothing to transfer for these learners, allowing them to avoid a non-facilitative L1 transfer. He concluded that the different course

of learning between the two groups is due to the difference in the empty category in their L1 lexicon: *pro* expletive exists only in *pro*-drop languages.

3. Transfer scenario

The previous studies confirm the following for each language regarding weather expression and existential constructions.

Box.6.1. Previous findings on the weather and existential constructions

Korean	Weather	Weather noun in the subject position
	Existential	Entity in the subject position
English	Weather	Expletive subject 'it'
	Existential	Expletive subject 'there'
Spanish	Weather	Null expletive subject '$pro_{expletives}$'
	Existential	Null expletive subject '$pro_{expletives}$'

Only one precondition is set for this property because Korean does not apply null or overt expletives in the constructions studies here. Therefore, the participants are qualified if they show proper use of the expletive 'it' in their L2 English.

Box 6.2. Precondition for proper prediction of transfer in L3 PAH acquisition

L2 English	Comply with EPP in English: Use of expletives

The following transfer scenario is posited for the design of the option sentences and the analysis of the possible transfer effect in the L3 Spanish data.

Box 6.3. Transfer scenario in L3 Null expletive acquisition

L1 Transfer Scenario: Non-facilitative	
L3 Spanish	If L1 is transferred, learners will prefer to apply Korean sentence structure [SUB-*i/ga* + predicate]
evidence	Accept sentences with [Weather] weather noun in the subject position [Existential] entity in the subject position

L2 Transfer Scenario: Non-facilitative	
L3 Spanish	If L2 is transferred, learners will prefer to fill the subject position with an overt expletive
evidence	Accept sentences with '*ello*' or '*lo*' in the subject position in weather and existential constructions.

4. Task design

The Null expletives items are tested in Spanish and English.

Table 6.1. Summary of Null expletive tasks

	Language		Type
1st Questionnaire	Spanish	n=6	Acceptability Judgment Task - option sentences in L1 structure - option sentences with overt expletives (L2)
2nd Questionnaire	English	n=4	Acceptability Judgment Task (n=2) Translation Task (n=2)

Being mindful that Korean does not have null expletive at all, the possible spill-over effect from the L1 is tested by presenting option sentences that imitate a similar sentence structure or collocational relation of Korean. And to check possible English transfer, an overt subject '*lo*' and '*ello*' are

positioned to the null expletive position. The learners are guided to mark the level of acceptability for each option sentence.[82]

> (102) Spanish Weather expletives test item
>
> Mi novio es de Canadá. Le pregunto qué tal si pasamos la Navidad en Canadá. Me dice "_____"
>
> *'My boyfriend is from Canada. I ask him what if we spend the Christmas in Canada. He replies "_____"'*
>
>   a. No me gusta la idea porque ello nieva mucho en Canadá.
>
>   b. No me gusta la idea porque lo nieva mucho en Canadá.
>
>   c. No me gusta la idea porque las nieves caen mucho en Canadá.
>
>   d. No me gusta la idea porque en Canadá las nieves muy caen.
>
>   e. No me gusta la idea porque nieva mucho en Canadá.

Option sentences (a) and (b) are included as L2 transfer items, and (c) and (d) are designed based on the sentence structure for Korean weather expression, which has weather noun in the subject position. Also, the ver "*caer(to fall)*" was used because Korean uses the verb "naylita" which translates into "fall down." A similar method was applied for the design of existential construction.

> (103) Spanish Existential expletives test item
>
> Hoy viene un nuevo profesor al departamento.
>
>   a. Estoy seguro de que ello van a estar algunos cambios.
>
>   b. Estoy seguro de que ello habrá algunos cambios.
>
>   c. Estoy seguro de que ahí habrán algunos cambios.

---

[82] The other three test properties of this thesis had two option sentences such as [null or overt] or [subject or object]. However, the testing of null expletive in Spanish was executed with different method and to gather enough sample from the participants each item had five option sentences.

d. Estoy seguro de que algunos cambios habrán

e. Estoy seguro de que habrá algunos cambios.

Option sentences (a) and (b) are L2 similar sentences, and (d) simulates the L1 structure. These items are expected to reveal the source language if any transfer obtains.

In the background questionnaire, only English expletive structures are included. The purpose of the English task is to confirm whether the participant group possesses correct knowledge of the obligatory use of expletives in the tested constructions. The participants are asked to translate Korean into English (example (104)) and mark the acceptability (example (105)) of option sentences. All Korean sentences had weather noun or existential entity in the subject position.

(104) English Translation item

I've been living in Korea for three years. As a Mexican, a fascinating thing about winter in Korea is that,

  [Translate] nwuni emcheng manhi ontanun kesita. 'It snows a lot.'
However,

  [Translate] kyothongcheycungkwa kathi nwunulo inhan
      mwunceytulto manhta.
'There are issues caused by the snow, such as horrible traffic jams.'

(105) English Acceptability Judgment item

To be honest, my trip to London was so disappointing. I really hate rain but,

a. it rained all day long for two weeks.

b. raining all day long for two weeks.

c. has rained all day long for two weeks.

d. rain came all day long for two weeks.

191

The use of correct 'it' and 'there' and strong acceptability for sentences with proper expletives were expected to be qualified for the transfer study.

5. Results

The English and Spanish data are analyzed descriptively due to the design of the task. Below is the summary of the items that are analyzed here.

Table 6.2. The Null expletive items

		Weather context	Existential context
English	Translation	n=2	n=2
	AJT	n=1	n=1
Spanish	AJT	n=3	n=3
	option sentences		
	-L1 similar	*(4)*	*(3)*
	-L2 similar	*(8)*	*(5)*

(BGN=60, ADV=20)

In the Spanish questionnaire, five option sentences were given for each context: two or three background language-similar option sentences, one correct L3 sentence, and some filler option sentences.

5.1. English result

The participants completed four translations given in Korean into English that required the appropriate use of overt expletives. The context for the translation was given, and they were asked to translate the completing sentence.[83]

---

[83] Considering the high L2 proficiency of the participant of this study, the difficulty of the items presented in this section was very low. However, the purpose of this section was to confirm whether they truly use overt expletives in weather and existential construction. Therefore, it seemed appropriate to fulfill the objective of the task.

(106) Weather constructions for translation

      a. ecceci! kumyoileyn pika ontay. *'Oh no! It will rain on Friday.'*

   b. nwuni emcheng manhi ontanun kesita. *'~ that it snows a lot.'*

(107) Existential constructions for translation

      a. kukoseynun konglyong hwaseki maywu manhki ttaymwunita.

        'It's because there are many dinosaur fossils in the museum.'

      b. kyothongcheycungkwa kathi nwunulo inhan mwunceytulto

      manhta.

        'There are issues caused by the snow, such as horrible traffic jams.

Interestingly, no case of omission of '*it*' (weather construction) or '*there*' (existential construction) was found in three hundred and twenty answers submitted. All instances complied with the English requirement of overt expletives.

    In the AJT type of English tasks, the learners read two contexts, each followed by one grammatical option sentence (with expletives) and three ungrammatical option sentences (without expletives).

Figure 6.1. Group Average acceptability in English weather/existential constructions

	BGN		ADV	
	Weather	Existential	Weather	Existential
■ Overt expletives	4.71	4.88	4.80	4.90
■ Others	2.11	1.91	1.42	1.35
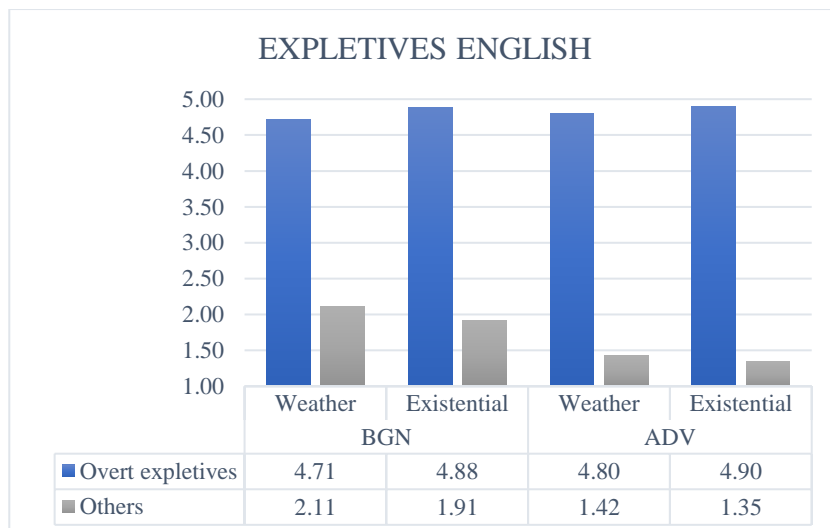
The comparison of average acceptability clearly shows that this group is familiar with the grammatical use of expletives in their L2 English. In short, both translation tasks and AJT proved that this group has proper L2 knowledge in weather and existential construction in English.

5.2. Spanish result

The result of sixty BGN and twenty ADV participants' Spanish data is analyzed here. Each participant rated the acceptability of thirty different option sentences presented in six different items. Three contexts are related to weather expression, and the other three are existential constructions, each followed by five option sentences.

As mentioned above, the design of the thirty option sentences was completed by imitating the sentence structure of the L1 or by inserting *lo (it)*, *ello(it)*, and *ahí (there)* in the *pro*expletives position as in L2. The option sentences are categorized as follows.

- L1 similar: SUB (weather noun/entity) + PREDICATE structure
  ex) No me gusta la idea porque las nieves caen mucho en Canadá
  Estoy seguro de que algunos cambios habrán.

- L2 similar: '*ello*', '*lo*' in the subject position
  ex) No me gusta la idea porque lo nieva mucho en Canadá.
 *Estoy seguro de que ello van a estar algunos cambios.*

In consideration of the task design, Spanish data is analyzed as below.

(1) Mean acceptability of each group

(2) One-way ANOVA analysis of three conditions: L1, L2, and L3

First, figure 6.2. shows the average acceptability scale of the BGN and ADV learner groups for weather constructions. On average, both groups rejected the L1 and L2 similar sentences (below 3) while accepting L3 samples with null expletives with a significantly high scale. This tendency is more drastic in the ADV group.

Figure 6.2. Group Average acceptability in Spanish weather constructions
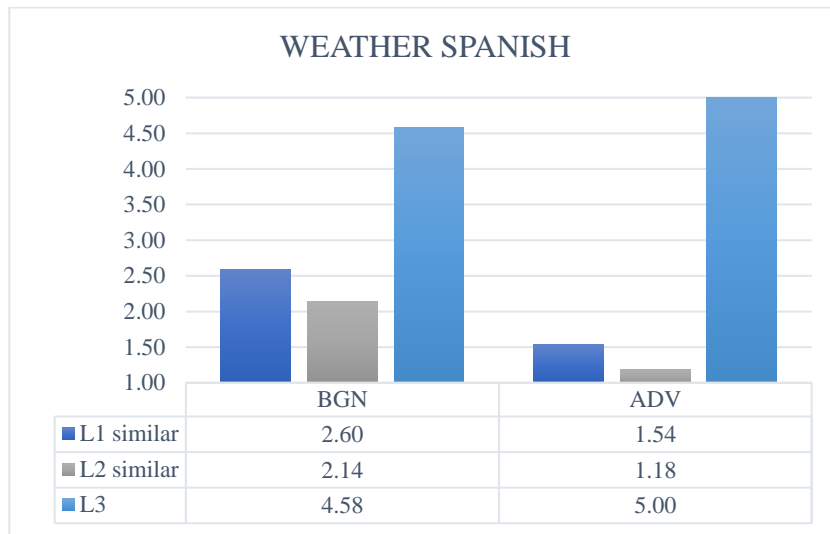
WEATHER SPANISH	BGN	ADV
▪L1 similar	2.60	1.54
▪L2 similar	2.14	1.18
▪L3	4.58	5.00

(1: Absolutely unacceptable 2: Fairly unacceptable 3: Neutral 4: Fairly acceptable 5: Absolutely acceptable)

Table 6.3. One-way ANOVA showing the effects of source language in weather option sentences

Weather SPANISH	Mean	Std.Deviation	F	P	Games-Howell
L1 similar	2.5958	1.44030			
L2 similar	2.1354	1.25134	394.168	<.001	<.001
L3	4.5778	.81847			

The One-way ANOVA analysis confirms that there is a significant effect of the source language on the learner's acceptability at the p<.05 level for the three conditions [$F_{(2, 897)}$=258.474, p<.001]. The Games-Howell post-hoc

test revealed that the differences in the average acceptability are statistically significant in all three conditions.

The same tendency is found in existential constructions. The learners rightly rejected the L1 and L2 similar constructions while accepting the L3 correct existential construction.

Figure 6.3. Group Average acceptability in Spanish existential constructions

EXISTENTIAL SPANISH

	BGN	ADV
■ L1 similar	2.27	1.33
■ L2 similar	2.05	1.07
■ L3	4.26	4.75

(1: Absolutely unacceptable 2: Fairly unacceptable 3: Neutral 4: Fairly acceptable 5: Absolutely acceptable)

Table 6.4. One-way ANOVA showing the effects of source language in existential option sentences

Existential SPANISH	Mean	Std.Deviation	*F*	*p*	*Games-Howell*
L1 similar	2.2722	1.30675			
L2 similar	2.0533	1.13789	220.407	<.001	a, b<c
L3	4.2556	1.03634			

The One-way ANOVA analysis again revealed that there was a significant effect of source language on the learner's acceptability at the p<.05 level for the three conditions [F(2, 657)=220.407, p<.001]. However, the post-hoc comparison using the Games-Howell test indicated that the mean acceptability of L3 sentences was significantly different than the other two

(<.001), while the acceptability for L1 similar and L2 similar was not significantly different(p=.151). This result indicates that both L1 similar and L2 similar were considered unacceptable without any statistical difference between the two, while the L3 correct sentences were evaluated as highly acceptable with statistical significance with two other conditions.

In summary, for both groups, L1 and L2-based option sentences are clearly rated below the acceptability scale of three, indicating that the participants evaluate them as unacceptable. The statistical analysis confirms that L3 constructions with null expletives are rated higher with a significant difference.

Table 6.5. Summary of Null Expletives tasks result

	BGN	ADV
English	All overt expletives	All overt expletives
Spanish	**Successful acquisition**	**Successful acquisition**
statistical difference	L1 similar/L2 similar < 3 < L3	
transferred language	none	

6. Discussion

The null expletives items aimed to examine how Korean participants evaluate the null expletives of Spanish in weather and existential constructions. In both constructions, Korean applies completely different sentence structures, while English and Spanish share similar structures but use different forms of an expletive, overt and null, respectively. In that regard, both L1 and L2 transfer would be non-facilitative in this particular property. In order to confirm a possible transfer effect, the option sentences were formulated in a different method from the other properties studied in this thesis.[84] Each sentence was designed to simulate L1 or L2 structures, and the

---

[84] In the previously examined grammatical features, the option sentences were given in null versus overt, or subject versus object in null and overt conditions.

participants were asked to evaluate its acceptability. This method was also used in the former literature, such as in Lozano (2002b) and Rothman (2007), to list a few. The previous studies that examined the non-native acquisition of Spanish null expletives consistently reported that the learners acquire the obligatory null expletive *pro* at the very early stages of acquisition. Its prompt native-like acquisition was often compared with the delayed acquisition of pronominal subjects, which is reported to constitute a *locus* of problem in the non-native acquisition.[85]

First, English weather and existential constructions were tested. Two types of questionnaires were executed, and the result of the translation task indicated that among three hundred and twenty translated answers, there was no case of native-deviant behavior. All learners adequately used *'it'* or *'there.'* Furthermore, the AJT result correctly marked a sharp contrast between grammatical overt expletive constructions and ungrammatical null expletive sentences. This authenticated that the participant of this study has correct knowledge of expletives in L2 English, thus completing the precondition for transfer analysis.

Secondly, the target language data confirmed that both BGN and ADV groups evaluated L1 and L2-similar Spanish items with significantly low acceptability, which corroborated that the learners exhibited correct knowledge of L3 Spanish. No hint of L1 or L2 transfer was evident in the task. The evaluation of the acceptability of L1 and L2-similar option items is marked below three, which translates as a rejection to the structure. Furthermore, statistically higher acceptability of L3 correct constructions confirmed that both groups showed proper knowledge in the null expletive use.

In summary, I report that there is no sign of transfer in learner's L3 null expletive judgments, even in the BGN group. This result coincides with the

---

[85] Licera(1989) noted that "pleonastic *pro* is incorporated in the learner's grammar at the very early stages (p.126)."

former literature that the knowledge of null expletive *pro* is evident from the early stages of acquisition.

CHAPTER 7. DISCUSSION

1. Introduction

This chapter is organized following the three research questions presented in the introduction of this thesis.

> RQ 1. Which background language is transferred in the early stages of L3 acquisition of null and overt Spanish subjects?

> RQ 2. Which L3 transfer model best accounts for Korean learners' behavior in the L3 acquisition of null and overt Spanish subjects?

> RQ 3. What implication does the Korean learners' data offer to the current discussion in the field of TLA on modeling the L3 transfer dynamics?

First, I will summarize the result of the properties examined through chapters 3 to 6 to present the transfer dynamic confirmed in this language group. This thesis aimed to observe the transfer of Korean or English to the L3 Spanish acquisition by observing learners' behavior in the subject realization. The result of four properties explored in this investigation will be presented from a transfer perspective. Secondly, I will advance hypothetical transfer scenarios for each property based on the six L3 transfer models. Then, the theoretical prediction of these positions will be compared with the actual data collected here, with an objective to assess their explanatory power. Lastly, the suggestion for the advancement and refinement of current L3 transfer theories will be put forward, established on the findings of this thesis.

2. Research question 1: the empirical foundation

Let me briefly present the outline of the experiments included in this study.

The Participant

The studied subjects of this thesis are Korean native learners who have prior experience of learning English as their first foreign language before receiving L3 Spanish instruction. They are all adult learners who started learning Spanish in a formal setting. The learners are either at two different stages in the target language: the beginner (BGN) or the advanced (ADV). Considering that the transfer effect is most evidently monitored during the early stages of acquisition, the learners at the beginner phase are set as the primary research subjects. However, the ADV's data are collected and analyzed for the purpose of comparison to highlight the BGN's behavior.

The Questionnaire

This investigation conducted two questionnaires. First, the learners participated in the Spanish questionnaire, which examined four properties related to the NSP. Then, with a minimum of two weeks of separation, they completed another questionnaire that tested L1 and L2 knowledge of the same properties. The result of the second questionnaire is analyzed first to filter out those who did not exhibit proper knowledge of the tested features in their background grammars. Of ninety-six participants, sixteen showed a native-deviant behavior in the L1 or L2, and their entire dataset was excluded from further analysis. The logic behind this decision is that in order to identify the source of transfer by observing the L3 data, it is imperative that the

participants first hold native-like knowledge of the tested properties.[86] In addition to the language task, the learners' general perception of the crosslinguistic relations among languages was questioned.

The Test Items

Four NSP-clustered properties were tested: the Overt Pronoun Constraint (OPC), the Position of Antecedent Hypothesis (PAH), the Topic-continuity, and the Null Expletives. The reason why this work explored the acquisition of subject realization to observe L3 transfer was that L1 Korean and L2 English display a contrastive behavior in regard to subject use, and therefore, the source of transfer would be best evidenced in the L3 subject realization. The properties were tested first in Spanish by AJTs, and then the second questionnaire examined Korean and English by means of AJT and translation tasks.

Now, the summary of the result of four Spanish grammatical features analyzed and discussed in sections 6 of chapters 3 to 6 is outlined below.

The OPC Results

First, the result from the OPC task confirmed a strong L1 transfer. The constraint encodes that the overt pronoun cannot be used in the quantifier binding interpretation context in languages that permit both null and overt pronouns. The OPC is operative in L1 Korean and not applicable to L2 English, which suggests that the transfer of native knowledge is expected to be facilitative while that of L2 is detrimental in L3. The result of BGN's mean acceptability for null and overt option sentences revealed that the early

---

[86] The detail of the excluded candidates are as follows. Four participants from English OPC task, seven from Korean PAH Overt condition, two from English PAH Overt condition, two from topic-continuity in Korean, and one from English topic-continuity context were excluded due to prerequisite condition for the transfer study.

learners already showed native-like OPC behavior. They rightly differentiated the appropriateness of two subject forms, accepting the null while rejecting the overt with a statistical significance. This tendency was more clearly manifest in the item-by-item analysis. Each participant's answers were coded as a pair for each given context. The L1 transfer, which included the cases when the learners' evaluation of the acceptability for the null condition received a higher scale than the overt counterpart, accounted for 78% of the BGN's choices. Some may question if it was genuinely the L1 transfer that led to a native-like OPC result or if it was just an indication of correct L3 acquisition through full access to UG being reflected in the data. In recognition of the fact that (a) these participants are initial stages learners and (b) the frequency of input of OPC constructions is not high considering the level of instruction they have received, and (c) the evidence from former studies that examined L1 English learners in L2 Spanish OPC context did not show such high OPC adherence, I interpret the target-like OPC behavior as the evidence of L1 transfer. The tendency to comply with the OPC increased even more in the ADV, showing native-like convergence. In summary, I take the OPC result as an indicator of the facilitative L1 Korean transfer in L3 Spanish acquisition.

The PAH Results

The PAH predicts a complementary anaphora resolution between the null and overt subject in the ambiguous intrasentential context in *pro*-drop languages. For the language combination studied here, the overt condition is where the L1 and L2 knowledge exerts conflicting strategies. According to the PAH, the overt subject is highly likely to be linked with object antecedent in both Korean and Spanish ambiguous contexts. Meanwhile, the L2 English abides by the subject assignment rule, which assigns overt subject to the subject antecedent. The Korean transfer would guide the learners to show native-like resolution preference in the L3, while the transfer of the L2

strategy would result in native-deviant choices in overt subject conditions. The data showed that the learners did not display any significant biases in the anaphora resolution, evaluating both subject and object antecedent as acceptable in the overt subject condition. The coding from a transfer perspective confirmed that both L1 (38%) and L2 (36%) seem to exert influence on the BGN's processing of anaphora. If we consider that L3 Spanish input itself also guides the learners to favor the L1-like antecedent interpretation, the evidence of L2-oriented anaphora resolution, which is not facilitative, deserves a spotlight. Interestingly, when compared with the ADV's result, the non-facilitative L2 cases significantly diminished to a mere 2%, which I report as evidence of non-facilitative L2 transfer being corrected through accumulated exposure to the L3 input. Furthermore, the percentage of incomplete acquisition remained significant in both proficiencies (BGN: 36.17%, ADV: 15.50%). This tendency indirectly supports the IH's claim that residual optionality and non-convergence are found in the acquisition of properties operating at the syntax-discourse interface even at the advanced stages. In essence, the transfer result from the PAH overt condition indicates that both L1 and L2 knowledge are transferred to the anaphora resolution in L3 Spanish.

The Topic-continuity Results

The alternation of null and overt subjects in topic-continuity and the topic-shift contexts were tested. Both Korean and Spanish prefer null form for the topic subjects, while English requires the subject to be overtly realized. On the other hand, all three languages require an overt pronoun subject to encode topic-shift in the subject. Therefore, the learner's behavior in the topic-continuity items was expected to offer a chance to observe the transfer from background languages. The analysis of the result indicated that the early learners did not differentiate the null and overt subjects in the topic-continuity context, evaluating both cases with a high acceptability scale with no

statistical difference. This judgment was not L1-like nor target-like. In the Korean questionnaire, the same group did show a significant difference between the two conditions, evaluating the acceptability of the null form statistically higher than the overt subject for [+topic] contexts, although both conditions were considered acceptable. It is noteworthy that the higher acceptability of Spanish overt subject in the topic context, which is L2-like, was the main factor that resulted in the target-deviant tendency in these items. This non-convergence and overextension, particularly in the use of overt subjects, have been repeatedly reported in the L2 acquisitional studies that examined the topic/focus subject alternation. The transfer-oriented coding further fortified the plausibility of the L2 strategy engaging in a non-facilitative manner in the L3 Spanish topic-continuity context: the L2 friendly choices marked 27% of learner's choices, while L1-based decisions were found in 38% of the cases. I conclude that both L1 and L2 were activated as the source of transfer in the acquisition of pragmatically fitting subject form in the L3 topic-continuity context. In the ADV's data, the L2-oriented choices decreased significantly from 27% to 8%, which I further report as an indicator of correction or recovery from a non-facilitative L2 transfer in the later stages of acquisition. This drastic correction of L2 transfer was also found in the PAH result. Furthermore, another similar tendency between the topic-continuity and the PAH result was found in the cases of incomplete acquisition.[87] The percentage of the case noticeably persisted even in the higher proficiency (BGN: 35%, ADV: 24%), again supporting the IH's argument of vulnerability in the interface. In short, the data of the topic-continuity context supports the hybrid transfer of both L1 and L2 in the beginning phase of L3 acquisition.

---

[87] This result indirectly supports Quesada Calvo de Mora's (2021) parallel approach to the PAH and topic-continuity/shift that these two only differ in the fact that "The PAS configuration is more restrictive as it only includes two antecedents (in pre-verbal and post verbal positions), while topic-continuity and topic-shift contexts offer richer scenarios (p.38)."

The null expletive *pro* was tested through weather expressions and existential constructions. The design of the null expletive task was different from the other three properties. The option sentences were forced to simulate the L1 and L2 structures, and the participants were asked to mark the acceptability of each sentence. The BGNs exhibited a stark contrast in their acceptability, approving the L3 construction while strongly rejecting both L1 and L2 similar sentences. This result coincided with the former findings that expletive *pro* seems to be present from the very earliest moment of learner's acquisition. The ADV's result also confirmed the correct rejection of L1 and L2-oriented constructions and acceptance of L3 constructions. I concluded that the transfer of background languages did not materialize in the acquisition of this property, even in the early stages of acquisition. The empirical significance of no transfer will be discussed again in the later section of this chapter.

Summary

The outstanding finding that I want to emphasize in Korean learners' behavior in the L3 Spanish subject acquisition is that even for a single property, both L1 and L2 are found to serve as the source language in the form of hybrid transfer. The genesis of the concept of a hybrid transfer is found in the notion of 'combined CLI' by De Angelis (2007).

> Viewing transfer as a one-to-one type of association is logical and viable option for speakers who are familiar with two languages, but the same type of association ceases to be the only possibility when more than two languages are in the mind. … the simultaneous influence of more than one language upon a target language, i.e., a many-to-one type of association. … In the absence of a widely

accepted term for this kind of CLI I shall use the term of reference of 'combined CLI.'

<div align="right">(De Angelis, 2007, pp. 20-21)</div>

Puig-Mayenco, González Alonso, et al. (2018), in their systematic review of L3 transfer studies, applied the label *hybrid transfer* to refer to the studies that reported the influence of both pre-existing languages. In their understanding, three possible hybridity exist: "combined influence on the same linguistic property (a true hybrid value); influence on different properties, that is, when in a single experiment with two conditions, one is seemingly influenced by language X (L1), and the other by language Y (L2); and, finally, those situations where it was not possible to exclude a hybrid value (tease out the L1 from the L2) because both the L1 and L2 are functionally the same (p.39)."[88] The data of the present study confirms the first two types of hybrid transfer. In the OPC task, only L1 transfer was hinted at, while in the PAH and topic-continuity contexts, both languages were activated for the transfer. According to Puig-Mayenco and his colleague's analysis of 71 previous works on the L3 transfer, 17 studies (23.9%) recorded the hybrid transfer, which connotes the property-by-property transfer. Westergaard (2021b) rightly pointed out that even though the number is not low, it may not fully reflect the actual transfer phenomena because not many L3 transfer studies examine multiple properties in a single investigation. In fact, most of the research often examines only one. Therefore, the possibility of observing the hybrid transfer itself is blocked from the beginning.

In short, the data from Korean learners of L3 Spanish confirmed that this group showed a hybrid transfer of L1 and L2 in their L3 acquisition of NSP-related properties. Furthermore, such hybridity of transfer was manifested in

---

[88] The example of hybrid transfer by the authors, "for example, in an interpretation task it could be the case that participants assign an interpretation from the L1 40% of the time and 60% from the L2 to a condition in the L3 (p.39)", applies to the transfer dynamic confirmed in this study, in the PAH and the topic-continuity tasks.

two levels: (a) in group-level that Koreans activated L1 and L2 in the L3 acquisition in general, and also (b) within a single linguistic property level that both L1 and L2 influenced the acquisition of a single linguistic property.

3. Research question 2: the validity of the L3 transfer models

In chapter 2 of this thesis, I have presented a comprehensive review of the latest L3 transfer models. The positions take two different orientations: whether the source of transfer is selected by default or by comparison or competition of linguistic factors. And the latter position is divided into two directions: one argues that the selected source language is solely transferred in its entirety and others predict both source languages are readily activated to be transferred in a structure-by-structure manner. The below figure shows how current models approach the transfer phenomena in the L3A.

Figure 7.1. L3 Transfer Models
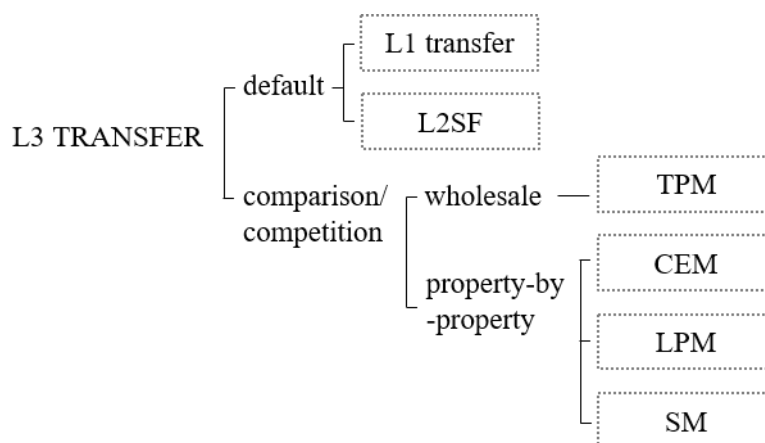
With an objective to evaluate the validity of proposed models, I will first advance hypothetical learner behavior that would support the prediction of each model. Then, the prediction will be compared with the actual data

collected here. The following discussion is progressed based on the linguistic value of the learner's background languages in each property reviewed in this thesis (Table 7.1.).

Table 7.1. Linguistic value of the properties in languages concerned

Property		L1 Korean	L2 English	Spanish
The OPC		NULL>OVERT	NULL<OVERT	NULL>OVERT
The PAH	NULL	SUB>OBJ		SUB>OBJ
	OVERT	SUB<OBJ	SUB>OBJ	SUB<OBJ
Topic-continuity		NULL>OVERT	OVERT	NULL>OVERT
Null expletives		n/a	OVERT expletive	NULL expletive

The prediction

The 'L1 Transfer Hypothesis' predicts that only Korean will be transferred as a default. This model will be supported if learners show a target-like behavior in the OPC, the overt condition of the PAH, or the correct use of null subject in the topic-continuity context. Meanwhile, for the null expletives items, it is expected that learners would tolerate the non-target-like weather and existential constructions that are similar to Korean. This position expects the transfer to obtain in a wholesale manner. Therefore, any trace of L2 transfer will falsify the theory.

The 'L2 Status Factor' speculates that only L2 English will affect the initial hypothesis of L3 Spanish acquisition. The L2 has a dominant status over L1, serving as a filter to block any influence from the native language. As a result, the L2SF will hold true if the responders exhibit target-deviant performance by following L2-oriented behavior: prefer overt subject over the null pronoun in the OPC and topic-continuity items; link the overt subject with the subject antecedent, or tolerate overt expletives in the weather, and existential expressions. A strong target-like behavior in the early stages would weaken the plausibility of the hypothesis, for the L1 transfer in this particular learning situation is always facilitative, with the exception of null expletives.

The 'Cumulative Enhancement Model' argues that the transfer is possible from all sources of background language only if it is facilitative. Therefore, the CEM's account will be falsified if there is any type of non-facilitative transfer from the pre-existing grammars, such as strong acceptance of overt pronouns in the OPC, preference for overt topic-subject, or tolerance to L1/L2 similar sentences to null expletive constructions. These are the cases of detrimental transfer of the L2 that will nullify the model's argument.

The 'Typological Primacy Model' envisions that an L3 learner will unconsciously select one of the background languages based on linguistic cues starting from the lexicon to syntactic structure. If this is the case, learners' L2 English is expected to be selected in its entirety because English and Spanish share more linguistic cues than Korean. Furthermore, recall that the Language Relations Questionnaire of this thesis has revealed that Korean participants perceive that English is more similar to Spanish than Korean is to Spanish. The result showed that BGN's evaluation of crosslinguistic similarity between their L2 and L3 was statistically higher than between the L1 and L3 in every level questioned: pronunciation, vocabulary, grammar, sentence structure, and general similarity. In recognition of the result from the Language Relations task, the TPM would predict a strong L2 English transfer to the L3 initial hypothesis in this language combination.[89] Notably, this model contends that transfer at the initial stages is always wholesale. Therefore, this model's prediction would be rejected if any evidence of mixed transfer from both L1 and L2 is found in learners' data.

The 'Linguistic Proximity Model' and the 'Scalpel Model' make the same predictions that during the L3 acquisition, both previously known languages may be activated for transfer. The main factor for transfer is the linguistic and abstract structural similarity at the property level. However,

---

[89] The evidence supporting this model will be the same as that corroborated the L2 Status Factor. However, the linguistic trigger that produced such a result would be different.

these positions are open to other factors that may contribute to the selection of the activated language, such as frequency, age, recency of use, and others. The most distinctive argument of the LPM and the SM in comparison to the TPM is that these two models strongly insist that transfer obtains selectively on a property-by-property basis. Both L1 and L2 systems can remain co-activated for transfer throughout the L3 development, although the level of activation may be stronger in the early phases of acquisition. And importantly, based on the Full Transfer Potential (FTP), which argues "anything may transfer, not that everything does transfer," the LPM offers an interpretation where no transfer happens at the property level. Therefore, these hypotheses will be supported if both L1 and L2 are found to be transferred as a combined/hybrid transfer for each property or even within a single property.

The result

Let me reiterate the summary of findings for tested properties from a transfer perspective.

Table 7.2. Summary of transferred language in properties tested

Property	L1 Korean	L2 English	L3 Spanish	Transfer
The OPC	*OPC operative*	*overt subject*	*OPC operative*	**L1 transfer**
	Native-like	**Native-like**	**TARGET-like**	
The PAH	*PAH sensitive*	*Subject Rule*	*PAH sensitive*	**Both L1 and L2**
	Native-like	**Native-like**	**TARGET-deviant**	
Topic-continuity	*null subject*	*overt subject*	*null subject*	**Both L1 and L2**
	Native-like	**Native-like**	**TARGET-deviant**	
Null expletives	*N/A*	*overt expletives*	*null expletives*	**None**
		Native-like	**TARGET-like**	

The above table explicitly presents that the selection of transferred languages was different among properties. The data indicated that both languages were activated in the L3 Spanish acquisition. It is noteworthy these properties are

known to form a cluster of the NS, which means they are very closely related. However, even these closely clustered properties showed different transfer gravitation.

In fact, the evidence of a hybrid transfer alone is sufficient to falsify all models but the LPM and the SM. First, the two default models, the L1 position and the L2SF, are rejected because both languages affected the L3 across properties. It is true that the activation of the native language was at least partially detected in three properties tested in this investigation. However, the combined L2 transfer was evident in the item analysis of the PAH overt condition and topic-continuity context. Secondly, the CEM is rejected due to the target-deviant transfer of English into Spanish. The transfer of L1 features would have been facilitative in this learning context. However, the L2 activation was confirmed. Lastly, the wholesale argument of the TPM is also rejected based on the fact that both previously acquired languages engaged in the L3 Spanish, despite the learner's strong perception of the structural similarity between the L2 and the L3.

The actual data clearly confirmed a hybrid transfer in the group level and within the single property level, thus supporting the claims of LPM and SM. Both languages were activated for parsing the PAH input and the topic-continuity input. The L1 was active for the OPC. And for null expletives, the parsers did not activate any background language, accordingly to LPM's argument that "not everything transfers." In fact, the concept of *activation* in the LPM serves as a more efficient tool than the TPM's *copy* or *reduplication* to describe the mixed transfer tendency found in this learner group. Furthermore, the fact that no hint of transfer was detected in the null expletive subject can be better accounted for in the LPM's concept of activation. Because if one of the source languages is fully copied and transferred to the initial hypothesis of the L3, there needs another layer of explanation for when the effect of transfer actually does not manifest. Following Westergaard, Mitrofanova, Rodina, and Slabakova's (submitted) claim that the activation

and the incorporation of existing linguistic representation happen when it "is found to be suitable for parsing the new input (p.5)", it seems that no linguistic representation of Korean and English was considered fit or necessary in parsing the L3 null expletives input.

4. Research question 3: implication for transfer models

The ultimate research goal of this thesis was to fill in the gap in our understanding of L3 transfer by submitting the data of an understudied language group in the field of TLA. The character of transfer that I want to highlight from Korean learners' data is its hybridity.

In the beginning of the 2010s, the proposals of transfer models started to hit their stride, and in the early discussion, the TPM undoubtfully took the initiative in both theory and practice. The model was clear and elegant, prompt in modification to sophisticate its theory. At the same time, it received extensive support from studies that tested the explanatory strength of the model, especially its argumentation on the role of typological/ structural cues in the selection of transfer held strong explanatory power (Cabrelli Amaro, Felipe Amaro, & Rothman, 2015; Giancaspro et al., 2015; Montrul et al., 2011). However, recent transfer works that tested multiple properties across domains report significant counter-evidence to the TPM's claim on the wholesale transfer, reporting influence from both background languages (Abbes, 2020; Jensen et al., 2021; Kolb, Mitrofanova, & Westergaard, 2022; Listhaug, Busterud, & Dahl, 2021). In line with these new findings, the models that projected a structure-by-structure transfer, the LPM and the SM, have updated their ideas for epistemological refinement. The empirical finding of this thesis that both grammars of Korean and English engaged in the L3 Spanish processing is best explained through LPM and SM. Furthermore, it offers several layers of insights into the further

discussion of the L3 transfer as a property-basis phenomenon.

First, from a methodological perspective, the importance of testing the multiple properties in transfer studies is reconfirmed. Westergaard, Mitrofanova, Rodina, and Slabakova (submitted) rightfully commented that the transfer studies often test one or only a few properties of the L3, which considerably lowers the chance of documenting a hybrid transfer. The data here also would not have been able to draw a wider picture of transfer dynamics if only one of the properties had been tested. For example, if Koreans were tested only to the OPC, the result would only support a strong L1 transfer position. Therefore, for the research prudence, it is imperative that the various properties and preferably more irrelevant properties are tested for the studied group to fully depict the transfer flow in the language pairing examined.

Secondly, the data here questions, but does not completely reject, the traditionally emphasized role of learner's evaluation of linguistic similarity in the selection of source language. The result of the Language Relations Questionnaire here indicated a strong connection between the L2 and the L3 in learners' minds, which did not coincide with the transfer dynamic found in the L3 data. In particular, the participants showed strong agreement with the statement, "My knowledge of English is helpful when learning Spanish" (BGN: 4.47, ADV: 4.45) while significantly underestimating the actual facilitativeness of their L1 in Spanish acquisition (BGN: 2.23, ADV: 2.55). The empirical evidence of this study did confirm the influence of L2 English in some properties. Therefore, it does not entirely reject the possible correlation between the perception of linguistic similarity and the selection of transfer. However, the factor 'perceived similarity among languages' certainly was not decisive enough to exclude or block the transfer from the other underappreciated language. A more structured evaluation of the perception of the crosslinguistic distance between Korean, English, and Spanish would be

helpful and also required to fully probe the validity of this factor.[90] For now, the preliminary conclusion that I offer is that the mismatch between the learners' conscious evaluation of the linguistic similarity and the actual selection of source language found in this group supports the character of linguistic transfer confirmed in the previous literature that it is an unconscious or involuntary phenomenon. Because even when one of the pre-existing grammars clearly won over the other in the learners' explicit evaluation of the crosslinguistic similarity, the actual transfer dynamic did not conform to it.

Finally and above all, based on the two premises drawn from the LPM that (a) the transfer obtains on the property-basis, and (b) there can be other factors than the abstract linguistic similarity that govern the activation of pre-existing property for transfer, I want to suggest the following: the "external interface" relatedness of a property may be one of the factors conditioning the transfer dynamic in the L3A. Note that the LPM has proposed the abstract linguistic similarity between properties as the decisive factor for the activation while admitting surface typological similarities may play a role in the early stages. However, these two factors are not fully competent in explaining the activation of both Korean and English in the PAH and the topic-continuity items. The hybridity of the transfer only found in the interface properties guided me to speculate about the interface as one of the factors that may condition the transfer dynamics. Let me first clarify the concept of 'interface.' According to Sorace and Serratrice (2009), "the term *interface* has been used to denote a component that links either (a) sub-modules of language, or (b) language and non-linguistic cognitive systems (Chomsky, 1995; Jackendoff, 2002) (p.197)." In that regard, Tsimpli and

---

[90] Any alternative or additional methodologies than the Language Relations Questionnaire is needed. For instance, a recent study by Nelson et al. (2021) comments that the previous literature has adapted the Questionnaire method, Think-Aloud Protocols or Magnitude estimation-based evaluation to the learner's perception on the language relatedness. Accentuating the importance of testing the crosslinguistic perception in L3A, they proposed a visual psychotypological measure, ViLDiM (Visual Language Distance Measure) in attempt to capture the perceived relatedness between all language in a learner's repertoire.

Sorace (2006) proposed the concept of internal and external interface, which makes a distinction between two interfaces according to the nature of the interaction. According to Sorace and her colleague, "the syntax-semantics interface (*which is the internal interface*) involves formal features and operation within syntax and Logical Form, whereas the syntax-discourse interface *(the external interface)* involves a pragmatic condition that determines appropriateness in context (Sorace & Serratrice, 2009, p.197)." The figure below is the 'working interface depiction' envisioned by White (2009), which has advanced Chomsky's original proposal of the syntax, LF, and PF interfaces. This would be helpful to visualize the concept of internal and external interface and to understand how the original concept of the interface can be approached within the Minimalist program.[91]

Figure 7.2. A Working Interface depiction from White (2009)
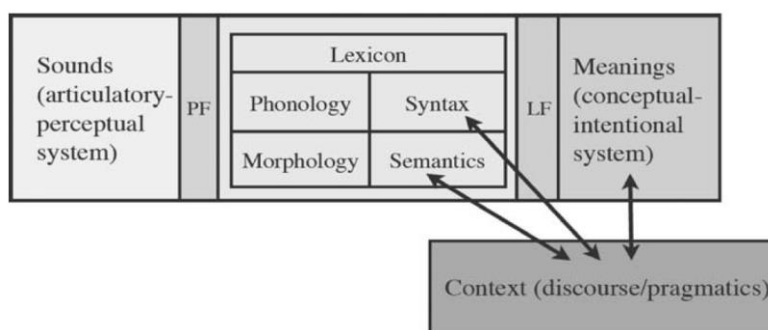
(Rothman & Slabakova, 2011, p. 570)

---

[91] Meanwhile, Domínguez (2013) argues that the original version of Interface Hypothesis cannot be fully supported by a Minimalist framework and proposed a new definition of 'interface-based' phenomena taking into consideration the Minimalist proposals. In her book *Understanding Interfaces*, the author offered a new definition of 'interface-based' phenomena as "'Interface structures' derivations which are selected over other possible well-formed derivations generated by the computational system because they are the only ones which meet the interpretive conditions of the interfaces (p.99)." I direct the reader to chapter 3.4. 'Moving forward in interface-based SLA research' of her publication for a detailed discussion on the matter.

What I want to underline here is the importance of the interface-based approach in the acquisitional investigation that is reflected in the recent work on the acquisition of interface properties (Contemori & Dussias, 2020a; Giannakou & Sitaridou, 2021; Lozano, 2018, 2021).

Back to the point, I believe that the PAH and topic-continuity data of this thesis showed a hybrid transfer because they are external interface structures, whereas internal interface structures, the OPC, and the null expletives showed a simpler transfer dynamic. Note that the previous literature confirmed that the PAH and topic-continuity are linguistic phenomena at the interface connecting syntax with the language-external domains, where acquisitional complexity is highly expected, in contrast to the OPC and null expletives.[92] Such structural complexity or parsing difficulties must have triggered the activation of more or all of the existing linguistic repertoire in the learner's mind for better parsing of the given L3 property. On the other hand, the OPC and the null expletives are discourse-irrelevant structures and have been reported to be present in the early stage interlanguage, which implies lower acquisitional complexity and a lower need or motivation to resort to the formerly acquired languages in the parsing of new input. This type indeed showed a more plain transfer panorama in the collected data.

To advance this possibility of interface factor affecting the transfer dynamic in the L3 context, I want to incorporate the ideas of Hulk & Müller (2000) and Müller & Hulk's (2001) "Mapping Induced Influence Hypothesis (MIIH)," and Sorace's influential "Interface Hypothesis (IH)" (Sorace, 2005, 2006a; Sorace & Filiaci, 2006; Sorace & Serratrice, 2009; Tsimpli & Sorace, 2006). Let me briefly go over the core idea of these hypotheses. The MIIH argued for '*mapping induced influence*' to refer to when the transfer is triggered by the "mapping of pragmatic principles onto syntactic principles

---

[92] Quesada (2015) notes that the generative investigations in the L2 context have documented that the OPC and null expletives are acquirable while topic/focus context and the overuse of overt subject have shown "lingering interlanguage errors (p.77)."

(Müller & Hulk, 2001, p. 5)." This position posits that the influence of previously acquired languages found in the early bilingual acquisition can be interpreted based on the *type* of grammatical structure: that is, whether the property is at the syntax-pragmatics interface or not. [93] The hypothesis contends that transfer from pre-existing languages is highly expected if the target structure is at the interface between syntax and pragmatics and if there is a surface overlap between the two target languages. According to Domínguez (2013), this hypothesis has been corroborated mainly by studies that investigated the acquisition of null and overt subjects by bilingual children. Meanwhile, the IH is applicable to a wider variety of acquisition contexts, which include bilingual children, bilingual heritage acquisition, and adult L2A. As briefly reviewed in chapters 4 and 5, the IH was formulated to account for the incomplete acquisition and non-convergence of properties operating at the interfaces between syntax and the other language external domains during nonnative acquisition. At first, it predicted that all interface structures are subject to an incomplete acquisition when compared to the structures that are purely syntactic (narrow syntax). Later, it narrowed down the possible locus of instability to the interface connecting the linguistic module with a language-external domain. That is, the IH predicts that the syntax-discourse interface is more likely to pose acquisitional complexities than the interface that connects language-internal modules, such as the syntax-semantic interface. In essence, the MIIH considers that external-interface properties are especially prone to the crosslinguistic influence from the early stages of acquisition, and the IH predicts persistent acquisitional

---

[93] Mapping Induced Influence Hypothesis (Muller & Hulk 2000, p.546)
1. Crosslinguistic influence may be expected at the interface between two modules of grammar, and more particularly at the interface between pragmatics and syntax.
2. Syntactic crosslinguistic influence is expected to be possible only if language A has a syntactic construction which allows for more than one syntactic analysis, and language B contains evidence for one of these possible analyses. That is, there has to be a certain overlap of the two adult systems at the surface level.

optionality and vulnerability in acquiring linguistic phenomena at the external interface even in the advanced stages.[94]

Against this backdrop, it is noteworthy that this study confirmed the activation of both pre-existing grammars, especially that of non-native and non-facilitative grammar, in the two properties that are traditionally accepted as external interface properties. When compared to the result of the OPC and Null expletives items, it was clear that the transfer dynamics were different according to the type of properties. Accepting the LPM's claim of language acquisition as learning by parsing, I believe that the L3 input of interface properties posed a heavier parsing difficulty (acquisitional difficulty) and thus increased the need to resort to more linguistic representations available in the learner's linguistic repertoire. Therefore, as Rothman and Slabokova (2011) asserted the importance of studying *acquisition* at the interfaces, I want to emphasize the importance of examining *transfer* at the external interfaces.

In a nutshell, this thesis agrees with the prediction and argumentation made within the LPM. And accepting that the transfer obtains on a property-by-property basis, I suggest the type of property, whether it relates external interface or not, may play a role in shaping the transfer dynamic because of the presumed acquisitional complexity in the language-external domains. However, in the same logic as the FTP, I want to be clear that I do not expect every property at the external interface to always cause more active activation of entire background languages. I contend that this factor may play an additive role in explaining the transfer dynamic within the LPM framework. As

---

[94] It is true that the IH was drawn upon the native-deviant data of those who are at the near-native L2 stage that the hypothesis mainly attempts to account for highly advanced L2 learners. However, I align with studies (Lardiere, 2011; Slabakova & García Mayo, 2015; White, 2011a) which assume that the learners in the early phases of acquisition experience interface-related problems that IH predicts as well as advanced learners. I believe that such deviance must have been present across proficiency levels, and that the proposed optionality and the vulnerability of interface properties would not have suddenly emerged only at the advanced level. The accumulation of acquisitional burden from the initial stages must have been just revealed and confirmed at the high level of proficiency. Therefore, albeit not directly, I believe that BGN's data along with the ADV's result can hold insight into acquisition lag predicted in the IH.

Westergard (2021b) noted, it is hardly possible to expect one factor to explain the activation of pre-existing linguistic representations in its entirety. This thesis proposes the *interface* as one of the factors that affect the property-basis transfer in the L3A. This sketchy idea, of course, requires further sophistication and empirical scrutinization in future research.

The limitation in providing further support for this idea here is that it is yet hard to find an L3 transfer study incorporating the interface-based approach. This is even more so if we consider that the interface itself has not yet been actively explored in the field of TLA itself. To the best of my knowledge, Slabakova and García Mayo (2015) and Hermas (2018) are the only studies that expanded the research scope and tested the IH in the L3 context. Nonetheless, the L3 transfer at the interfaces seems a promising topic for future research. Slabakova and García Mayo (2015) persuasively argued that L3 learners are also another, or even more "vulnerable population (p. 210)" in the light of interface phenomena. In that regard, I believe that testing the transfer of pre-existing grammar in the acquisition of interface-related features will broaden our understanding of the L3 transfer dynamics in third language acquisition.

CHAPTER 8. CONCLUSION AND FUTURE DIRECTIONS

1. Conclusions of this study

The primary objective of this thesis was to contribute to our understanding of the influence of previously acquired languages in the L3A by examining the understudied language population in the field of TLA, the L1 Korean-L2 English-L3 Spanish learners.

A comprehensive review of the latest L3 transfer models was provided and served as the theoretical framework of this investigation. Then, considering the contrastive parameter setting between the L1 Korean [+*pro*-drop] and the L2 English [-*pro*-drop], the null and overt subject realization was chosen as the research topic to observe how pre-existing language representations may engage in the L3 Spanish acquisition. Four keenly associated, so-called NSP-clustered properties were tested in both background and target languages. The participants were all adult Spanish learners at two different stages of acquisition: the beginner and the advanced levels. This study mainly targeted beginner-level learners, considering that the transfer of pre-existing linguistic systems is most evidently observed in the early phases of acquisition. The analysis of the collected dataset was then applied to each L3 transfer model's prediction to examine the validity of its claim.

The significant empirical findings of this thesis can be summarized as the following.

▪ The OPC is a UG constraint that blocks bound variable interpretation of the overt subject in the NSLs. The constraint is operative in Korean but not applicable in English. The former literature confirms that the

OPC is acquirable in the nonnative context despite its low frequency in the learner's input. The L3 Spanish data of this investigation confirmed that the L1 Korean was activated as a source language in the parsing of L3 OPC input. The L1 transfer, along with UG, provided a significant facilitative effect on the native-like OPC behavior, even in the early stages of acquisition.

▪ The PAH is a processing preference that accounts for antecedent biases of the null and overt subjects in anaphora resolution in ambiguous intrasentential contexts. It is generally accepted that this strategy requires mapping between syntax and discourse domains as an interface property, which is considered to evidence residual optionality and persistent instability in nonnative acquisition. Korean abides by the anaphoric preference envisioned by the PAH, while English follows the subject assignment strategy, which directly conflicts with the PAH's prediction for the overt pronouns. The PAH predicts the overt subject to be linked to an object antecedent, while the subject assignment rule predicts the subject antecedent assignment. The L3 Spanish result of Korean natives indicated that both L1 and L2 were activated in processing the PAH input. The acceptability for subject or object antecedent did not show any contrastive bias. The L2 strategy-oriented interpretation, which links the overt pronoun with the subject antecedent, was evaluated as acceptable as the object antecedent. The item-by-item analysis further supported the hybrid transfer of L1 and L2 in the L3 PAH context.

▪ In the Topic-continuity context, the NSLs generally prefer the use of *pro*, although the overt pronoun is not impossible. The proper use of subject form in the topic-continuity context relates to the syntax-discourse interface, which poses an additional acquisitional burden due to its complexity. For the adequate use of null subject in the L3 topic-

continuity context, the L1 Korean knowledge is facilitative while that of the L2 is not. The L3 learner's data showed that both L1 and L2 were activated in the parsing of this property. The acceptability of overt subjects in the topic contexts showed no significant difference from that of the null subjects. Furthermore, the item analysis again confirmed both L1 and L2-oriented evaluations in learner's data, reinforcing the existence of hybrid transfer in the processing of L3 Spanish topic-continuity contexts.

▪ The Null Expletive is a semantically empty category that corresponds to the English dummy subjects, 'it' or 'there.' To fulfill the EPP requirements in weather or existential constructions, expletive *pro* is applied in Spanish. In the L2 literature, the null expletives are confirmed to be present from the early acquisition phase, unlike null referential subjects. Korean does not have null expletives, and English requires overt expletives in weather and existential constructions. In that regard, it is expected that both languages are non-facilitative in the proper use of a null expletive in L3 Spanish. The data collected in this thesis suggested that no hint of transfer was found in the L3 null expletive constructions.

A complete puzzle of Korean learners' behavior in four NSP-related Spanish properties indicated that both L1 and L2 played a role in the L3 acquisition process but to a different extent. This hybridity is most effectively explained in the LPM and the SM framework, which argue for property-by-property basis activation of previously acquired linguistic representations in the L3 acquisition process. Westergaard proposed that language acquisition is a step-wise process of building up new grammar through parsing, and in the process if certain property available in the learners' mind is identical or similar to L3 input, it will be activated to parse the new input. The LPM's concept of co-

activation, instead of the TPM's full copy, was more accurate in interpreting the hybridity of source languages and the absence of transfer found in the Korean learners' data. However, the abstract structural similarity factor or surface typological similarity factor (predicted only in the very early stages) could not fully explain the transfer dynamic found in this group, which served as a backdrop to propose 'interface' as one of the possible factors that shape the activation of properties.

The fact that the activation of both languages, or all linguistic repertoire available in this learner group, was particularly found in the interface properties resonated with the claims of the Mapping Induced Influence Hypothesis (MIIH), which predicts vulnerability to crosslinguistic influence in grammatical phenomena that require a mapping between the syntax and pragmatics in the bilingual children acquisition. Furthermore, this result is in line with the Interface Hypothesis, which predicts interface properties are subject to residual optionality and persistent native deviance due to the added difficulty in integrating two representations. Based on the former literature, I proposed that the external interface relatedness of the property may be one of the factors that trigger the activation of all the linguistic resources in learners' linguistic repertoire. The added acquisitional complexity posed to the features at the external interface seems to have increased the need for more resources to parse the given input, which brought about a hybrid transfer.

2. Limitations and future directions

This study attempted, to my best endeavors, to answer the research questions set at the beginning of this thesis. However, several methodological limitations were discovered during the completion of this thesis. These limitations also direct us to meaningful points for future research.

The first and the most critical issue is regarding the study group. This

investigation studied only one type of language profile, L1 Korean-L2 English learners of L3 Spanish. Although this group has not been highlighted enough despite its research value in the L3 context, I admit that in order to fully confirm the hybrid transfer at the external interface, the so-called "subtractive language group design (Westergaard, Mitrofanova, Rodina, and Slabakova, submitted, p. 7)" was required. That is, comparing the current group with L1-English and L2-Spanish group and L1-Korean and L2-Spanish group would be ideal. If a significant difference is found in the L3 Spanish and the L2 Spanish, we can safely confirm that the missing language did affect the L3A. However, it is also true that it would be empirically challenging to find Korean native learners of Spanish who have not studied English, considering the current education trend. Notwithstanding, I fully accept that the ideal design would be to compare all three groups to confirm a complete picture of hybrid transfer. Furthermore, in regards to the recent argumentation that the activation of pre-existing grammars can be evidenced, although to a different degree, in every stage of L3A, examining Korean learners at various phases of L3 exposure would also be purposeful. To this end, a more refined and reliable way to assess the L2 and L3 proficiency should be applied in the design of questionnaires. This study applied self-reported proficiency and the length of instruction to divide learners' proficiency levels, which may have rendered room for inaccurate descriptions of the group.

The second point of shortcoming relates to the properties tested in this thesis. If indeed transfer obtains on a property basis, testing properties that would bring about the opposite effect would offer a wider view of the transfer. In the properties tested in this thesis, the L1 transfer was almost always facilitative, and the L2 transfer was all-time non-facilitative. Including additional test properties where the L1 transfer would be detrimental while L2 transfer is facilitative in the L3 Spanish acquisition would offer other insights to the investigation. More importantly, testing other external

interface-related properties will be needed to test the feasibility of the external interface factor proposed in this thesis.

Lastly, incorporating various types of tasks in the future study would make it possible to capture the transfer dynamic from a multifaceted perspective. Most importantly, the learners were only tested in their comprehension of L3 Spanish and not in the production. Testing the candidates from both areas of language acquisition would be needed in future research. Furthermore, the data were collected by means of numerical judgment tasks for a rightful reason; however, adding qualitative judgment tasks such as yes-no tasks or forced-choice tasks would render a more clear-cut picture of learners' selection of source language for linguistic transfer.

REFERENCES

Abbes, K. B. (2020). Transfer in L3 Acquisition: Is it Holistic or Property-Based? *International Journal of Language and Linguistics, 7*(3), 43-59.

Ahn, D. (2015). *La realización de la estructura informativa del español y su implicación en la enseñanza del español como lengua extranjera (written in Korean).* Master's thesis. Seoul National University.

Ahn, D. (2019). Finding 'who': Position of Antecedent Hypothesis in non-native Spanish. In *Proceedings of GALA 2017: Language Acquisition and Development* (pp. 345-361). Newcastle-upon-Tyne: Cambridge Scholars Publisher.

Ahn, H. J., & Kwon, Y. J. (2012). A study of topic prominence in Korean. *Studies in Humanities, 33*, 81-101.

Al-Kasey, T., & Pérez-Leroux, A. T. (1998). Second language acquisition of Spanish null subjects. In Suzanne Flynn, Gita Martohardjono, & W. O'Neil (Eds.), *The generative study of second language acquisition* (pp. 161-185). Mahwah: L. Erlbaum.

Alonso-Ovalle, L., Fernández-Solera, S., Frazier, L., & Clifton, C. (2002). Null vs. overt pronouns and the topic-focus articulation in Spanish. *Italian Journal of Linguistics, 14*, 151-170.

Bardel, C., & Falk, Y. (2007). The role of the second language in third language acquisition: The case of Germanic syntax. *Second Language Research, 23*(4), 459-484.

Bardel, C., & Falk, Y. (2012). The L2 status factor and the declarative/procedural distinction. In J. Cabrelli Amaro, S. Flynn, & J. Rothman (Eds.), *Third language acquisition in adulthood* (pp. 61-78). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Bardel, C., & Sánchez, L. (2017). The L2 status factor hypothesis revisited. In T. Angelovska & A. Hahn (Eds.), *L3 Syntactic Transfer: Models, new developments implications* (pp. 85-101). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Bel, A., & García-Alcaraz, E. (2015). Subject pronouns in the L2 Spanish of Moroccan Arabic speakers: Evidence from bilingual and second language learners. In T. Judy & S. Perpiñán (Eds.), *The acquisition of Spanish in understudied language pairings* (pp. 201-232). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Bel, A., Sagarra, N., Comínguez, J. P., & García-Alcaraz, E. (2016). Transfer and proficiency effects in L2 processing of subject anaphora. *Lingua, 184*, 134-159.

Berkes, É., & Flynn, S. (2012). Further evidence in support of the Cumulative-Enhancement Model. *Third language acquisition in adulthood, Studies in*

Bilingualism 46, 143-164.

Bono, M. (2011). Crosslinguistic Interaction and Metalinguistic Awareness in Third Language Acquisition. In G. De Angelis & J.-M. Dewaele (Eds.), *New trends in crosslinguistic influence and multilingualism research* (pp. 25-52). Clevedon: Channel View Publications.

Bosque, I., & Demonte, V. (1999). *Gramática descriptiva de la lengua española: Las construcciones sintácticas fundamentales*. Madrid: Espasa Calpe Mexicana, SA.

Bullock, B. E., & Toribio, A. J. (2009). Reconsidering Dominican Spanish: data from the rural Cibao. *Revista Internacional de Lingüística Iberoamericana*, 49-73.

Cabrelli Amaro, J., Felipe Amaro, J., & Rothman, J. (2015). The relationship between L3 transfer and structural similarity across development. *Transfer effects in multilingual language development, 4*, 21-52.

Cabrelli Amaro, J., Iverson, M., & Judy, T. (2009). Informing adult acquisition debates: N-Drop at the initial state of L3 Brazilian Portuguese. In P. A & R. Jason (Eds.), *Minimalist inquiries into child and adult language acquisition: Case studies across Portuguese* (pp. 177-196). Berlin, New York: Mouton de Gruyter.

Cabrelli Amaro, J., & Rothman, J. (2015). The relationship between L3 transfer and structural similarity across development: Raising across an experiencer in Brazilian Portuguese. In H. Peukert (Ed.), *Transfer effects in multilingual language development* (pp. 21-52). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Camacho, J. A. (2013). *Null Subjects* (Vol. 137). New York: Cambridge University Press.

Carminati, M. N. (2002). *The processing of Italian subject pronouns.* Doctoral dissertation. University of Massachusetts Amherst.

Casielles-Suárez, E. (2004). *The syntax-information structure interface: Evidence from Spanish and English*. New York: Routledge.

Chafe, W. (1976). Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In C. Li (Ed.), *Subject and Topic* (pp. 25-56). New York: Academic Press.

Choe, H. S. (1988). Restructuring parameters and complex predicates: a transformational approach. *RLE Progress report*, 304-306.

Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht: Foris Publications.

Chomsky, N. (1986). *Knowledge of language: Its nature, origin, and use*. Westport: Greenwood Publishing Group.

Chomsky, N. (1995). *The minimalist program* (20th Anniversary ed.). Cambridge, MA: The MIT Press.

Clements, M. (2017). *Exploring the role of previously acquired languages in third*

language (L3) acquisition: a feature-based approach. Doctoral dissertation. University of Southampton.

Clements, M., & Domínguez, L. (2018). Testing the predictions of the Scalpel Model in L3/Ln acquisition: The acquisition of null and overt subjects in L3 Chinese. In J. Cho, M. Iverson, T. Judy, T. Leal, & E. Shimanskaya (Eds.), *Meaning and Structure in Second Language Acquisition: In honor of Roumyana Slabakova* (Vol. 55, pp. 181-201). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Contemori, C., & Dussias, P. E. (2020a). The processing of subject pronouns in highly proficient L2 speakers of English. *Glossa: a journal of general linguistics, 5*(1), 1-19.

Contemori, C., & Dussias, P. E. (2020b). The processing of subject pronouns in highly proficient L2 speakers of English. *Glossa: a journal of general linguistics, 5*(1).

De Angelis, G. (2007). *Third or additional language acquisition* (Vol. 24). Clevedon/Buffalo: Multilingual Matters.

De Angelis, G., & Dewaele, J.-M. (2011). *New trends in crosslinguistic influence and multilingualism research*. Bristol: Multilingual Matters.

Domínguez, L. (2013). *Understanding interfaces: second language acquisition and first language attrition of Spanish subject realization and word order variation*. Amsterdam: John Benjamins Publishing Company.

Elder, C., & Manwaring, D. (2004). The relationship between metalinguistic knowledge and learning outcomes among undergraduate students of Chinese. *Language Awareness, 13*(3), 145-162.

Epstein, S. D., Flynn, S., & Martohardjono, G. (1996). Second language acquisition: Theoretical and experimental issues in contemporary research. *Behavioral Brain Sciences, 19*(4), 677-714.

Epstein, S. D., Flynn, S., & Martohardjono, G. (1998). The strong continuity hypothesis: some evidence concerning functional categories in adult L2 acquisition. In S. Flynn, G. Martohardjono, & W. O'Neil (Eds.), *The generative study of second language acquisition* (pp. 61-77). New Jersey: Lawrence Erlbaum.

Eubank, L. (1993). On the transfer of parametric values in L2 development. *Language Acquisition, 3*(3), 183-208.

Eubank, L. (1994). Optionality and the initial state in L2 development. *Language acquisition studies in generative grammar, 8*, 369-388.

Eubank, L. (1996). Negation in early German-English interlanguage: More valueless features in the L2 initial state. *Second Language Research, 12*(1), 73-106.

Falk, Y., & Bardel, C. (2010). The study of the role of the background languages in third language acquisition. The state of the art. *IRAL-International Review of Applied Linguistics in Language Teaching, 48*(2-3), 185-219.

Falk, Y., & Bardel, C. (2011). Object pronouns in German L3 syntax: Evidence for

the L2 status factor. *Second Language Research, 27*(1), 59-82.

Falk, Y., Lindqvist, C., & Bardel, C. (2015). The role of L1 explicit metalinguistic knowledge in L3 oral production at the initial state. *Bilingualism: language and cognition, 18*(2), 227-235.

Filiaci, F. (2010). Null and overt subject biases in Spanish and Italian: A cross-linguistic comparison. In C. Borgonovo, M. Espanol-Echevarria, & P. Prevost (Eds.), *Selected proceedings of the 12th Hispanic linguistics symposium* (pp. 171-182). Somerville: Cascadilla Proceedings Project.

Filiaci, F., Sorace, A., & Carreiras, M. (2014). Anaphoric biases of null and overt subjects in Italian and Spanish: a cross-linguistic comparison. *Language, cognition and neuroscience, 29*(7), 825-843.

Flynn, S., Foley, C., & Vinnitskaya, I. (2004). The cumulative-enhancement model for language acquisition: Comparing adults' and children's patterns of development in first, second and third language acquisition of relative clauses. *International Journal of Multilingualism, 1*(1), 3-16.

García-Alcaraz, E., & Bel, A. (2014). The acquisition of co-referential properties of pronouns in bilingual and L2 Spanish speakers. In Online Proceedings Supplement of the 39th Annual Boston University Conference on Language Development.

Gass, S. M., & Selinker, L. (2001). *Second Language Acquisition: An Introductory Course*. Milton: Taylor & Francis Group.

Giancaspro, D., Halloran, B., & Iverson, M. (2015). Transfer at the Initial Stages of L3 Brazilian Portuguese: A Look at Three Groups of English/Spanish Bilinguals. *Bilingualism 18*(2), 191-207.

Giannakou, A., & Sitaridou, I. (2021). (In)felicitous use of subjects in Greek and Spanish in monolingual and contact settings. *Glossa (London), 7*(1), 1-33.

Gónzales Alonso, J., & Rothman, J. (2016). Coming of age in L3 initial stages transfer models: Deriving developmental predictions and looking towards the future. *International Journal of Bilingualism, 21*(6), 683-697.

González Alonso, J., & Rothman, J. (2017). From theory to practice in multilingualism: What theoretical research implies for third language learning. In T. Angelovska & A. Hahn (Eds.), *L3 Syntactic Transfer: Models, new developments and implications* (Vol. 5, pp. 277-298). Amsterdam/Philadephia: John Benjamins Publishing Company.

Gürel, A. (2003). *Is the Overt Pronoun Constraint universal? Evidence from L2 Turkish.* Paper presented at the Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002), University of Ottawa.

Gürel, A. (2006). L2 acquisition of pragmatic and syntactic constraints in the use of overt and null subject pronouns. *Inquiries in linguistic development*, 259-282.

Haegeman, L. (1990). Non-overt subjects in diary contexts. *Grammar in Progress,*

GLOW essays for Henk van Riemsdijk, 167-174.

Haegeman, L., & Guéron, J. (1999). *English grammar: A generative perspective*. Oxford: Blackwell Publishing.

Hall, C. J., Newbrand, D., Ecke, P., Sperr, U., Marchand, V., & Hayes, L. (2009). Learners' implicit assumptions about syntactic frames in new L3 words: The role of cognates, typological proximity, and L2 status. *Language Learning, 59*(1), 153-202.

Halliday, M. (1967). Notes on transitivity and theme in English: Part 2. *Journal of linguistics, 3*(2), 199-244.

Hammarberg, B. (2009). *Processes in Third Language Acquisition*. Edinburgh: Edinburgh University Press.

Harley, H., & Ritter, E. (2002a). Person and number in pronouns: A feature-geometric analysis. *Language*, 482-526.

Harley, H., & Ritter, E. (2002b). Structuring the bundle: A universal morphosyntactic feature geometry. In H. Weise & H. Simon (Eds.), *Pronouns: Features and representation* (pp. 23-39). Amsterdam: Elsevier Press.

Hermas, A. (2010). Language acquisition as computational resetting: verb movement in L3 initial state. *International Journal of Multilingualism, 7*(4), 343-362.

Hermas, A. (2014a). Multilingual transfer: L1 morphosyntax in L3 English. *International Journal of Language Studies, 8*(2), 1-24.

Hermas, A. (2014b). Restrictive Relatives in L3 English: L1 Transfer and Ultimate Attainment Convergence. *Australian Journal of Linguistics*(34), 361-387.

Hermas, A. (2018). Discourse-linking in advanced L3 English: Testing the Interface Hypothesis. *Lingua, 212*, 20-29.

Hong, S. (1985). *A and A' binding in Korean and English: government-binding parameters*. Doctoral dissertation. University of Connecticut.

Hong, S. (1986). Some Constraints on Pronominal Binding. *Korean Journal of Linguistics, 11*(1), 75-97.

Huang, C. T. J. (1984). On the Distribution and Reference of Empty Pronouns. *Linguistic Inquiry, 15*(4), 531-574.

Huang, Y. (2000). *Anaphora: A cross-linguistic approach*. Oxford: Oxford University Press on Demand.

Hulk, A., & Müller, N. (2000). Bilingual first language acquisition at the interface between syntax and pragmatics. *Bilingualism: language and cognition, 3*, 227-244.

Hyuk Jung, E. (2004). Topic and subject prominence in interlanguage development. *Language Learning, 54*(4), 713-738.

Jackendoff, R. S. (2002). *Foundations of language: brain, meaning, grammar, evolution*. New York: Oxford University Press.

Jaeggli, O. (1981). *Topics in Romance syntax*. Berlin: De Gruyter.

Jensen, I. N. (2022). *Crosslinguistic influence in third language acquisition*. Doctoral dissertation. The Arctic University of Norway.

Jensen, I. N. (submitted). Testing similarity-based models of third language acquisition: Learning versus crosslinguistic influence. *Submitted to Studies in Second Language Acquisition*, 1-19.

Jensen, I. N., Mitrofanova, N., Anderssen, M., Rodina, Y., Slabakova, R., & Westergaard, M. (2021). Crosslinguistic influence in L3 acquisition across linguistic modules. *International Journal of Multilingualism*, 1-18.

Jensen, I. N., & Westergaard, M. (submitted). Syntax matters: Exploring the effect of linguistic similarity in third language acquisition. *Submitted to Language Learning*.

Jessner, U. (2008). A DST model of multilingualism and the role of metalinguistic awareness. *The modern language journal, 92*(2), 270-283.

Jessner, U., Megens, M., & Graus, S. (2016). *Crosslinguistic Influence in Third Language Acquisition*. Bristol/Buffalo/Toronto: Multilingual Matters.

Jin, F. (2009). Third language acquisition of Norwegian objects: Interlanguage transfer or L1 influence? In Y.-K. I. Leung (Ed.), *Third Language Acquisition and Universal Grammar* (pp. 144-161). Bristol: Second Language Acquisition.

Kang, S., & Kienpointner, M. (2020). Sentence Patterns in German and Korean: Syntactic and Semantic Aspects of the Basic Weather Expressions. *The review of Korean studies, 23*(2), 153-200.

Kanno, K. (1997). The acquisition of null and overt pronominals in Japanese by English speakers. *Second Language Research, 13*(3), 265-287.

Kanno, K. (1998). The stability of UG principles in second-language acquisition: Evidence from Japanese. *Linguistics, 36*(6), 1125-1146.

Keating, G., Vanpatten, B., & Jegerski, J. (2011). Who was walking on the beach? *Studies in Second Language Acquisition, 33*(2), 193-221.

Kellerman, E. (1983). Now you see it, now you don't. In S. M. Gass & L. Selinker (Eds.), *Language transfer in language learning* (pp. 112-134). MA: Newbury House: Rowley.

Klein, E. C. (1995). Second versus Third Language Acquisition: Is There a Difference? *Language Learning, 45*(3), 419-466.

Kolb, N., Mitrofanova, N., & Westergaard, M. (2022). Crosslinguistic influence in child L3 English: An empirical study on Russian-German heritage bilinguals. *International Journal of Bilingualism*, 1-26.

Kweon, S.-O. (2011). Processing null and overt pronoun subject in ambiguous sentences in Korean. *International Journal of Linguistics, 3*(1), 1-13.

Kweon, S.-O. (2012). Processing Null and Overt Pronoun Subject at Different Proficiency Levels in Korean as a Second Language. *Foreign Languages Education, 19*(1), 1-20.

Lardiere, D. (2011). What is the Interface Hypothesis about? *Linguistic approaches to bilingualism, 1*, 48-53.

Lee, M.-K. (2000). Una aproximación a las oraciones con 'haber' y 'estar' del español

con metodología didáctica. *Revista Iberoamericana, 11*, 497-517.

Lee, M.-K., & Ahn, D. (2018). OPC Sensitivity in Non-native Spanish by Korean Learners. *Korean Journal of Applied Linguistics, 34*(4), 175-199.

Leung, Y.-K. I. (2007). Third language acquisition: why it is interesting to generative linguists. *Second Language Research, 23*(1), 95-114.

Li, C., & Thompson, S. (1976). Subject and topic: A new typology of language. In C. Li & S. Thompson (Eds.), *Subject and topic* (pp. 457-489). New York: Academic Press.

Liceras, J. M. (1989). On some properties of the pro-drop parameter: looking for missing subjects in non-native Spanish. In S. M. Gass & S. J. (Eds.), *Linguistic perspectives on second language acquisition* (pp. 109-133). Cambridge: Cambridge University Press.

Liceras, J. M., de la Fuente, A. A., & Sanz, C. M. (2010). *The distribution of null subjects in non-native grammars: Syntactic markedness and interface vulnerability.* Paper presented at the Proceedings of the mind/context divide workshop.

Lindqvist, C. (2015). Do learners transfer from the language they perceive as most closely related to the L3? The role of psychotypology for lexical and grammatical crosslinguistic influence in French L3. In K. M., J. U., & D. A. G. (Eds.), *Crosslinguistic influence and crosslinguistic interaction in multilingual language learning* (pp. 231-251). Bloomsbury: Bloomsbury Publishing.

Listhaug, K. F., Busterud, G., & Dahl, A. (2021). French as a third language in Norway: the influence of the prior languages in the acquisition of word order. *Oslo Studies in Language, 12*(1), 125-144.

Lozano, C. (2002a). The interpretation of overt and null pronouns in non-native Spanish. *Durham Working Papers in Linguistics, 8*, 52-66.

Lozano, C. (2002b). Knowledge of expletive and pronominal subjects by learners of Spanish. *International Journal of Applied Linguistics, 135*(1), 37-60.

Lozano, C. (2002c). Pronominal mental representations in advanced L2 and L3 learners of Spanish. *Nuevas tendencias en la investigación lingüística [New trends in linguistic research]*, 605-617.

Lozano, C. (2009). Selective deficits at the syntax-discourse interface. In N. Snape, Y.-k. I. Leung, & M. S. Smith (Eds.), *Representational deficits in SLA: Studies in honor of Roger Hawkins* (Vol. 47, pp. 127-166). Amsterdam: John Benjamins Publishing.

Lozano, C. (2018). The development of anaphora resolution at the syntax-discourse interface: pronominal subjects in Greek learners of Spanish. *Journal of psycholinguistic research, 47*(2), 411-430.

Lozano, C. (2021). Anaphora Resolution in Second Language Acquisition. In *Oxford Bibliographies in Linguistics*. Oxford: Oxford University Press.

Maleczki, M. (2010). On the definiteness effect in existential sentences: Data and

theories. In T. Eniko Nemeth & B. Karoly (Eds.), *The Role of Data at the Semantics-Pragmatics Interface* (pp. 25-56). Belin/New York: De Gruyter Mouton.

Marsden, H. (2001). L1 transfer in the L2 acquisition of a Japanese poverty-of-the stimulus problem. *Proceedings of the Generative Approaches to Language Acquisition (GALA 2001)*, 155-163.

Meisel, J. (1983). Transfer as a second language strategy. *Language and Communication 3*, 11-46.

Mok, J. (2016). Impersonal construction in Korean. *Linguistic Typology Research, 3*(1), 90-104.

Montalbetti, M. M. (1984). *After binding: On the interpretation of pronouns.* Doctoral dissertation. Massachusetts Institute of Technology.

Montrul, S. (2004a). *The acquisition of Spanish: morphosyntactic development in monolingual and bilingual L1 acquisition and adult L2 acquisition*. Amsterdam/Philadelphia: John Benjamins Publishing.

Montrul, S. (2004b). Subject and object expression in Spanish heritage speakers: A case of morphosyntactic convergence. *Bilingualism, 7*(2), 125-142.

Montrul, S., Dias, R., & Santos, H. (2011). Clitics and object expression in the L3 acquisition of Brazilian Portuguese: Structural similarity matters for transfer. *Second Language Research, 27*(1), 21-58.

Montrul, S., & Louro, C. R. (2006). Beyond the syntax of the null subject parameter: A look at the discourse-pragmatic distribution of null and overt subjects by L2 learners of Spanish. In V. Torrens & L. Escobar (Eds.), *The acquisition of syntax in Romance languages* (pp. 401-418). Amsterdam: John Benjamins Publishing Company.

Müller, N., & Hulk, A. C. J. (2001). Crosslinguistic influence in bilingual language acquisition: Italian and French as recipient languages. *Bilingualism: language and cognition, 4*, 1-21.

Mykhaylyk, R., Mitrofanova, N., Rodina, Y., & Westergaard, M. (2015). The Linguistic Proximity Model: The case of verb-second revisited. *Proceedings of BUCLD, 39*, 1-13.

Na Ranong, S., & Leung, Y.-k. I. (2009). Null Objects in L1 Thai–L2 English–L3 Chinese: An empiricist take on a theoretical problem. In Y.-k. I. Leung (Ed.), *Third Language Acquisition and Universal Grammar* (pp. 162-191). Bristol: Multilingual Matters.

Nelson, C., Krzysik, I., Lewandowska, H., & Wrembel, M. (2021). Multilingual learners' perceptions of cross-linguistic distances: a proposal for a visual psychotypological measure. *Language Awareness, 30*(2), 176-194.

Neuser, H. (2017). *Source language of lexical transfer in multilingual learners: A mixed methods approach.* Doctoral dissertation. Stockholm University.

Odlin, T. (1989). *Language transfer: cross-linguistic influence in language learning*. Cambridge: Cambridge University Press.

Okuma, T. (2014). *Overt Pronoun Constraint effects in second language Japanese.* Doctoral dissertation. McGill University.

Oshita, H. (2004). Is there anything there when there is not there? Null expletives and second language data. *Second Language Research, 20*(2), 95-130.

Paradis, M. (1994). Neurolinguistic aspects of implicit and explicit memory: implication for bilingualism and second language acquisition. In E. N (Ed.), *Implicit and explicit learning of languages* (pp. 393-419). London: Academic Press.

Paradis, M. (2004). *A neurolinguistic theory of bilingualism*. Amsterdam: John Benjamins Publishing.

Paradis, M. (2009). *Declarative and procedural determinants of second languages*. Amsterdam: John Benjamins Publishing.

Park, C. W. (2003). *Topic and Focus in Korean Information Structures*. Seoul: Youkrack.

Park, M. (2016). *Third language acquisition among early bilinguals.* Doctoral dissertation. The University of Singapore.

Pérez-Leroux, A. T., & Glass, W. R. (1997). OPC effects on the L2 acquisition of Spanish. *Contemporary perspectives on the acquisition of Spanish, 1*, 149-165.

Pérez-Leroux, A. T., & Glass, W. R. (1999). Null anaphora in Spanish second language acquisition: probabilistic versus generative approaches. *Second Language Research, 15*(2), 220-249.

Pérez, C. M. (2014). Dominican 'ello' as a non-deleted null expletive. *An International Journal of Hispanic Linguistics, 3*(1), 155-161.

Platzack, C. (1996). The initial hypothesis of syntax. *Generative perspectives on language acquisition*, 369-414.

Puig-Mayenco, E., González Alonso, J., & Rothman, J. (2018). A systematic review of transfer studies in third language acquisition. *Second Language Research, 36*(1), 1-34.

Puig-Mayenco, E., Miller, D., & Rothman, J. (2018). Language dominance and transfer selection in L3 acquisition: Evidence from sentential negation and negative quantifiers in L3 English. In J. Cho, M. Iverson, T. Judy, T. Leal, & E. Shimanskaya (Eds.), *Meaning and Structure in Second Language Acquisition: In honor of Roumyana Slabakova* (pp. 229-260). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Puig-Mayenco, E., & Rothman, J. (2020). Low proficiency does not mean ab initio: A methodological footnote for linguistic transfer studies. *Language Acquisition, 27*(2), 217-226.

Quesada Calvo de Mora, T. (2021). *Studies on Anaphora Resolution in L1 Spanish–L2 English & L1 English–L2 Spanish adult learners: combining corpus and experimental methods.* Doctoral dissertation. Universidad de Granada.

Quesada, M. L. (2015). *The L2 acquisition of Spanish subjects: Multiple perspectives*

(Vol. 50). Berlin: Walter de Gruyter

Quesada, M. L., & Blackwell, S. E. (2009). The L2 acquisition of null and overt Spanish subject pronouns: A pragmatic approach. In Joseph Collentine, Maryellen García, Barbara Lafford, & F. M. Marín (Eds.), *Selected proceedings of the 11th Hispanic linguistics symposium* (pp. 117-130). Somerville, MA: Cascadilla Proceedings Project.

Rizzi. (1982). *Issues in Italian Syntax* (Reprint 2012. ed.). Foris: Dordrecht.

Rizzi. (1986). Null objects in Italian and the theory of pro. *Linguistic Inquiry, 17*(3), 501-557.

Rothman, J. (2007). Pragmatic Solutions for Syntactic Problems: Understanding Some L2 Syntactic Errors in Terms of Pragmatic Deficits. In *Romance Languages Linguistic Theory: Selected Papers from 'Going Romance'* (pp. 299-320). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Rothman, J. (2010). On the typological economy of syntactic transfer: Word order and relative clause high/low attachment preference in L3 Brazilian Portuguese. *IRAL-International Review of Applied Linguistics in Language Teaching, 48*(2-3), 245-273.

Rothman, J. (2011). L3 syntactic transfer selectivity and typological determinacy: The typological primacy model. *Second Language Research, 27*(1), 107-127.

Rothman, J. (2013). Cognitive economy, non-redundancy and typological primacy in L3 acquisition: Evidence from initial stages of L2 Romance. In S. Baauw, F. Drijkoningen, L. Meroni, & M. Pinto (Eds.), *Romance Languages and Linguistic Theory 2011* (pp. 217-248). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Rothman, J. (2015). Linguistic and cognitive motivations for the Typological Primacy Model (TPM) of third language (L3) transfer: Timing of acquisition and proficiency considered. *Bilingualism: language and cognition, 18*(2), 179-190.

Rothman, J., Alemán Bañón, J., & Gonzáles Alonso, J. (2015). Neurolinguistic measures of typological effects in multilingual transfer: introducing an ERP methodology. *Frontiers in Psychology, 6*(1087), 1-14.

Rothman, J., Cabrelli Amaro, J., & De Bot, K. (2013). Third language acquisition. In J. Herschensohn & M. Young-Scholten (Eds.), *The Cambridge Handbook of Second Language Acquisition* (pp. 372-393). New York: Cambridge University Press.

Rothman, J., González Alonso, J., & Puig-Mayenco, E. (2019). *Third Language Acquisition and Linguistic Transfer*. Cambridge: Cambridge University Press.

Rothman, J., & Halloran, B. (2013). Formal Linguistic Approaches to L3/Ln Acquisition: A Focus on Morphosyntactic Transfer in Adult Multilingualism. *Annual Review of Applied Linguistics, 33*, 51-67.

Rothman, J., & Iverson, M. (2007a). Input type and parameter resetting: Is

naturalistic input necessary? *IRAL-International Review of Applied Linguistics in Language Teaching, 45*(4), 285-319.

Rothman, J., & Iverson, M. (2007b). On Parameter Clustering and Resetting the Null-Subject Parameter in L2 Spanish: Implications and Observations. *Hispania, 90*(2), 328-341.

Rothman, J., & Iverson, M. (2007c). The syntax of null subjects in L2 Spanish: Comparing two L2 populations under different exposure. *Revista española de lingüística aplicada*(20), 185-216.

Rothman, J., Iverson, M., & Judy, T. (2011). Introduction: Some notes on the generative study of L3 acquisition. *Second Language Research, 27*(1), 5-19.

Rothman, J., & Slabakova, R. (2011). The Mind-Context Divide: On acquisition at the linguistic interfaces. *Lingua, 121*, 568-576.

Sánchez, L. (2011). 'Luisa and Pedrito's Dog will the Breakfast Eat': Interlanguage Transfer and the Role of the Second Language Factor. In G. De Angelis & J.-M. Dewaele (Eds.), *New trends in crosslinguistic influence and multilingualism research* (pp. 86-104). Bristol: Multilingual Matters.

Sánchez, L., & Bardel, C. (2017). Transfer from an L2 in third language learning. In T. Angelovska & A. Hahn (Eds.), *L3 Syntactic Transfer: Models, new developments and implications* (Vol. 5, pp. 223-250). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Saunders, J. K. (1999). *Null and overt references in Spanish second language acquisition: A discourse perspective.* Doctoral dissertation. The University of Texas at Austin.

Schütze, C. T., & Sprouse, J. (2013). Judgment data. *Research methods in linguistics*, 27-50.

Schwartz, B. D., & Sprouse, R. (1994). Word order and nominative case in nonnative language acquisition: a longitudinal study of (L1 Turkish) German interlanguage. *Language acquisition studies in generative grammar, 31*(4), 71-89.

Schwartz, B. D., & Sprouse, R. (1996). L2 cognitive states and the Full Transfer/Full Access model. *Second Language Research, 12*(1), 40-72.

Schwartz, B. D., & Sprouse, R. (2021). The full transfer/full access model and L3 cognitive states. *Linguistic approaches to bilingualism, 11*(1), 1-29.

Scott, K. J. (2010). *The relevance of referring expressions: the case of diary drop in English.* Doctoral dissertation. University College London.

Sharwood Smith, M. (1989). Crosslinguistic influence in language loss. In K. Hyltenstam & L. Obler (Eds.), *Bilingualism across the lifespan: Aspects of acquisition, maturity loss* (pp. 185-201): Cambridge University Press.

Sharwood Smith, M. (1994). *Second language learning: theoretical foundations*. London/New York: Longman.

Sharwood Smith, M. (2021). Language transfer: a useful or pernicious concept? *Second Language Research, 37*(3), 409-414.

Sharwood Smith, M., & Kellerman, E. (1986). *Crosslinguistic Influence in Second Language Acquisition*. New York: Pergamon Press.

Sheehan, M. (2016). Subjects, null subjects, and expletives. In S. Fischer & C. Gabriel (Eds.), *Manual of grammatical interfaces in Romance* (pp. 329-362): Walter de Gruyter

Shim, S.-W. (2003). Comparative study on pro-drop: Pedagogical approach. *Revista Iberoamericana, 14*, 113-132.

Silva-Corvalán, C. (1994). *Language contact and change: Spanish in Los Angeles*: ERIC.

Slabakova, R. (2017). The scalpel model of third language acquisition. *International Journal of Bilingualism, 21*(6), 651-665.

Slabakova, R., & García Mayo, M. (2015). The L3 Syntax-Discourse Interface. *Bilingualism (Cambridge, England), 18*(2), 208-226.

Song, H.-J. (2013). The Acquisition of Overt and Null Pronouns in L2 Korean by English Speakers. *Korean Journal of Applied Linguistics, 29*(2), 233-259.

Sorace, A. (2000). Differential effects of attrition in the L1 syntax of near-native L2 speakers. In *Proceedings of the 24th Boston University conference on language development* (pp. 719-725): Cascadilla Press.

Sorace, A. (2004a). Native language attrition and developmental instability at the syntax-discourse interface: Data, interpretations and methods. *Bilingualism, 7*(2), 143-145.

Sorace, A. (2004b). Native language attrition and developmental instability at the syntax-discourse interface: Data, interpretations and methods. *Bilingualism: language and cognition, 7*(2), 143-145.

Sorace, A. (2005). Selective optionality in language development. In L. Cornips & K. P. Corrigan (Eds.), *Syntax and variation: Reconciling the biological the social* (pp. 55-80). Amsterdam: John Benjamins Publishing Company.

Sorace, A. (2006a). Gradedness and optionality in mature and developing grammars. In G. Fanselow (Ed.), *Gradience in grammar: generative perspectives* (pp. 106-123). Oxford: Oxford University Press.

Sorace, A. (2006b). Possible manifestations of shallow processing in advanced second language speakers. *Applied Psycholinguistics, 27*(1), 88-91.

Sorace, A. (2011). Pinning down the concept of "interface" in bilingualism. *Linguistic approaches to bilingualism, 1*(1), 1-33.

Sorace, A., & Filiaci, F. (2006). Anaphora resolution in near-native speakers of Italian. *Second Language Research, 22*(3), 339-368.

Sorace, A., & Serratrice, L. (2009). Internal and external interfaces in bilingual language development: Beyond structural overlap. *The international journal of bilingualism 13*(2), 195-210.

Stringer, D. (2021). Commitment in L3 relationships: Sacred vows or polyamory? *Second Language Research, 37*(3), 495-500.

Svenonius, P. (2002). *Subjects, Expletives, and the EPP*: Oxford Studies in

Comparative Syntax.

Tan, L. A.-K. (2007). *Null arguments in Singapore colloquial English.* Doctoral dissertation. University of Cambridge.

Thomas, J. (1988). The role played by metalinguistic awareness in second and third language learning. *Journal of Multilingual & Multicultural Development, 9*(3), 235-246.

Tsimpli, I., & Sorace, A. (2006). *Differentiating interfaces: L2 performance in syntax-semantics and syntax-discourse phenomena.* Paper presented at the BUCLD Proceedings 30.

Vainikka, A., & Young-Scholten, M. (1994). Direct access to X'-theory: evidence from Korean and Turkish adults learning German. *Language acquisition studies in generative grammar, 31*(4), 71-89.

Vainikka, A., & Young-Scholten, M. (1996a). The early stages in adult L2 syntax: additional evidence from Romance speakers. *Second Language Research, 12*(2), 140-176.

Vainikka, A., & Young-Scholten, M. (1996b). Gradual development of L2 phrase structure. *Second Language Research, 12*(1), 7-39.

Vallduví, E. (1990). *The informational component.* Doctoral dissertation. The University of Pennsylvania.

Weinreich, U. (1953). *Languages in contact: Findings and Problems*. The Hague: Mouton.

Westergaard, M. (2021a). L3 acquisition and crosslinguistic influence as co-activation: Response to commentaries on the keynote 'Microvariation in multilingual situations: The importance of property-by-property acquisition'. *Second Language Research, 37*(3), 501-518.

Westergaard, M. (2021b). Microvariation in multilingual situations: The importance of property-by-property acquisition. *Second Language Research, 37*(3), 379-407.

Westergaard, M. (2021c). The plausibility of wholesale vs. property-by-property transfer in L3 acquisition.

Westergaard, M., Mitrofanova, N., Mykhaylyk, R., & Rodina, Y. (2017). Crosslinguistic influence in the acquisition of a third language: The Linguistic Proximity Model. *International Journal of Bilingualism, 21*(6), 666-682.

Westergaard, M., Mitrofanova, N., Rodina, Y., & Roumyana Slabakova. (submitted). Full Transfer Potential in L3/Ln acquisition: Crosslinguistic influence as a property-by-property process. In *The Cambridge Handbook of Third Language Acquisition and Processing*.

White, L. (1989). *Universal grammar and second language acquisition* (Vol. 1). Amsterdam/Philadelphia: John Benjamins Publishing Company.

White, L. (2003). *Second language acquisition and universal grammar*. Cambridge: Cambridge University Press.

White, L. (2009). Grammatical theory: Interfaces and L2 knowledge. In W. C. Ritchie & T. K. Bhatia (Eds.), *The New Handbook of Second Language Acquisition* (pp. 49-65). Bingley: Emerald Group Publishing, Ltd.

White, L. (2011a). The Interface Hypothesis: How far does it extend? *Linguistic approaches to bilingualism, 1*, 108-111.

White, L. (2011b). Second language acquisition at the interfaces. *Lingua, 121*(4), 577-590.

Wrembel, M. (2021). Multilingual acquisition property by property: A view from a wider perspective. *Second Language Research, 37*(3), 441-447.

Wunder, E.-M. (2011). Crosslinguistic Influence in Multilingual Language Acquisition: Phonology in Third or Additional Language Acquisition. In G. De Angelis & J.-M. Dewaele (Eds.), *New trends in crosslinguistic influence and multilingualism research* (pp. 105-128). Bristol: Multilingual Matters.

Xu, L. (1986). Free empty category. *Linguistic Inquiry, 11*, 75-93.

Zagona, K. (2002). *The syntax of Spanish*. Cambridge: Cambridge University Press.

Zubizarreta, M. L. (1998). *Prosody, focus, and word order*. Cambridge: MIT Press.

APPENDIX A BACKGROUND QUESTIONNAIRE

1. 언어 경험 및 능숙도 관련 조사

1. 귀하의 모국어는 무엇입니까?

    (a) 한국어 (b) 영어 (c) 스페인어

2. 모국어 외에 바로 다음으로 배우기 시작한 언어(Language 2)는 무엇입니까?

    (a) 한국어 (b) 영어 (c) 스페인어 (d) 기타

3. 본인이 판단하는Language 2 에 대한 능숙도는 어느 정도 입니까?

    1 (초급)   2   3 (중급)   4   5 (고급)

  해당 언어를 배우기 시작한 나이와 학습 혹은 사용한 기간을 직접 입력해주세요.

    _____

  해당 언어에 대한 공식시험(토플, 토익, 스눌트, 델레, 플렉스 등) 결과를 알고

   있는 경우 입력해주세요.

    _____

4. 모국어와 Language 2 외에 배우고 있는 언어(Language 3)가 무엇입니까?

    (a) 한국어 (b) 영어 (c) 스페인어 (d) 기타

5. 본인이 판단한 Language 3에 대한 능숙도는 어느 정도입니까?

  해당 언어를 배우기 시작한 나이와 학습 혹은 사용한 기간을 직접 입력해주세요.

    _____

  해당 언어에 대한 공식시험(토플, 토익, 스눌트, 델레, 플렉스 등) 결과를 알고

   있는 경우 입력해주세요.

    _____

6. 그 외에 사용할 수 있거나 배우고 있는 언어가 있습니까? 해당 언어 명과 능숙도,

   그리고 배우기 시작한 나이와 학습기간을 명시해주세요.

    _____

APPENDIX B SPANISH STIMULI

1.1. Overt Pronoun Constraint[95]

1. Los estudiantes tienen un examen de gramática hoy. La profesora dice que el examen es muy difícil. Por eso,

    a. nadie piensa que va a obtener buen resultado.

    b. nadie piensa que él va a obtener buen resultado.

2. Juan necesita ayuda para limpiar su dormitorio y decide pedir ayuda a sus amigos. Pero,

    a. nadie dice que tiene tiempo.

    b. nadie dice que él tiene tiempo.

3. El jefe pregunta a los empleados si tienen tiempo libre para participar en un nuevo proyecto. De repente,

    a. todo el mundo dice que tiene mucho trabajo.

    b. todo el mundo dice que él tiene mucho trabajo.

4. La directora del *Kindergarten* busca un maestro de Educación Física. En el día de la entrevista,

    a. todo el mundo dice que es agradable con los niños.

    b. todo el mundo dice que él es agradable con los niños.

5. El examen de ortografía fue muy difícil. Los estudiantes están desesperados. Entre ellos,

    a. ¿Quién piensa que lo aprobó?

    b. ¿Quién piensa que él lo aprobó?

---

[95] It is important to note that subjunctive mood was considered too difficult for the beginner learners, therefore, adjustments were made to items No.1 and No.9. Interestingly, ADV learners did not seem to be affected by the inappropriate use of indicative mood, which is subject to further study.

6. La profesora entrega un papel que dice "E=MC²" a los alumnos para que lo aprueben.

       a. ¿Quién cree que es lo suficientemente inteligente como para resolverlo?

       b. ¿Quién cree que él es lo suficientemente inteligente como para resolverlo?

7. La profesora anuncia que toda la clase va a visitar el Museo del Prado el viernes que viene.

       a. Cada estudiante dice que va a ir a la excursión.

       b. Cada estudiante dice que él va a ir a la excursión.

8. Hoy es la gran final del concurso de gimnasia.

       a. Cada finalista dice que está nerviosa.

       b. Cada finalista dice que ella está nerviosa.

9. Cada fin de semana, la profesora da mucha tarea a los estudiantes. Por eso,

       a. ningún estudiante cree que puede terminarla a tiempo.

       b. ningún estudiante cree que él puede terminarla a tiempo.

10. Cuando el director está a punto de usar la impresora, la máquina no funciona. Pero,

       a. ningún empleado dice que sabe cómo reparar la máquina.

       b. ningún empleado dice que él sabe cómo reparar la máquina.

1.2. Position of Antecedent Hypothesis

1. Marta le escribía frecuentemente a Paloma cuando estaba en los Estados Unidos. ¿Quién estaba en los Estados Unidos?

       a. Marta estaba en los Estados Unidos.

       b. Paloma estaba en los Estados Unidos.

2. Marta le escribía frecuentemente a Paloma cuando ella estaba en los Estados Unidos.

   ¿Quién estaba en los Estados Unidos?

   > a. Marta estaba en los Estados Unidos.

   > b. Paloma estaba en los Estados Unidos.

3. Pedro no habla con Víctor desde que renunció.

   ¿Quién renunció?

   > a. Pedro renunció.

   > b. Víctor renunció.

4. Pedro no habla con Víctor desde que él renunció.

   ¿Quién renunció?

   > a. Pedro renunció.

   > b. Víctor renunció.

5. Daniel ya no ve a Pedro desde que se casó.

   ¿Quién está casado?

   > a. Daniel está casado.

   > b. Pedro está casado.

6. Daniel ya no ve a Pedro desde que él se casó.

   ¿Quién está casado?

   > a. Daniel está casado.

   > b. Pedro está casado.

7. María va de compras con Lucía cuando está libre.

   ¿Cuándo van de compras?

   > a. Cuando María está libre.

   > b. Cuando Lucía está libre.

8. María va de compras con Lucía cuando ella está libre.

   ¿Cuándo van de compras?

   > a. Cuando María está libre.

   > b. Cuando Lucía está libre.

9. Antonio va a hacer un viaje con Pedro si llega a tener sus vacaciones en agosto.

   ¿En qué condición va a hacer Antonio un viaje?

   > a. Si Antonio llegar a tener unas vacaciones en agosto.

   > b. Si Pedro llegar a tener unas vacaciones en agosto.

10. Antonio va a hacer un viaje con Pedro si él llega a tener sus vacaciones en agosto.

   ¿En qué condición va a hacer Antonio un viaje?

   > a. Si Antonio llegar a tener unas vacaciones en agosto.

   > b. Si Pedro llegar a tener unas vacaciones en agosto.

11. Daniela va a ir al teatro con Luisa, si no trabaja mañana por la noche.

   ¿En qué condición van al teatro?

   > a. Si Daniela no trabaja.

   > b. Si Luisa no trabaja.

12. Daniela va a ir al teatro con Luisa, si ella no trabaja mañana por la noche.

   ¿En qué condición van al teatro?

   > a. Si Daniela no trabaja.

   > b. Si Luisa no trabaja.

13. Roberto insultó a Ugo cuando estaba borracho.

   ¿Quién estaba borracho?

   > a. Roberto estaba borracho.

   > b. Ugo estaba borracho.

14. Roberto insultó a Ugo cuando él estaba borracho.

   ¿Quién estaba borracho?

a. Roberto estaba borracho.

b. Ugo estaba borracho.

15. María se hizo amiga de Sandra después de que se divorció.

   ¿Quién está divorciada?

      a. María está divorciada.

      b. Sandra está divorciada.

16. María se hizo amiga de Sandra después de que ella se divorció.

   ¿Quién está divorciada?

      a. María está divorciada.

      a. Sandra está divorciada.

17. Lorenzo le escribió a Roberto después de que se mudó a Turín.

   ¿Quién se mudó a Turín?

      a. Lorenzo se mudó a Turín.

      b. Roberto se mudó a Turín.

18. Lorenzo le escribió a Roberto después de que él se mudó a Turín.

   ¿Quién se mudó a Turín?

      a. Lorenzo se mudó a Turín.

      b. Roberto se mudó a Turín.

19. Luis juega al tenis con David si está libre el sábado por la tarde.

   ¿En qué condición va a jugar al tenis Luis con David?

      a. Si Luis está libre por el sábado por la tarde.

      b. Si David está libre por el sábado por la tarde.

20. Luis juega al tenis con David si él está libre el sábado por la tarde.

   ¿En qué condición va a jugar al tenis Luis con David?

      a. Si Luis está libre por el sábado por la tarde.

      b. Si David está libre por el sábado por la tarde.

1.3. Topic-continuity and Topic-shift

1. Marta tocó muy bien en el concurso. Por eso,

      a. Marta piensa que va a ganar el premio.

      b. Marta piensa que ella va a ganar el premio.

2. En el aula entra un mosquito.

      a. La profesora dice que no puede matarlo.

      b. La profesora dice que ella no puede matarlo.

3. El examen final de este semestre fue muy difícil. Por eso,

      a. Pablo piensa que no va a obtener buen resultado.

      b. Pablo piensa que él no va a obtener buen resultado.

4. Hay mucho tráfico y además empieza a nevar. Por eso,

      a. Marta cree que va a llegar tarde a la oficina.

      b. Marta cree que ella va a llegar tarde a la oficina.

5. Marta pide a Pablo porque necesita dinero para empezar un negocio.

      a. Pablo admite que tampoco tiene dinero.

      b. Pablo admite que él tampoco tiene dinero.

6. La profesora Pérez y el profesor López vienen a su oficina todos los días. Pero,

      a. ningún estudiante piensa que trabaja mucho.

      b. ningún estudiante piensa que ella trabaja mucho.

7. Pablo y Marta están acusados de asesinato sin pruebas. No obstante,

      a. todo el mundo cree que es culpable.

      b. todo el mundo cree que él es culpable.

8. Cristina y Juan siempre obtienen A+ en el examen. A pesar de eso,

      a. ningún profesor piensa que es diligente.

b. ningún profesor piensa que él es diligente.

9. Aunque Julio y Marta han estado casados por 20 años y tienen 3 niños,

     a. todos creen que lleva una vida muy triste.

     b. todos creen que ella lleva una vida muy triste.

10. El profesor López y la profesora Pérez están siendo criticados por plagio. Pero,

     a. cada profesor asegura que no es culpable de eso.

     b. cada profesor asegura que él no es culpable de eso.

1.4. Null expletives

1. Voy a visitar a mi amiga en Busan. Antes de hacer la maleta, quiero saber qué tiempo hace ahí. Por eso, la llamo a mi amiga y ella me dice
"_____."

     a. Ello llueve mucho ahora.

     b. Lo es lloviendo mucho ahora

     c. Lo está lloviendo mucho ahora.

     d. La lluvia está cayendo mucho ahora.

     e. Llueve mucho ahora.

2. Mi novio es de Canadá. Le pregunto qué tal si pasamos la Navidad en Canadá. Me dice "_____"

     a. No me gusta la idea porque ello nieva mucho en Canadá.

     b. No me gusta la idea porque lo nieva mucho en Canadá.

     c. No me gusta la idea porque las nieves caen mucho en Canadá.

     d. No me gusta la idea porque en Canadá las nieves muy caen.

     e. No me gusta la idea porque nieva mucho en Canadá.

3. Estoy haciendo un informe sobre la cultura de la sauna en Finlandia. ¿Por qué se

van a la sauna ahí?

        a. Es porque ello hace mucho frío en Finlandia.

        b. Es porque lo es mucho frío en Finlandia.

        c. Es porque lo está muy frío en Finlandia.

        d. Es porque Finlandia es muy frío.

        e. Es porque hace mucho frío en Finlandia.

4. Tengo plan de ir a Brasil durante el Carnaval. Sin duda, va a ser un viaje emocionante. Porque

        a. ello hayan fiestas toda la noche durante esa temporada.

        b. ahí hay fiestas toda la noche durante esa temporada.

        c. fiestas hayan toda la noche durante esa temporada.

        d. hacen fiestas toda la noche durante esa temporada.

        e. hay fiestas toda la noche durante esa temporada.

5. Hoy viene un nuevo profesor al departamento.

        a. Estoy seguro de que ello van a estar algunos cambios.

        b. Estoy seguro de que ello habrá algunos cambios.

        c. Estoy seguro de que ahí habrán algunos cambios.

        d. Estoy seguro de que algunos cambios habrán.

        e. Estoy seguro de que habrá algunos cambios.

6. ¿Tiene plan de visitar Corea? Le recomiendo un recorrido histórico. Especialmente, tienes que visitar Gyeongju.

        a. Ello hay muchos lugares famosos en esa ciudad.

        b. Ello hayan muchos lugares famosos en esa ciudad.

        c. Hayan muchos lugares famosos en esa ciudad.

        d. Muchos lugares famosos hayan en esa ciudad.

        e. Hay muchos lugares famosos en esa ciudad.

APPENDIX C KOREAN STIMULI

1.1. Overt Pronoun Constraint

1. 오늘 학생들은 문법 시험을 보게 됩니다. 교수님이 오늘 시험이 매우 어렵다고 말합니다.

   그래서 학생들은

         (1) 아무도 좋은 결과를 얻을 것이라 생각하지 않습니다.

         (2) 아무도 그가 좋은 결과를 얻을 것이라 생각하지 않습니다.

2. 후안은 기숙사를 청소하기 위해 도움이 필요해서 친구들에게 도움을 요청하기로 합니다.

   하지만

         (1) 아무도 시간이 된다고 말하지 않습니다.

         (2) 아무도 그가 시간이 된다고 말하지 않습니다.

3. 사장님이 직원들에게 신규 프로젝트에 참여할 시간이 있는지 묻습니다. 그러자 갑자기

         (1) 모든 직원은 일이 너무 많다고 말합니다.

         (2) 모든 직원은 그가 일이 너무 많다고 말합니다.

4. 유치원 원장님이 새로운 체육 선생님을 모집하고 있습니다. 면접에서

         (1) 모두 지원자는 아이들을 잘 다룬다고 말합니다.

         (2) 모든 지원자는 그가 아이들을 잘 다룬다고 말합니다.

5. 맞춤법 시험이 정말 어려웠습니다. 그래서 학생들은 매우 절망했습니다. 학생 중에서

         (1) 누가 시험에 통과했다고 생각할까요?

         (2) 누가 그가 시험에 통과했다고 생각할까요?

6. 교수님이 E=MC2 라고 적힌 종이를 학생들에게 주고 이를 증명하라고 합니다. 학생들 중에서

      (1) 누가 그 문제를 풀 수 있을 만큼 똑똑하다고 생각할까요?

      (2) 누가 그 문제를 풀 수 있을 만큼 그가 똑똑하다고 생각할까요?

7. 선생님이 학생들에게 다음주 금요일 프라도 박물관에 견학 갈 것이라고 공지했습니다.

      (1) 각 학생마다 소풍에 갈 것이라고 말합니다.

      (2) 각 학생마다 그가 소풍에 갈 것이라고 말합니다.

8. 오늘은 체조 대회 최종결선 날입니다.

      (1) 결승전 참가 선수들마다 떨린다고 말합니다.

      (2) 결승전 참가 선수들마다 그가 떨린다고 말합니다.

9. 주말마다 선생님은 학생들에게 무리한 양의 숙제를 내줍니다. 그래서

      (1) 그 어떤 학생도 제 때에 숙제를 마칠 수 있을 것이라 상상조차 못합니다.

      (2) 그 어떤 학생도 그가 제 때에 숙제를 마칠 수 있을 것이라 상상조차

        못합니다.

10. 팀장님이 복사기를 쓰려고 하는 순간 작동을 하지 않습니다. 그러나

      (1) 그 어떤 직원도 복사기를 어떻게 고치는지 안다고 말하지 않습니다.

      (2) 그 어떤 직원도 그가 복사기를 어떻게 고치는지 안다고 말하지

        않습니다.

1.2. Position of Antecedent Hypothesis

1. 미국에 있었을 때 미희는 자주 진희에게 편지를 썼습니다.

    누가 미국에 있었나요?

           (1) 미희가 미국에 있었습니다.

           (2) 진희가 미국에 있었습니다.

2. 그녀가 영국에 있었을 때 수희는 자주 영희에게 편지를 썼습니다.

    누가 영국에 있었나요?

           (1) 수희가 영국에 있었습니다.

           (2) 영희가 영국에 있었습니다.

3. 은퇴한 후 철수는 영수와 이야기를 나누지 않습니다.

    누가 은퇴를 했나요?

           (1) 철수가 은퇴했습니다.

           (2) 영수가 은퇴했습니다.

4. 그가 은퇴한 후 준혁은 민혁과 이야기를 나누지 않습니다.

    누가 은퇴를 했나요?

           (1) 준혁이 은퇴했습니다.

           (2) 민혁이 은퇴했습니다.

5. 결혼한 후 영수는 더 이상 준혁을 만나지 않습니다.

    누가 결혼을 했나요?

           (1) 영수가 결혼했습니다.

           (2) 준혁이 결혼했습니다.

6. 그가 결혼한 후 철수는 더 이상 민혁을 만나지 않습니다.

   누가 결혼을 했나요?

         (1) 철수가 결혼했습니다.

         (2) 민혁이 결혼했습니다.

7. 시간이 있을 때 영희는 진희와 쇼핑을 갑니다.

   언제 쇼핑에 가나요?

         (1) 영희가 시간이 있을 때

         (2) 진희가 시간이 있을 때

8. 그녀가 시간이 있을 때 미희는 수희와 쇼핑을 갑니다.

   언제 쇼핑에 가나요?

         (1) 미희가 시간이 있을 때

         (2) 수희가 시간이 있을 때

9. 8월에 휴가를 낼 수 있다면 철수는 영수와 여행을 갈 것입니다.

   어떤 조건에서 철수는 여행을 갈까요?

         (1) 철수가 휴가를 낼 수 있는 경우

         (2) 영수가 휴가를 낼 수 있는 경우

10. 그가 금요일에 휴가를 낼 수 있다면 민혁은 준혁과 여행을 갈 것입니다.

   어떤 조건에서 민혁은 여행을 갈까요?

         (1) 민혁이 휴가를 낼 수 있는 경우

         (2) 준혁이 휴가를 낼 수 있는 경우

11. 내일 저녁 일을 안한다면 수희는 진희와 연극을 보러 갈 것입니다.

어떤 조건에서 연극을 보러 가게 되나요?

(1) 진희가 일을 안 하는 경우

(2) 수희가 일을 안 하는 경우

12. 그녀가 내일 저녁 일을 안한다면 진희는 미희와 영화를 보러 갈 것입니다.

어떤 조건에서 영화를 보러 가게 되나요?

(1) 진희가 일을 안 하는 경우

(2) 미희가 일을 안 하는 경우

13. 취해 있었을 때 준혁은 민혁을 모욕했습니다.

누가 취해 있었나요?

(1) 준혁이 취해 있었습니다.

(2) 민혁이 취해 있었습니다.

14. 그가 취해 있었을 때 철수는 영수를 모욕했습니다.

누가 취해 있었나요?

(1) 철수가 취해 있었습니다.

(2) 영수가 취해 있었습니다.

15. 이혼한 후에 영희는 미희와 친구가 되었습니다.

누가 이혼을 했나요?

(1) 영희가 이혼했습니다.

(2) 미희가 이혼했습니다.

16. 그녀가 이혼한 후에 수희는 진희와 친구가 되었습니다.

　　누가 이혼을 했나요?

　　　　(1) 수희가 이혼했습니다.

　　　　(2) 진희가 이혼했습니다.

17. 부산으로 이사한 후 민혁은 영수에게 자주 편지를 썼습니다.

　　누가 부산으로 이사를 했나요?

　　　　(1) 민혁이 이사를 했습니다

　　　　(2) 영수가 이사를 했습니다.

18. 그가 서울로 이사한 후 철수는 준혁에게 자주 편지를 썼습니다.

　　누가 서울로 이사를 했나요?

　　　　(1) 철수가 이사를 했습니다

　　　　(2) 준혁이 이사를 했습니다.

19. 토요일 오후 시간이 있는 경우 철수는 영수와 골프를 칩니다.

　　어떤 경우에 골프를 치나요?

　　　　(1) 철수가 시간이 있는 경우

　　　　(2) 영수가 시간이 있는 경우

20. 그가 수요일 오후 시간이 있는 경우 준혁은 민혁과 테니스를 칩니다.

　　어떤 경우에 테니스를 치나요?

　　　　(1) 준혁이 시간이 있는 경우

　　　　(2) 민혁이 시간이 있는 경우

1.3. Topic-continuity and Topic-shift

1. 피아노 콩쿨이 열리는 날입니다.

      (1) 미희는 상을 탈 것을 기대합니다.

      (2) 미희는 그녀가 상을 탈 것을 기대합니다.

2. 강의실로 쥐가 한 마리 들어왔습니다. 그러자

      (1) 교수님은 쥐를 잡을 수 없다고 말합니다.

      (2) 교수님은 그가 쥐를 잡을 수 없다고 말합니다.

3. 기말 고사 난이도가 너무 높았습니다. 그래서

      (1) 철수는 좋은 성적을 얻을 수 없다고 생각합니다.

      (2) 철수는 그가 좋은 성적을 얻을 수 없다고 생각합니다.

4. 교통체증이 매우 심한데 다가 갑자기 눈까지 오기 시작합니다. 그러자

      (1) 미희는 사무실에 늦게 도착할 것이라 생각합니다.

      (2) 미희는 그녀가 사무실에 늦게 도착할 것이라 생각합니다.

5. 미희는 철수에게 신규사업을 위한 자금이 필요하다며 부탁을 합니다. 그러자,

      (1) 철수는 돈이 없다고 말합니다.

      (2) 철수는 그가 돈이 없다고 말합니다.

6. 이지혜 교수님과 김철민 교수님은 매일 연구실에 나오십니다. 하지만

(1) 그 어떤 학생도 일을 많이 한다고는 생각하지 않습니다.

(2) 그 어떤 학생도 그녀가 일을 많이 한다고는 생각하지 않습니다.

7. 아무런 증거도 없이 김철수와 이미희는 살인죄로 기소되었습니다. 그럼에도
   불구하고

(1) 모두들 유죄라고 생각합니다.

(2) 모두들 그는 유죄라고 생각합니다.

8. 철수와 미희는 항상 A+의 성적을 받습니다. 그럼에도 불구하고

(1) 그 어떤 교수님도 성실하다고 생각하지 않습니다.

(2) 그 어떤 교수님도 그가 성실하다고는 생각하지 않습니다.

9. 철수와 미희는 결혼한지 20년이나 되었고 자식 3명도 있습니다. 그럼에도 불구하고

(1) 모두들 슬픈 인생을 산다고 생각합니다.

(2) 모두들 그녀는 슬픈 인생을 산다고 생각합니다.

10. 김철민 교수님과 이지혜 교수님이 공동연구를 진행했는데, 연구 결과물이 표절
    의혹을 받고 있습니다. 하지만,

(1) 교수들마다 잘못이 없다고 확신합니다.

(2) 교수들마다 그는 잘못이 없다고 확신합니다.

APPENDIX D ENGLISH STIMULI

1.1. Overt Pronoun Constraint

1. Today is the final match of the annual basketball game in my high school.
   As writing homework, I have to write a short report about this big match. I
   decided to interview each player on the team. Since their rivals are the
   winning team of last year's match,

   [Translate] 선수들마다 매우 떨린다고 말합니다.

   Every player says that _____.

2. Tom, John, and Mathew are playing basketball on the backyard court. The
   ball flies away from the court and breaks the house window. Mom is very
   angry and asks who broke the window.

   [Translate] 아무도 창문을 깼다고 말하지 않습니다.

   Nobody admits that _____.

3. Twenty people were invited to Tom's birthday party. The pizza was
   supposed to be delivered by six o'clock, but it's already eight.

   [Translate] 모두가 너무 배가 고프다고 말합니다.

   Everyone complains that _____.

4. The Manhattan Music School hosts the annual piano contest today. All the
   participants are gathered in the waiting room. Each one seems intimidated
   by the other candidates.

   [Translate] 누가 1등을 할 것이라 생각할까요?

   Who would think that _____.

5. Professor Johnson is famous for his fieldwork in the Amazon jungle.
   However, over the past few years, there have been several fatal accidents in

his research team. The professor is trying to recruit three graduate students from the Department of Anthropology.

[Translate] 어떤 학생도 시간이 된다고 말하지 않습니다.

No student says that _____.

1.2. Position of Antecedent Hypothesis

1. When she was living in Spain, Mary used to send e-mails to Jane.

    Who was living in Spain?

        a. Mary was living in Spain.

        b. Jane was living in Spain.

2. After he resigned, Peter does not speak to Victor anymore.

    Who resigned?

        a. Peter resigned.

        b. Victor resigned.

3. Ever since he got married, Daniel does not hang out with Peter anymore.

    Who got married?

        a. Daniel got married.

        b. Peter got married.

4. When she has free time, Mary goes shopping with Lucy.

    When do they go shopping?

        a. When Mary is free.

        b. When Lucy is free.

5. If he gets a bonus, Anthony wants to visit Toledo with Tom.

    On what condition will Anthony visit Toledo?

        a. If Anthony gets a bonus.

b. If Tom gets a bonus.

6. Sarah plans to go out for a movie with Lisa if she does not have to work tonight.

   On what condition will Sarah go to a movie?

   a. If Sarah does not have to work.

   b. If Lisa does not have to work.

7. Robert insulted James when he was drunk.

   Who was drunk?

   a. Robert was drunk.

   b. James was drunk.

8. Mary has been friends with Sandra ever since she got divorced.

   Who got divorced?

   a. Mary is divorced.

   b. Sandra is divorced.

9. James has sent a Christmas gift to Julian ever since he moved to Korea.

   Who moved to Korea?

   a. James moved to Korea.

   b. Julian moved to Korea.

10. John plays golf with David if he has time.

    When does John play golf?

    a. If John has time.

    b. If David has time.

1.3. Topic-continuity and Topic-shift

1. I am very strict about my schedule. I wake up at six and go to the gym to work out until seven. And then I go to school to study and come back home around eight at night.

   [Translate] 그 후 저녁을 먹고 책을 읽다가 12시쯤 잠에 듭니다.

   After, _____.

2. My friend John is perfect in everything. He graduated summa cum laude from Princeton University and earned his MBA at Harvard.

   [Translate] 운동도 잘할 뿐 아니라 영어, 스페인어, 한국어를 유창하게 합니다.

   _____.

3. John and Mary have been married for twenty years. As a working mother, Mary takes care of their children all by herself. On the other hand, John dreams of becoming a famous songwriter, but he has no hit songs. At the thanksgiving dinner, Mary announces that she wants a divorce.

   [Translate] 아무도 그녀에게 잘못이 있다고 생각하지 않습니다.

   Nobody thinks that _____.

4. Mr. Johnson and Ms. Sandra work at the stock exchange in New York City. They are famous for their expertise in the field. This morning they were arrested for embezzlement. However,

   [Translate] 모두들 말하길 그녀는 결백합니다.

   Everybody says that _____.

5. Mary and John are the top students in my department. They both got three A+ and two A- in the final exam. The Committee gathered to select the scholarship beneficiary for the next semester. However,

   [Translate] 그 어떤 교수님도 그녀가 똑똑하다고 말하지 않습니다.

No professor evaluates that _____.

1.4. Expletives

1. To be honest, my trip to London was so disappointing. I really hate rain but,
   a. it rained all day long for two weeks.
   b. raining all day long for two weeks.
   c. has rained all day long for two weeks.
   d. rain came all day long for two weeks.

2. It took me so long to decide. You know that I would never want to hurt your feelings but,
   a. there is something I have to tell you.
   b. something is there for me to tell you.
   c. you have something for me to tell.
   d. to you I have something to tell.

3. My boys are excited about the upcoming field trip to the American Museum of Natural History on Friday. I check the weather and tell them,

   [Translate] 어쩌지! 금요일엔 비가 온대.

   Oh no! _____.

   The reason why kids were looking forward to visiting the Museum is that,

   [Translate] 그 곳에는 공룡 화석이 매우 많이 있기 때문이다.

   _____.

4. I've been living in Korea for three years. As a Mexican, a fascinating thing about winter in Korea is that,

   [Translate] 눈이 엄청 많이 온다는 것이다.

   _____.

   However, [Translate] 교통체증과 같이 눈으로 인한 문제들도 많다.

_____, such as horrible traffic jam.

APPENDIX E   LANGUAGE   RELATIONS QUESTIONNAIRE

1. 한국어와 스페인어 간의 관계에 관한 질문입니다.

   (1) 한국어와 스페인어는 발음이 유사하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (2) 한국어와 스페인어는 단어 혹은 단어 구성 방식이 비슷하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (3) 한국어와 스페인어는 문법이 비슷하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (4) 한국어와 스페인어는 문장 구조가 비슷하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (5) 한국어와 스페인어는 언어 전반적으로 유사하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (6) 한국어에 관한 지식이 나의 스페인어 학습에 도움이 된다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

2. 영어와 스페인어 간의 관계에 관한 질문입니다.

   (1) 영어와 스페인어는 발음이 유사하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (2) 영어와 스페인어는 단어 혹은 단어 구성 방식이 비슷하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (3) 영어와 스페인어는 문법이 비슷하다.

   □ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

   (4) 영어와 스페인어는 문장 구조가 비슷하다.

□ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

(5) 영어와 스페인어는 언어 전반적으로 유사하다.

□ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

(6) 영어에 관한 지식이 나의 스페인어 학습에 도움이 된다.

□ 1 전혀 그렇지 않다   □ 2   □ 3   □ 4   □ 5 매우 그렇다.

c.f. English translation of Language Relations Questionnaire

1. These are statements regarding the relation between Korean and Spanish.

   (mark the acceptability for each statement in a scale of 1 to 5)

   (1) Korean and Spanish are similar in their pronunciation.

   (2) Korean and Spanish are similar in their words or how words are formed.

   (3) Korean and Spanish are similar in their grammar.

   (4) Korean and Spanish are similar in their sentence structure.

   (5) Korean and Spanish are similar in general.

   (6) My knowledge of Korean is helpful when learning Spanish.

2. This is question regarding the relations between English and Spanish.

   (mark the acceptability for each statement in a scale of 1 to 5)

   (1) English and Spanish are similar in their pronunciation.

   (2) English and Spanish are similar in their words or how words are formed.

   (3) English and Spanish are similar in their grammar.

   (4) English and Spanish are similar in their sentence structure.

   (5) English and Spanish are similar in general.

   (6) My knowledge of English is helpful when learning Spanish.

국문초록

L3 스페인어 영주어 및 명시적 주어 습득에서의 언어 전이 연구

본 연구는 제 3 언어 습득 시 이미 학습하여 알고 있는 기존 언어 체계(previously acquired languages)가 언어 습득에 영향을 미치는 언어적 전이(linguistic transfer)를 한국인 스페인어 학습자의 데이터를 통해 관찰하고, 이에 기초하여 현재까지 제안된 전이 모델(L3 Transfer Models)의 설명력을 검증하는 것을 목표로 한다.

지난 20 여 년간 습득 이론에서는 제 3 언어 습득(Third Language Acquisition, TLA)을 제 2 언어 습득(Second Language Acquisition, SLA)과 분리하여 관찰한 연구물이 뚜렷하게 증가하였고, 이러한 배경하에서 TLA 를 독립된 언어 이론 체계로 분류하여 SLA 와는 별개의 이론으로 다루려는 경향이 확인되고 있다. 특히 TLA 이론 분야의 주된 연구 관심은 L3 습득 과정에 기존 언어 체계가 미치는 영향을 규명하는 데 집중되어 왔다. 이론적으로는 (ㄱ) 전이 없음, (ㄴ) L1 전이, (ㄷ) L2 전이, (ㄹ) 하이브리드 전이의 가능성을 상정할 수 있으며, (ㄱ)의 경우를 제외한 세 시나리오를 뒷받침하는 다수의 경험적 자료가 보고된 바 있다. 이러한 축적된 학습자의 자료에 입각하여 현재까지 총 6 개의 언어 전이 모델이 구축되어 연구되어왔다. 첫째, 모국어가 가지는 특수성을 고려하여 L1 으로부터의 배타적 전이를 주장하는 'L1 transfer hypothesis (Hermas, 2010, 2014a, 2014b; Jin, 2009; Na Ranong & Leung, 2009)', 둘째, 학습자의 첫 외국어인 L2 와 L3 간에 존재하는 인지적 유사성 및 L2 가 가진 높은 메타언어적 지식에 기초한 L2 의

배타적 전이를 주장하는 'L2 Status Factor(L2SF) (Bardel & Falk, 2007, 2012; Bardel & Sánchez, 2017; Falk & Bardel, 2010, 2011)', 셋째, L3 와 기존 언어 체계 간의 구조적/유형학적 유사성에 따라 한 언어가 선택되어 전체 전이(wholesale transfer)됨을 예측하는 'Typological Primacy Model(TPM) (Rothman, 2010, 2011, 2013, 2015)', 넷째, 언어 습득에서의 인지적 경제성에 기초하여 긍정적 전이 효과를 야기하는 항목만의 전이를 예측하는 'Cumulative-Enhancement Model(CEM) (Berkes & Flynn, 2012; Flynn, Foley, & Vinnitskaya, 2004)', 다섯째, L3 언어 항목과 기존 언어 항목간의 구조적 유사성(abstract structural similarity) 비교를 통한 항목 간 전이(property-by property transfer)를 주장하는 'Linguistic Proximity Model(LPM) (Mykhaylyk, Mitrofanova, Rodina, & Westergaard, 2015; Westergaard, 2021b; ; Westergaard, Mitrofanova, Mykhaylyk, & Rodina, 2017)' 과 마지막, 언어 전이의 미세한 정교성(scalpel-like precision)을 강조한 'Scalpel Model(SM) (Slabakova, 2017)'이 있다. 거시적 분류에 따르자면, 첫 번째와 두 번째 모델은 전이에 대한 디폴트 모델로서 전이될 수 있는 절대적이고 배타적인 한 언어체계가 있다는 입장(Default transfer models)이며, 그 외의 모델은 경쟁 모델 (Competition transfer models), 즉 기존의 두 언어 체계가 전이를 위해 경쟁이나 비교를 거치게 되어 선정되게 된다는 모델로 이해할 수 있다. 한편, 경쟁 모델은 비교를 통해 선정된 한 언어 체계의 전부가 전이된다는 TPM 과 각 언어 항목 간 전이가 이루어진다는 LPM 과 SM 의 입장으로 세부 분류된다. 각 모델이 예측하는 전이 양상은 다르더라도, 이들 모델 모두 언어학적 전이가 즉흥적이거나 임의로 일어나는 현상이 아니며 특정한 언어학적 요소에 의해 체계적으로 구현된 현상이라는 점에 동의한다. 다만, 지금까지 관찰된 L3 학습자의 전이 양상을 모두

267

설명할 수 있는 모델은 아직 존재하지 않는다는 점에서, TLA 연구자들은 현재까지 제안된 모델을 다양한 언어 조합(language pairings)에 검증하여 더욱 강력한 이론적 설명력을 갖추도록 모델을 수정 보완하는 데 각고의 노력을 쏟고 있다.

이러한 배경하에서, 본 논문은 지금까지 TLA 이론 내에서 보고된 바 없는 한국인(L1)−영어(L2)−스페인어(L3) 학습자의 영주어, 명시적 주어에 대한 해석 양상을 관찰하고 분석함으로써, 현재 활발하게 진행 중인 L3 전이 모델 구축 논의에 유의미한 함의점을 제안하고자 한다. 이러한 연구 목적을 달성하기 위해 다음의 연구 질문이 상정되었다. 첫째, 한국인의 L3 스페인어 학습의 초기 단계에서 전이되는 언어는 어떠한 언어인가? 이를 살펴보기 위해서 한국인의 스페인어 주어 사용 양상을 총 네 가지의 영주어 매개변인 관련 항목(NSP-clustered properties) 을 통해 살펴보게 된다. 둘째, 한국인의 스페인어 자료에서 확인된 전이 양상을 가장 잘 설명하는 전이 모델은 어떠한 모델인가? 이 질문에 답하기 위해 총 여섯 가지 모델의 주요 논점을 살펴보고 첫번째 연구 질문에서 확인된 한국인의 스페인어 습득 양상을 각 모델에 대입하여 그 설명력을 검증한다. 셋째, 한국인의 자료가 현재 TLA 에서 진행되고 있는 전이 모델 구축에 주는 함의점은 무엇인가? 마지막 질문은 첫 번째 그리고 두 번째 질문을 종합하여, 전이 모델의 이론적 정교화를 위하여 본 연구의 자료가 제시할 수 있는 논의 점을 보고하도록 한다.

본 연구에서 전이 현상을 살펴보기 위하여 특히 스페인어 주어 실현 양상을 그 연구 항목으로 선정한 이유는 다음과 같다. L3 습득 시 기존 언어 체계로부터의 영향을 관찰하기 위해서는 연구 대상자의 L1 과 L2 가 언어학적으로 상반된 전이 결과를 불러일으키는 항목을 조사하여야 그 전이의 출처를 역 추적하는 것이 가능하다. 이러한 점에서 한국인 스페인어 학습자의 모국어인 한국어와 처음 배운

268

영어가 가장 대조적인 양상을 보이는 주어 실현(subject realization)이 가장 적합한 연구 항목이라 판단하였다. 한국어와 영어는 영주어 매개변인에서 상반된 값을 보이며, 이러한 세팅은 다음의 네 가지 항목, (1) Overt Pronoun Constraint, (2) Position of Antecedent Hypothesis, (3) Topic-continuity, (4) Null Expletives 에서의 대조적인 주어 실현 양상을 야기시킨다. 위 항목을 살펴보기 위해서 두 개의 설문조사가 수행되었다. 첫 번째 설문은 스페인어 설문으로 간단한 언어 배경 조사와 총 46 개의 스페인어 질문이 포함되었으며 각 질문은 적합성 판단 과제(Acceptability Judgment Task, AJT)의 형태로 주어졌다. 두 번째 설문에서는 동일 항목에 대한 기존 언어의 지식을 검증하였다. 총 40 개의 한국어 설문과 24 개의 영어 설문 문항이 적합성 판단 과제와 번역 과제를 통해 조사되었고, 언어 간 관련성 설문 (Language Relations Questionnaires)이 추가로 포함되었다. 총 96 명의 설문 참여자 중, 총 80 명의 학습자의 자료가 최종 선정되었으며, 선정 기준으로 실험 항목에 대한 L1 과 L2 의 완전한 지식을 가지고 있을 것이 요구되었다. 구체적으로는 60 명의 초급 학습자(스페인어 학습 3~4 학기)와 20 명의 고급 학습자(스페인어 학습 5 년 이상)의 자료가 분석에 포함되었다.

네 가지 항목에 대한 설문을 통해 확인된 한국인 스페인어 학습자의 결과는 다음과 같다. 첫째, 스페인어 Overt Pronoun Constraint (OPC) 자료에서는 뚜렷한 L1 전이의 양상이 확인되었다. OPC 는 Montalbetti(1984)가 제안한 보편적 제약으로 종속절의 명시적 주어는 영주어와는 다르게 주절의 양화사구와 동지시되어 해석될 수 없는 현상을 다룬 것이다. 영주어의 경우 OPC 에 순응한다는 점에서 본 연구의 L1 한국어와 L3 스페인어는 이 제약 하에 있다. 설문에서 참여자는 OPC 의 해석이 요구되는 문맥을 읽고 후속하는 2 개의 선택 문항 (영주어 조건 및 명시적 주어 조건)에 각각 1 (매우 부적절하다) ~ 5 (매우

269

적절하다)의 적절성 값을 부여하도록 요구되었다. 초급 학습자들의 스페인어 설문 결과 이들은 영주어 문항에는 높은 적절성을, 그리고 명시적 주어 문항에는 낮은 적절성을 부여하는 경향이 뚜렷하게 확인되어 긍정적 L1 전이가 확인되었다. 또한 설문 문항별 분석에서도 L1 에 기반한 답변이 78%, L2 에 기반한 답변은 11%로 평균값에서 확인한 L1 전이의 효과가 재확인되었다. 둘째, Position of Antecedent Hypothesis (PAH)를 검증한 문항에서는 L1 과 L2 모두로부터의 영향이 확인되어, 하이브리드 전이가 확인되었다. PAH 는 영주어 언어의 중의적 문장 내 영주어와 명시적 주어 간의 대조적인 대용사 결속 선호도를 정리한 가설로 통사부와 담화부에 대한 종합적 접근이 요구되는 외적 접합면(external interface) 항목이다. 특히 한국어는 PAH 에 따라 중의적 문장 내 명시적 주어를 목적어 선행사로 해석하는 경향이 있지만, 영어는 Subject Assignment Rule 에 따라 이를 주어 선행사로의 해석하는 양상을 보인다. 따라서 명시적 주어 대명사 조건에서 한국어와 영어는 상반된 전이 효과를 야기 할 것이 예상된다. 스페인어 설문 결과, 한국인 학습자의 적절성 판단에서 명시적 대명사 주어의 해석 시 주어/목적어 선행사 조건이 통계적으로 차이가 없는 것으로 확인되었다. 이는 L2 로부터의 부정적 전이가 L1 전이로부터 누릴 수 있었던 긍정적 전이 효과를 경감시킨 결과로 해석되었다. 특히 개별 설문 문항별 분석에서도 L1 전략을 따른 선택이 38%, L2 가 36%로 나타나 L1 과 L2 모두 활성화되어 L3 습득에 관여하는 하이브리드 전이가 명확하게 확인되었다. 셋째, Topic-continuity 문맥에서의 영주어 사용 양상에 대한 설문 결과에서는 또다시 L1 과 L2 의 하이브리드 전이가 확인되었다. Topic-continuity 에서의 문맥 적합성을 띠는 주어 형태의 선택은 스페인어 습득에서 외적 접합면 항목으로 습득 취약성을 보이는 전형적인 사례로 지목되는 항목이다. PAH 의 결과와 매우 유사하게, 한국인 학습자는 영주어 조건과 명시적

270

주어 조건 모두에 높은 적절성을 부여하는 것으로 확인되었다. 이러한 결과는 L1 에 기초한 선택이 38%, L2 에 기초한 선택이 27%로 나타났다는 점에서 두 언어 모두가 활성화 되어 스페인어의 문장 처리에 반영되었음을 확인하여 주었다. 마지막으로 Null Expletives 습득을 검증한 항목에서는 기존 언어체계로부터의 전이가 특별하게 확인되지 않았다. 이는 SLA 연구에서 보고되어 온 영허사 주어의 습득양상과 일치하는 것으로, 이 항목은 초기 단계부터 완전한 습득이 단시간에 이루어지는 것으로 보고되어 왔다. 스페인어의 영주어 및 명시적 주어의 습득에 관한 설문 결과를 종합적으로 요약하자면, L1 과 L2 모두로부터의 영향이 확인되어 L3 로서의 스페인어의 학습에는 항목 간 전이가 하이브리드의 형태로 나타난 것이 확인되었다.

이러한 전이 양상은 현재까지 제안된 L3 전이 모델 중 Linguistic Proximity Model (LPM)의 예측에 가장 부합된다. LPM 은 모든 언어 습득은 구문분석을 통한 학습(learning by parsing)의 방식으로 이루어지며, 따라서 언어학적 전이 역시 항목별로 나타남을 주장하는 모델이다. 이 모델은 학습자의 지식체계에 존재하는 각 항목이 활성화(activation)되거나 억제(inhibition)됨에 따라 후속 언어 습득에 영향을 미치게 된다고 해석하며, 이 전이 과정을 조율하는 기제는 추상적 층위에서의 구조적 유사성이라 주장한다. 특히 활성화의 강도의 개념을 전제하여, 습득 초기의 불안정한 상태에서는 구문분석을 위해 기존 습득 언어 체계의 활성화가 더 많이 일어나며, 습득이 진행될수록 L3 지식 체계가 안정화 되어 기존 언어를 활성화할 필요성이 감소하여, 그 전이의 정도도 줄어든다고 가정한다. 또한 중요한 점은 다른 모델과는 다르게 본 모델은 해당 기제 외의 다른 언어학적 요소들이 전이될 지식의 활성화에 기여할 수 있음을 인정한다는 점이다.

본 연구에서 검증한 네 가지의 영주어 매개변인 관련 항목 중 특히 외적 접합면에서 하이브리드 전이가 나타났음에 주목하여, 이 논문은 습득 항목이 외적 접합면(external interface)인지의 여부 역시 전이 다이내믹에 영향을 미치는 기제 중 하나임을 주장하고자 한다. 본 연구에서 수집된 자료는 통사 층위에 국한된 항목인 OPC 와 Null Expletives 의 습득과 통사–담화 층위 간 외적 접합면 항목인 PAH 와 Topic–continuity 습득 시 발견되는 언어학적 전이 양상이 매우 상이함을 보여주었다. 완전한 습득의 어려움이 많다고 보고되어 온 외적 접합면의 습득 시 기존 언어 체계 모두가 활성화되는 양상, 심지어 부정적 전이를 야기하는 L2 지식의 활성화까지 이루어지는 것이 확인되었으나, 반면 통사부 내에서 결정되는 두 항목에서는 전이를 위한 동력이 크게 확인되지 않은 것이다. 이는 이중언어 사용자들의 통사–화용부 층위 습득 시 전이가 더 빈번하게 확인된다는 Mapping Induced Influence Hypothesis (MIIH)의 주장에 의해 뒷받침되며, SLA 분야의 주요 가설인 Interface Hypothesis (IH)에 의해서도 함께 이해될 수 있겠다. 이러한 기존 논의에 기초하여 본 논문은, 외적 접합면 항목 학습 시 추가된 습득의 복잡성(acquisitional complexity)에 대한 대응 기제로 L3 학습자는 가용한 언어 지식 체계를 더 많이 활성화하는 경향성을 보일 가능성이 높다고 판단하는 바이다. 따라서 습득 연구뿐만 아니라 전이 현상 연구 시에도 해당 항목의 외적 접합면 연관성의 여부에 따라 다른 접근이 이루어져야 하며, "외적 접합면" 변수가 L3 습득 시 기존 언어 체계로부터의 전이 다이내믹을 관할하는 기제 중 하나임을 제안하는 바이다.

주요어: 제 3 언어 습득 이론, 언어학적 전이, L3 전이 모델, 외적 접합면, 스페인어 주어 실현, 영주어, 명시적 주어, 한국인 스페인어 학습자

RESUMEN

La transferencia lingüística en la adquisición
de los sujetos nulos y explícitos en el español como L3

El objetivo principal de esta tesis es revisar críticamente los últimos modelos de transferencia lingüística propuestos en el campo de la Adquisición de Tercera Lengua (A3L) basado en los datos de aprendientes de español como lengua tercera, cuya lengua materna sea el coreano y la segunda el inglés durante las etapas iniciales. En líneas generales, pretendemos contribuir a la comprensión de los papeles que juegan las lenguas aprendidas previamente en la adquisición de la L3.

Durante las últimas dos décadas, ha habido un aumento significativo en las investigaciones que distinguen la adquisición de una L3 con la de una L2, estableciendo un consenso para considerar la Adquisición de Tercera Lengua (A3L) como un campo de estudio autónomo. La discusión de esta nueva área se ha enfocado principalmente en cómo las representaciones lingüísticas existentes pueden influir en la adquisición de otros idiomas más. Se podría suponer que existen cuatro posibles escenarios de transferencia en el aprendizaje de L3: (a) ausencia de transferencia, (b) transferencia absoluta de L1, (c) transferencia absoluta de L2 y (d) transferencia híbrida. Al observar los datos acumulados sobre cada posible escenario, los investigadores han intentado diseñar y proponer modelos teóricos más formalizados para explicar y predecir la dinámica de transferencia en la A3L.

Hasta el presente, han surgido seis modelos teóricos de la transferencia: la hipótesis de transferencia de L1 (Hermas, 2010, 2014; Jin, 2009; Na Ranong y Leung, 2009), el Estatus de la L2 (L2SF) (Bardel y Falk, 2007, 2012; Bardel y Sánchez, 2017; Falk y Bardel, 2010, 2011), el Modelo de Superioridad Tipológica (TPM) (Rothman, 2010, 2011, 2013, 2015), el

Modelo de Progreso Acumulativo (CEM) (Berkes y Flynn, 2012; Flynn, Foley y Vinnitskaya, 2004), el Modelo de Proximidad Lingüística (LPM) (Mykhaylyk, Mitrofanova, Rodina y Westergaard, 2015; Westergaard, 2021; Westergaard, Mitrofanova, Mykhaylyk y Rodina, 2017) y el Modelo de Scalpel (SM) (Slabakova, 2017). Estos modelos pueden clasificarse en modelos de transferencia por defecto, como la hipótesis de transferencia de L1 y el L2SF, o en modelos de transferencia por comparación que incluyen un modelo de transferencia completa, como el TPM, y en modelos de transferencia por propiedades, como serían el LPM y el SM. En concreto, cada modelo ofrece respuestas diferentes a las siguientes preguntas: (a) ¿Existe un idioma predeterminado para la transferencia? (b) ¿Qué factor condiciona la selección de la lengua transferida? (c) ¿Cómo se materializa la transferencia, de manera completa o por propiedad? (d) ¿Es siempre positiva la transferencia? (e) ¿La transferencia persiste a lo largo del desarrollo de L3 o solo durante las fases iniciales? A pesar de las diferencias, todos los modelos comparten el acuerdo de que la transferencia lingüística no es un fenómeno arbitrario, sino que se trata de un comportamiento sistemático inducido por factores lingüísticos específicos. Todavía ninguno de los modelos ha podido explicar por completo la amplia evidencia empírica reportada en el campo de A3L, y los proponentes siguen revisando y modificando sus argumentos para afinar sus modelos.

A este respecto, el presente estudio intenta contribuir a la discusión teórica sobre el establecimiento de un modelo sólido de transferencia en la A3L, basado en los datos obtenidos, comprobando el uso de los sujetos nulos y explícitos en español en un grupo que no se había considerado en este campo: los aprendientes del español con L1 coreano y L2 inglés. Por ello, planteamos tres preguntas de investigación. Primera, ¿qué lengua previa se transfiere en las primeras fases del aprendizaje de los sujetos en la L3? Segunda, ¿qué modelo de transferencia explica mejor el comportamiento de los estudiantes coreanos en la adquisición de sujetos nulos y explícitos del

español? Tercera, ¿qué implicación ofrecen los hallazgos de esta investigación al desarrollo de los modelos teóricos de la transferencia en la A3L?

Con el fin de responder a estas preguntas, nos enfocamos específicamente en la adquisición del uso de los sujetos en español como tema de prueba, para observar y verificar el efecto de la transferencia lingüística. Para averiguar la fuente de transferencia mediante el análisis de datos de L3, se requiere que los idiomas de trasfondo muestren una configuración contrastante en las propiedades probadas. En este sentido, el coreano y el inglés presentan configuraciones opuestas en el Parámetro del Sujeto Nulo (PSN). El coreano es un idioma *pro*-drop [-PSN], mientras que el inglés es un idioma no *pro*-drop [+PSN]. Esta diferencia condiciona otros comportamientos lingüísticos contrastantes en las propiedades relacionadas con el PSN, algunas de las cuales comprueba este trabajo: (a) la restricción del pronombre explícito (Overt Pronoun Constraint, OPC, Montalbetti, 1984), (b) la hipótesis de la posición del antecedente (Position of Antecedent Hypothesis, PAH, Carminati, 2002), (c) el uso de sujeto en la continuidad del tópico, y (d) el uso de expletivo nulo. En estas construcciones, las lenguas previamente adquiridas exhiben un uso contrastivo de las formas de sujeto, por ende, se espera un efecto distinto de la transferencia lingüística.

Esta tesis utilizó dos cuestionarios, uno que probó el idioma meta y otro que examinó las mismas propiedades en las lenguas de trasfondo. El primer cuestionario constaba de cuarenta y seis ítems en español que examinaban cuatro propiedades del PSN antes mencionadas. Los datos fueron recolectados por medio de la prueba de juicios de aceptabilidad en la que los participantes debían valorar las oraciones en una escala de uno a cinco, donde uno significaba totalmente inaceptable y cinco totalmente aceptable. El cuestionario de las lenguas previas contenía cuarenta ítems en coreano y veinticuatro en inglés. Un total de noventa y seis aprendientes participaron en la aportación de datos, pero los de dieciséis participantes que no mostraron

completo conocimiento nativo en la prueba de L1 y L2 fueron eliminados para cumplir con el requisito previo de los estudios de transferencia en un contexto de AL3.

Primero, el resultado de las pruebas que examinaron la restricción del pronombre explícito (OPC) dejó de manifiesto una transferencia significativa desde la L1. El OPC es un principio universal que restringe el sujeto explícito en cláusulas subordinadas al considerar una referente variable o un cuantificador en la cláusula principal. La literatura previa ha confirmado que esta restricción es operativa universalmente en los idiomas de *pro-drop*, por lo tanto, se espera que la transferencia de la L1 sea positiva para el aprendizaje de esta restricción sintáctica en el contexto L3 de los participantes. El resultado de la aceptabilidad confirmó que incluso los aprendientes iniciales conformaban con el OPC, lo que respalda la transferencia facilitadora de la representación L1 a la L3. En segundo lugar, las pruebas sobre la hipótesis de la posición del antecedente (PAH) confirmaron la activación del conocimiento de ambas, L1 y L2. La PAH es una hipótesis formulada por Carminati que predice que los sujetos nulos prefieren referirse a un antecedente en la posición de sujetos, mientras que los sujetos explícitos prefieren recuperar uno que ocupe una posición más baja de la estructura sintáctica en las oraciones compuestas ambiguas. La característica formal de la PAH se determina en la interfaz sintáctico-pragmática que para su adquisición requiere la integración de la sintaxis y el dominio lingüístico externo, que sería el discurso. Los trabajos anteriores confirmaban que esta estrategia de procesamiento se aplicaba al coreano y al español, pero no al inglés. Reportamos que se observó una transferencia híbrida en la condición de sujeto explícito, donde la PAH y la regla de asignación del sujeto del inglés obligan a una recuperación opuesta de los antecedentes. Interpretamos que la transferencia negativa de la L2 mitigó la ventaja de la posible transferencia facilitadora desde la L1 en el comportamiento similar al nativo en los contextos de la PAH. La tercera propiedad de la prueba examina el uso del

sujeto nulo en un contexto de continuidad de discursos en español. Los amplios estudios previos confirmaron que la adquisición de esta propiedad es también un fenómeno en el que interviene la interfaz sintáctico-discursiva, que carga una significante dificultad adquisitiva para los no nativos. Al igual que ocurría con los resultados de PAH, se comprobó que los alumnos activaban tanto la L1 como la L2. La transferencia de la L2 resultó negativa, ya que los llevó a evaluar erróneamente las oraciones con sujetos explícitos en el contexto de continuidad del discurso que fueran aceptables en español. Por último, en los datos de los expletivos nulos obligatorios, no confirmamos ningún indicio de activación de ninguna de las gramáticas preexistentes. Los estudios anteriores han reportado que el conocimiento de los sujetos nulos en español se manifestaba desde las primeras fases de AL2, lo que implicaba poca dificultad durante la adquisición del no nativo. La ausencia de transferencia en los resultados de los expletivos nulos nos confirmó que la menor dificultad de aprendizaje había disminuido la necesidad a recurrir a los conocimientos adquiridos. En resumen, los datos coreanos corroboran una transferencia híbrida de ambas lenguas previas y una correlación potencial entre la dificultad adquisitiva y la necesidad de recurrir a las representaciones lingüísticas existentes.

Se aplicaron los hallazgos empíricos de este estudio a las predicciones de los modelos de transferencia para evaluar su validez teórica. Reportamos que la hibridez de la transferencia observada en los datos se explica de manera más efectiva en el Modelo de Proximidad Lingüística y en el Modelo de *Scalpel* que afirman que las transferencias interlingüísticas se realizan de una manera de propiedad por propiedad en vez de una completa. Evaluamos que el concepto de coactivación del LPM sería más efectivo y válido que la idea de copia completa del TPM, para interpretar la hibridez y la ausencia de transferencia que se observó en esta investigación. Según Westergaard (2021), la transferencia es un proceso de activación e inhibición de las propiedades existentes en el repertorio de los aprendientes, que está motivada para un

mejor análisis sintáctico (*parsing*) de las entradas lingüísticas durante la adquisición. La complejidad añadida a las propiedades en las que interviene la interfaz externa parece haber aumentado la necesidad de activar los recursos disponibles para el análisis sintáctico de los aprendientes coreanos. Sin embargo, la afirmación de la LPM de que la similitud lingüística abstracta es un factor crítico en la activación de una propiedad no pudo comprender plenamente la dinámica de transferencia encontrada en esta tesis. La proponente de este modelo también admitió que podría haber factores adicionales que promovieran la activación de ciertas propiedades, y afirmó que la averiguación de las variables lingüísticas merece destacarse en las futuras investigaciones en el campo de A3L.

Con base en el hecho de que la transferencia híbrida se encontró particularmente en la adquisición de las propiedades de la interfaz externa, proponemos 'la interfaz externa' como uno de los posibles factores que da forma a la activación de las propiedades existentes para la transferencia. Este argumento se corresponde con las afirmaciones de la Hipótesis de la Interferencia Inducida por Mapeo (*Mapping Induced Influence Hypothesis*, MIIH, Hulk y Müller, 2000; Müller y Hulk, 2001) que postula una vulnerabilidad a la influencia translingüística, particularmente en la adquisición de los fenómenos gramaticales que requieren una integración entre sintaxis y pragmática. Además, este argumento está en consonancia con la Hipótesis de la Interfaz (*Interface Hypothesis,* Sorace, 2005, 2006a; Sorace y Filiaci, 2006; Sorace y Serratrice, 2009; Tsimpli y Sorace, 2006), que predice que las propiedades de la interfaz externa muestran opcionalidad residual e inestabilidad persistente debido a la complejidad añadida de integrar las dos representaciones. Al combinar los hallazgos empíricos de esta investigación con las hipótesis de la literatura previa, proponemos que el tipo de propiedad, ya sea que esté relacionada con la interfaz externa o no, puede ser uno de los factores que impulsan la activación de los repertorios lingüísticos preexistentes. Exponemos que la complejidad adquisitiva

añadida por la interfaz externa aumenta la necesidad de valerse de más recursos disponibles para analizar la entrada dada en la L3, dándose el caso de la transferencia híbrida.

Por último, los datos recogidos de los estudiantes coreanos de español apoyaron la predicción y la argumentación del LPM. La transferencia se obtuvo propiedad por propiedad, lo que dio lugar a una transferencia híbrida en la adquisición de los sujetos del español. Además, proponemos que el tipo de propiedad, que esté relacionado o no con la interfaz externa, puede desempeñar un papel en la dinámica de la transferencia. La complejidad adquisitiva en los dominios lingüísticos externos parece aumentar la necesidad de recurrir a las representaciones lingüísticas disponibles. Concluimos que el factor de interfaz externa merece ser estudiado como una de las variables críticas de la transferencia durante la A3L en futuras investigaciones.

Palabras clave: Adquisición de Tercera Lengua (AL3), transferencia lingüística, modelos de la transferencia, interfaz externa, sujetos nulos y explícitos españoles, aprendientes coreanos de español