

Anaphoric reference in L1 Spanish-L2 English:
A corpus-based study of oral and written
narratives

PhD Thesis
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Abstract

This dissertation investigates possible mode of production effects on the occurrence of topic continuity contexts and on Referring Expressions (RE) selection in this discourse configuration. A corpus study was conducted a corpus-based study to establish the following: i) How does the mode of production affect the selection of REs as zeros, overt pronouns and noun phrases (NP) in the subject position?; ii) How does the mode of production affect the syntactic (i.e., coordination) and discourse factors constraining the selection of REs across proficiency groups?; iii) How does the selection of REs occur developmentally in L2 English learners?

By looking at spoken and written performance across proficiency levels, this investigation explores whether deficits persist (or not) in one of the two modes (or in both) in the narratives under study. To this end, this study looks at third-person singular grammatical subjects across different proficiency levels (from beginner to advanced learners) in L1 Spanish-L2 English, in contrast with L1 English. The data are spoken and written narratives from the COREFL corpus produced by the same participant and under the same task conditions. The analysis comprises 82 participants, 164 texts (82 spoken and 82 written texts, respectively) and 4.178 grammatical subjects. For data analysis, a specific fine-grained tagset was designed and used on the XML annotator UAM Corpus Tool (O'Donnell, 2009). Statistical analysis of the tagged data was performed using the same tool.

The present corpus findings provide a comprehensive picture of the effects of the mode of production on the selection of REs and provide important insights as to learner's performance in spoken and written performance. In particular, a highly marked effect of the mode of production in L1 Spanish-L2 English was found, while no such effect was found in L1 English performance. Overall, the results revealed that L1 English-L2 Spanish learners show greater and more persistent deficits in spoken production, while those in written production tend to disappear at advanced levels. In topic continuity coordination, the discourse configuration in learners is comparable to that of native speakers. However, the spoken production by beginner and intermediate learners still shows a higher amount of fuller REs than that by advanced and native participants.

This study highlights the practical implications of considering the mode of production in RE selection, revealing distinct patterns in spoken vs. written discourse for L1 Spanish-L2 English learners and L1 English. The marked differences observed between L1 Spanish-L2 English and

the control group of English native speakers in mode-specific performance emphasize the need for further comparative studies across different language pairs.

Resumen

Esta tesis investiga los posibles efectos del modo en los contextos de continuidad temática y en la selección de expresiones referenciales en esta configuración discursiva. Realizamos un estudio basado en corpus para establecer lo siguiente: i) ¿Cómo afecta el modo de producción a la selección de expresiones referenciales como ceros, pronombres explícitos y sintagmas nominales (NP) en la posición de sujeto?; ii) ¿Cómo los factores sintácticos (es decir, coordinación) y discursivos limitan la selección de ER en los distintos grupos de competencia?; iii) ¿Cómo se desarrolla la selección de las expresiones referenciales en los aprendices de inglés como L2?

Al examinar los textos orales y escritos oral y escrito en los diferentes niveles de competencia, esta investigación explorará si los déficits persisten (o no) en uno de los dos modos (o en ambos) en los textos analizados. Además, se analizan los sujetos gramaticales de tercera persona del singular en diferentes niveles de competencia (desde principiantes hasta avanzados) en español-inglés como L2, en contraste con el inglés como L1. Los datos son textos orales y escritos extraídos del corpus COREFL producidos por el mismo participante y bajo las mismas condiciones de tarea. Contamos con 82 participantes y 164 textos (82 orales y 82 escritos, respectivamente) y analizamos 4178 sujetos gramaticales. Para el análisis de los datos, se diseñó y utilizó un conjunto de etiquetas específico y detallado en el anotador XML UAM Corpus Tool (O'Donnell, 2009).

Crucialmente, nuestros resultados basados en el corpus mostraron la importancia de investigar la selección de expresiones referenciales en el discurso oral y escrito. En particular, mostramos que la literatura basada en corpus que compara ambos modos de producción es escasa, pero es esencial abordar esto en esta tesis.

Además, nuestros resultados proporcionan una imagen más completa de los efectos del modo de producción en la selección de expresiones referenciales. Importante, partiendo de algunos hallazgos del corpus; investigamos la cohesión referencial en L1 Spanish-L2 English vs. L1 English y encontramos un efecto del modo de producción en los distintos grupos de aprendices. Sin embargo, no se encontró tal efecto en los hablantes nativos de inglés. En general, los resultados revelaron que los tanto los aprendices como los nativos de inglés muestran un déficit en la producción oral, mientras que en la producción escrita tienden a desaparecer en los niveles avanzados. En la coordinación de la continuidad temática, la configuración del discurso es comparable a la de los hablantes nativos en narrativas escritas y orales. Sin embargo, la producción oral de los aprendices principiantes e intermedios aún muestra una mayor cantidad

expresiones referenciales más explícitas en comparación con la producción oral de los participantes avanzados y nativos.

Este estudio destaca las implicaciones prácticas de considerar el modo de producción en la selección de expresiones referenciales, revelando patrones distintos en el discurso oral vs. escrito para los aprendices de inglés y los hablantes nativos de inglés.

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LIST OF ABBREVIATIONS

ANACOR	A corpus-based approach to anaphora resolution in second language acquisition: Beyond the interfaces
ANACOREX	Anaphora and referring expressions in bilingualism: Triangulating corpus and experimental approaches
BD	Branching Direction
BELC	Barcelona English Language Corpus
BNC	British National Corpus
CEDEL2	Corpus Escrito del Español L2
CHILDES	The Child Language Data Exchange System
CIA	Contrastive Interlanguage Analysis
CMF	The Cognitive Multi-Factorial model of referential choice
COCA	Corpus of Contemporary American English
COREFL	The Corpus of English as a Foreign Language
CREA	Corpus de Referencia del Español Actual
EDU	Elementary Discourse Unit
EFL	English as a Foreign Language
FSP	Functional Sentence Perspective approach
ICE	The International Corpus of English
L	Left
LCR	Learner Corpus Research
LOB	Lancaster-Oslo-Bergen
LONGDALE	Longitudinal Database of Learner English
<i>LGSWE</i>	Longman Grammar of Spoken and Written language
NNS	Non-Native Speaker

NP	Noun Phrase
NS	Native Speaker
PAH	Position of Antecedent Hypothesis
PPVH	Pragmatic Principles Violation Hypothesis
R	Right
REs	Referring Expression
SLA	Second Language Acquisition
T2K-SWAL	The Spoken and Written Academic Language Corpus
UG	Universal Grammar
WM	Working memory

Chapter 1. Introduction

The selection of referring expressions (REs) is influenced by multiple factors, whose incidence may vary depending on the population under study. This study focuses on L1 Spanish-L2 English vs. English native speakers and examines the effect of mode of production (spoken and written) on RE selection, in combination with language-specific factors, i.e. pro-drop and non-pro drop languages, as well as syntactic-discursive factors, such as discourse configuration, distance between antecedents, the number of antecedents, protagonist-hood and change of scenes. The data of this research have been extracted from the COREFL (Corpus of English as a Foreign Language, Lozano, Díaz-Negrillo, and Callies, 2021), which is a bimodal corpus (spoken and written data) and with native speaker control corpora (i.e., English, Spanish, and German). By analyzing this comprehensive dataset, the study aims to contribute to the ongoing debate about the differences between written vs. spoken data in language acquisition research. Previous studies on RE selection in L1 Spanish-L2 English have often been limited to either written or spoken data, leaving a gap in understanding the differences and potential biases each mode may introduce. Through this research, we aim to clarify how these modes of production influence RE selection, providing insights that can inform both theoretical and practical approaches to language development and, possibly also, language teaching.

The tendency of human discourse is to use various linguistic mechanisms, in particular reference, in order to provide a coherent message. Etymologically, reference (from Middle French: *référence*) means “carry back”. The complexity of the process of communication between the speaker and the listener at a particular moment during the conversation has been the focus of investigation of countless researchers, who have dedicated their efforts to look for an explanation of knowledge and reference in discourse. A common focus of investigation in discourse reference is the selection of REs. The complexity of the selection of REs has attracted the attention of many researchers and its study is often referred to as “Anaphora resolution” (AR). Lozano (2016) defines anaphora resolution in discursive terms as how the REs (NP, overt pronoun and \emptyset) and its antecedent co-relate in the preceding discourse. This relation between the anaphor and its antecedent is crucial in the interpretation and production of language. Note that the selection of RE is constrained by the type of language (pro-drop and non-pro-drop language, respectively) and different linguistic factors (semantic, syntactic, grammatical, cognitive and discursive) as will be explained in more detail below.

Pro-drop languages (known as null subject languages), such as Spanish, Greek or Italian alternate between null and pronoun in subject position, whereas in non-pro-drop languages (known as non-null languages) such as English, French or German null pronouns are not allowed in subject position, with some exceptions, for example in English of coordinated clauses and participle clauses (Crosthwaite, 2011; Leclercq & Lennart, 2013; Quesada & Lozano, 2020). To illustrate this, see examples below extracted from the corpus from native English speakers and L1 Spanish-L2 English, which show the possible syntactic variation between null (\emptyset) and overt (he) pronouns for a given subject: (1) is an example of topic continuity from an English native speaker, where zeros are not allowed in non-coordinate clauses, while (2) is an example of L2er where a zero is used, maybe as a transfer from the learner's L1, where zeros are allowed in this syntactic context in Spanish. Additionally, example (3) is an example of topic continuity syntactic coordination from an L2er, where overt pronouns are used, where null pronouns are licensed in this particular syntactic context in English and example (4) from a native speaker where null pronouns are allowed.

(1) Charles chaplin_i was walking through an alleyway when all of a sudden bricks of some sort fell from a window and almost hit him. Then, he_i paused to light a cigarette and as he_i was smokig he_i noticed a baby_j on the ground crying. (EN_WR_21_14_GLN)¹

(2) So he_i decides to take another cigar, then he_i takes off his gloves, pulls out a match and with the sole of the shoe turns it on, and then throws_i it in a barrel along with the gloves. (ES_WR_B1_17_10_14_NCA)

(3) /he_i tried to put it_j where he_i found it_j/on the street/ and he_i couldn't because a policeman_k came and he_i had to pick h=pick him_j up/ (...) (ES_SP_B2_23_17_14_RGM)²

(4)/and uh he_i sees a man_j and/ \emptyset _i gives the man_j the baby_k and \emptyset _i runs away/ the man_j can't find Charlie_i cause Charlie_i is hiding in the alley/ (...) (EN_SP_20_14_TK)

¹ Note that these are real examples L2ers English and native English speakers extracted from the learner corpora used in this dissertation (cf. chapter 6). The information in square brackets is the ID of the Corpus file.

² Each participant has a unique code made up of the following information, in this order, L1, medium (written or spoken), proficiency level, age, length of instruction in English, task number and initials. Accordingly, for example, the file code ES_WR_C1_21_8_14_LAR represents a Spanish native who produced a written task, with a C1 level (=upper advanced), who is 21 years old, who has been learning English fo 8 years, who did the Chaplin task (task #14) and whose initials are LAR.

This dissertation looks at discourse-syntactic factors that constrain the selection of REs in L1 Spanish-L2 English and English natives: the information status (i.e., topic continuity), the syntactic configuration (coordination and intervening subordination between coordinate clauses). Within the context of topic continuity coordination, distance may be examined in terms of the presence or absence of intervening subordination, as well as the number of subordinate clauses occurring between the equi-topic subjects in parallel coordinate clauses. An essential consideration within these configurations involving intervening subordination is whether the subjects or topics in the subordinate clause(s) shift reference when they do not share reference with the subjects in the parallel coordinated clauses. See examples below, for example (5), where the subjects in the subordinate clauses co-refer with the subject in the parallel main clause, and (6), where the intervening subject does not co-refer with the subjects in the main clause. This dissertation follows the claims that subjects in subordinate clauses are syntactically less salient and discursively less topical than those in main clauses (Gundel & Zacharski, 1993, p. 279; see also Lozano, 2016, pp. 258-259), and therefore do not necessarily switch the reference chain in the main parallel coordinate clauses. The latter would possibly explain why zero is still selected in (7), despite the same gender but non-coreferential intervening subject (“he”).

(5) He_i meets a man_j, who gives the baby_k and runs away_i.

(ES_WR_B2_19_15_14_MADHR).

(6) Chaplin_i told the man_j to carry the baby_k while he_i was cleaning his boots and when the man_k wasn't looking he_i ran away. (ES_WR_B1_18_12_14_CRM).

(7) The police man_i sees what he_k is doing and \emptyset _i keeps a close eye on him_j.

(EN_WR_20_14_CP).

The syntactic factors are not the only factors constraining the selection of REs. There are other discursive factors, such as number of antecedents, protagonist hood and change of scenes. The number of potential antecedents that appear between the referring expression and the referent has been shown to constrain the REs (c.f. Chapter 2). Kibrik (2011) argues that two key processes occur when using REs in discourse: attention and activation. When a referent is mentioned for the first time, it requires the speaker's attention and becomes activated in their working memory. If an antecedent is highly activated in the discourse, speakers tend to use

reduced REs, such as null or overt pronouns. Thus, we consider the number of potential antecedents as those units in the discourse that have already appeared in the mind of the speaker. Example (8) illustrates this factor of potential antecedents. *Charlie Chaplin* appears first and then *the mother*. So far, there are two potential antecedents in the speaker's mind. Then, *the baby* is mentioned and, after that *the police officer* is introduced. Thus, the number of potential antecedents increases in the discourse influencing the selection of RE, as we will examine in this investigation. Another discursive factor is the protagonist-hood, which has been traditionally considered by various cognitive approaches (c.f. 2.7). This factor can influence both native speakers and L2ers, but it remains unclear whether the mode of production impacts these factors equally on the selection of REs by L2 learners and native speakers in their narratives. While REs have been extensively studied for L1 English, there is limited research available for L1 Spanish-L2 English. Example (9) illustrates this factor. Finally, the factor of scenes involves a shift to a new segment or scenes in the narrative, involving transitions in characters, location, or focus. Thus, it introduces new actions or themes and requires fuller RE to maintain the topic. This factor has been addressed in previous studies (Collewaert, 2019; Quesada, 2021), where results showed that this factor influences the REs. Vonk et al (1992) highlighted in his several experiments that fuller REs are going to indicate a thematic change. Examples (10) and (11) illustrate the phenomenon of change of scenes. In (10) we have the narration where he (Charles Chaplin) gets the baby again because the woman refuses to take it and Charles leaves. Next time, a NP (proper noun) is used to refer to Charles Chaplin as it is a new scene, where the protagonist gives the baby to an old man. However, in example (11) the narration happens in the same scenes, where the second time the protagonist is named \emptyset is chosen. All these factors have been shown to determine selection of REs (cf. Quesada, 2021 for an overview), as it will be discussed in Chapter 8.

(8) He_i³ encounters the same mother_j Chaplin_i had already tried to give the baby_k to and \emptyset _i runs away. When Chaplin_i passes by the woman_j and she_j realizes the baby_k is there, she_j beats him_i up and screams_j at him violently. When the same policeman_i approaches to see what is happening Chaplin_i just takes the baby_k again and \emptyset _i goes away to avoid conflict. (ES_WR_C1_19_13_14_MHM)

(9) After walking with the baby_i for some time, the man_j sits down with the baby_i on a curb. For a split second he_j considers putting the baby_i into the sewer. He_j doesn't think he_j can handle the burden of a baby_i. (EN_WR_19_14_SC)

³ The antecedent in this example and subsequent examples are underlined.

(10) He_i picks it_j up and brings_i it_j to a woman_k carrying a pram, who refuses to take him_j, thought. Back with the baby_j, Chaplin_i gives the kid_j this time to an oldman_i, trying to avoid the policeman_m who is following him_i. (ES_WR_B2_19_15_14_LPI)

(11) /uh so he_i picks the baby_j back up and ∅_i walks around with it_j and decides_i to leave it_j in the exact spot on the ground where he_i had found the baby_j/ (...) (EN_SP_120_14_EES)

The above examples illustrate the discursive factors addressed in this dissertation: i) the number of antecedents; ii) protagonist hood and iii) change of scenes and how these factors can affect the selection of REs in L1 Spanish-L2 English vs. English natives and the need for studies to investigate these factors in spoken and written discourse, as done in this dissertation.

This dissertation aims to contribute to SLA by exploring whether mode of production (spoken vs. written) could possibly be another factor constraining the selection of REs in L1 Spanish-L2 English. Previous literature has claimed clear the differences in terms of time and permanence of records (Williams, 2012, p.322) between these two modes of production (see Grabowski, 2007; Kuiken & Vedder, 2012; Vasylets, Gilbert & Manchón, 2017). It emphasizes that the written mode imposes less cognitive load than the spoken mode on the language users, given that writing is not restricted by time. The writers can plan, monitor and edit their narratives, while the latter processes are more restricted in spoken discourse as speaking takes place online. Since an extended type deficit in L2 RE selection, and also in L2 English, is for learners to select fuller RE than those by the native speakers, and given the additional difficulty described for the learners in spoken performance, we may expect L2 English learners to select fuller forms in their spoken texts than in their written texts. Additionally, previous research in SLA has examined the effects of mode on a variety of linguistic aspects, which has sometimes shown an effect on language performance and acquisition (see Bulté and Housen, 2009; Yu, 2009; Christensen, 2000; Bel, Perera & Salas, 2010; Vasylets et al., 2017; Ngo, Kaiser & Simpson, 2019, *interalia*). On the other hand, corpus-based studies on L2 English REs have focused either on spoken or written performance (see Quesada & Lozano, 2020 for written data; Crosthwaite, 2011; Kang, 2004, for spoken data, *interalia*), yielding in both cases deficits in comparison to RE selection by the native speakers, i.e. selection of fuller REs than the natives. To the best of our knowledge, there are no studies comparing RE selection by L1 Spanish-L2 English in spoken vs. written performance. Similarly, there do not seem to be studies comparing RE selection in

spoken vs. written discourse in L1 English. Hence, due to the scarce studies on the effect of mode of production on the selection of REs in L2 English, there is an urge for studies researching it in L1 Spanish-L2 English, and this is what is undertaken in this dissertation.

Importantly, despite the numerous previous studies on the acquisition of REs, the vast majority of RE studies are in L2s other than L2 English (i.e., Spanish, Chinese, and Italian among others). Moreover, most of RE studies in L2 English are based on experimental methodologies (Cunning, Fotiadou, & Tsimpli, 2017, for L1 Greek; Mitkovska & Buzarovska, 2018, for L1 Macedonian; Prentza, 2014, for L1 Greek, inter alia), while corpus-based studies are substantially more limited (Hendriks, 2003; Kang, 2004 and Crosthwaite, 2011; Ryan, 2015 and Quesada & Lozano, 2020). Hence, this dissertation should also be taken as an additional contribution to corpus-based studies on RE selection in L2 English.

Regarding specifically the distinction between spoken and written discourse, most previous SLA literature has identified various differences among both modes of production (Grabowski, 2007; Kuiken & Vedder, 2011, 2012; Vasylet et al., 2017). Regarding the effect of mode on the selection of REs in L2, similar findings were found whether the data examined was either spoken or written, claiming overexplicitation in L2 RE selection. As we will see in Chapter 4, there are studies in L2 research that have explored the effects of mode on a variety of linguistic aspects: lexical complexity (Bulté and Housen, 2009; Yu, 2009); lexical and syntactic complexity (Christensen, 2000; Bel et al., 2010; Vasylets et al., 2017; Ngo et al., 2019); pragmatic competence (Martínez-Flor, 2006); grammatical complexity and accuracy (Weissberg, 2000; Ferrari and Nuzzo, 2009) and grammatical complexity, lexical complexity, and accuracy (Granfeldt, 2007; Kormos and Trebits, 2009; Kuiken and Vedder, 2010, Baba, Takemoto & Yokochi, 2013). Importantly, these studies unveil a better performance in written over spoken discourse, showing an effect of the mode of production on language performance and acquisition, except for Christensen, (2000) and Bel et al. (2010) who did not find any effect of mode in their studies.

Corpus Research (LCR) emerged in the late 1980s with the intention of investigating less controlled language tasks than those in experimental methodologies, which could reflect learners' production in more realistic communication contexts both in spoken and written form. McEnery, Xiao, & Tono (2006, P.5) provides a definition of learner corpora as a "collection of machine-readable authentic texts (including transcripts of spoken data) which is sampled to be representative of a particular language or language variety". Despite the importance of spoken and written production in LCR, the number of written corpora is greater than the spoken learner corpora. Importantly, the number of spoken corpora is on the rise in the last years, as it can be

seen on the list of “Learner Corpora around the World” (LCW). There is a recent debate between SLA and LC researchers, where cooperation between the two fields of study has been demanded (Granger, 2021; Myles, 2021). In fact, in the last few years there are studies looking for opportunities where both fields can work together (see Granger, 2021; Lozano, 2021; Tracy-Ventura, Paquot and Myles, 2021). Granger (2021, p. 3) suggests a possible interaction between SLA and LCR by promoting the integration of some significant improvements, namely: adaptation of corpus design via bimodal and multi-task corpora, incorporating triangulation studies and more longitudinal or pseudo-longitudinal studies.

This dissertation investigates RE selection and has the focus of whether mode of production affects RE selection or not. The specific RQs analyzed are related to various syntactic-discursive aspects that have been shown to constrain RE selection, as mentioned above. The dissertation looks at the above across beginner intermediate and advanced proficiency levels in comparison with L1 English, with a view to disclosing language development. This research uses corpus-based data from COREFL, which allows analysis of both written and spoken data. Moreover, the study addresses the controversy over the superiority of written vs. spoken data for disclosing language acquisition patterns. This research aims to contribute insights not previously explored in cross-sectional corpora or among L1 Spanish-L2 English learners and English natives. All the above constraints on RE selection have been specifically considered and treated in this dissertation with the application of Learner Corpus Research (LCR) methodology (Granger, Dagneaux, Meunier, & Paquot, 2009; Granger, Gilquin, & Meunier, 2015; Gilquin, & Meunier, 2015; Myles, 2005, 2015).

This dissertation is based on data extracted from COREFL, a corpus that covers various proficiency levels including a native corpus for comparison with the target language and written vs. spoken data by the same participant. Additionally, as suggested by Myles (2015) this investigation covers the needs of SLA research in terms of learner corpora, grouping learners by proficiency level, using cross-sectional corpora. This allows for the observation of developmental patterns, with comparisons between groups of varying proficiency (beginner to advanced) shedding light on L2 development. To our knowledge, most corpora studies are of advanced learners, including a single proficiency level, making it challenging to investigate learners' development.

In summary, this investigation contributes to the field through its contrastive analysis between English learners and native speakers, focusing on the influence of production mode on referring expression selection in reference maintenance contexts.

The remaining of this dissertation is structured as follows:

Chapter 2 presents the theoretical background of this dissertation. Different theories of reference and anaphora are presented in this chapter, which intend to provide an overview of the existing theoretical models on the topic of reference.

Chapter 3 deals with the main approaches to acquiring REs, examining studies on the interlanguage of L1 Spanish-L2 English, and framing the subject within the theory of Second Language Acquisition (SLA), while also distinguishing between null and non-null subject languages. The chapter aims to provide an overview of previous studies and findings related to the acquisition of 3rd person singular anaphoric subjects in L2 English.

Chapter 4 examines the differences between spoken and written discourse by reviewing previous studies on both modes of production. It considers evidence from spoken and written corpora and includes an analysis of previous corpus-based studies investigating the impact of mode of production on L2 English. The main goal is to provide a comprehensive overview of existing research findings regarding how mode of production can influence the selection of REs.

Chapter 5 contains the research questions and hypotheses of this dissertation, formulated on previous findings and unresolved issues in SLA research.

Chapter 6 describes the methodology of this dissertation. The corpus database, the participants' data, the annotation software and the tagset are discussed in this chapter.

Chapter 7 presents the results on the mode effects on the selection of REs. First, it shows the overall distribution of discourse configuration in L1 Spanish-L2 English. Second, the syntactic factors constraining the selection of REs in reference maintenance contexts. Finally, the last section of this chapter focuses on the discursive factors affecting the selection of REs in reference maintenance context in the participants' narrative.

Chapter 8 offers the discussion of the results in this dissertation and answers the research questions in Chapter 5.

Chapter 9 shows the conclusions of this thesis and possible directions for future research based on the limitations of the present study.

Chapter 2. Theories of reference: An overview

This chapter reviews the most influential theoretical approaches to referential choice. The dichotomy *Given-New*, proposed by Chafe (1976), was the first to provide an account of knowledge and reference in discourse. In a similar line of research, Prince's *Scale of Assumed Familiarity* (1981) expresses dissatisfaction with Chafe's account of Givenness, proposing a substitute term "assumed familiarity" for Givenness, based on the speaker's assumptions about the familiarity of the listener with discourse referents. Givón's *Scale of Topic Accessibility* (1989) continues with Prince's study, insofar as it correlates the linguistic structures with degrees of Givenness, now called "continuity" or "accessibility", where topic continuity is expressed through grammatical and prosodic devices. In contrast, Ariel's *Accessibility theory* (1990), involves accessing antecedent when processing discourse, which requires the speaker use the forms available in the language to guide the listener to retrieve contextual information. In line with Prince's (1981) and Givón's (1989), Gundel et al.'s *Scale of Givenness* (1993), attempts to explain the distribution and identification of REs in discourse in terms of cognitive statuses. Finally, Kibrik's Cognitive Multi-factorial Model (2011) reframes the framework from psychology and neuroscience perspective, where attention and working memory are responsible for referential choices.

2.1 Clause as message

The focus of this research is the choice of REs by English language users, both native speakers and Spanish L2 English learners, in connected spoken and written English. Let's begin by considering a simple example:

(12)

a. [One of the newsboys]_{R1} pelts [The Tramp]_{R2} with a peashooter.

b. [One of the newsboys]_{R1} pelts [him]_{R2} with a peashooter.

In both (12.a) and (12) two REs are used which correspond to the same pair of personal referents, i.e., *one of the newsboys* and *The Tramp*. The propositional content is the same in (12.a) and (12.b) so the choice between the full NP *The Tramp* and the pronoun *him* has to be more related to *how* the content is communicated than *what* content is communicated. Such

choice seems to be conditioned by cognitive factors, in particular what the speaker assumes the hearer to know. This knowledge has been variously conceptualized as givenness, familiarity or continuity, as it will be explained in greater detail below, but before examining the theoretical accounts of reference and givenness, it is convenient to consider how content is communicated, or packed, in simple sentences, that is, the clause as message. By doing so, I will provide a broad framework to integrate functional, structural and cognitive explanations of the corpus analyzed, the interlanguage, and learners' difficulties in L2 acquisition.

In Halliday's functional grammar (Halliday & Matthiessen, 2004) three different kinds of meaning are mapped onto three types of structures, of which clauses can be regarded as realizations:

Meaning	Structure	Clause as
Experiential	Transitivity	Representation
Interpersonal	Mood	Exchange
Textual	Thematic	Message

Figure 1. Meanings and structures in functional grammar.

Accordingly, (12) can then be analyzed in three different ways:

Clause as	One of the newsboys	pelts	the tramp	with a peashooter
Representation	Agent	Process	Affected	Instrument
Exchange	Mood		Residue	
Message	Theme	Rheme		

Figure 2. Functional analyzes of a simple clause.

The semantic role and syntactic function of antecedents have been demonstrated to have a bearing on referential choice (Arnold, 2001) but my main interest at this point is the thematic structure of clauses because of its crucial role in the flow of discourse. The organization of clause as message responds at a given moment to the current state of knowledge of speaker and hearer, and contributes to its advancement. This is the Functional Sentence Perspective (FSP) approach, which can be traced back to Prague linguistic scholarship and which bore a central role in Halliday's grammar (Halliday, 1974). The structure of information and the thematic

structure are coextensive with the clause and in unmarked cases the Theme belongs with the Given and the New belongs with the Rheme. Still, they should not be identified with each other. The Theme is the starting point selected by the speaker to word her message and the Given is what the speaker considers accessible to or known by the hearer. The thematic structure is speaker-oriented and the information structure is hearer oriented. Nevertheless, both structures are selected by the speaker. These relationships are represented in Figure 3.

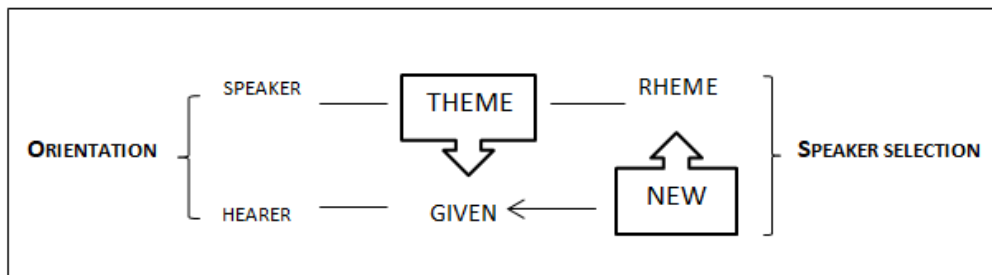


Figure 3. Orientation and givenness in the clause as message.

The complexity of the relationship between thematic and information structures is a case in point of the complexity of human communication and its elucidation here will be centered on the progression of information. The overall pattern of progression from Given Themes to New information in the Rheme is conveniently framed in functional linguistics but particular explanations and refined distinctions are necessary to account for the choice of referential expressions. The following sections discuss the most influential explanations scholars have given to the ways in which language users organize information and the factors that affect such organization.

2.2 Givenness and definiteness: Chafe (1976)

The wording of discourse in clauses, in particular reference, can be regarded as a snapshot of speaker's and hearer's knowledge at a particular moment during the ongoing process of communication. The picture may appear deceptively simple but the number and stature of scholars who have devoted their efforts to provide an explanation of knowledge and reference in discourse in countless theoretical and applied studies gives a measure of the complexity of

the process.⁴ Generally, linguistic scholars have begun from one or more aspects of the structuring of discourse and then proceeded to connect them to cognitive, verbal or contextual conditions.

Chafe's conception of givenness is focused on the structure of NPs as the expression of the speaker's assessment of the hearer's needs to process language in context (Chafe, 1976, p. 27). Such needs fluctuate from immediate to long-term and are presumably satisfied by the packaging of information, specifically by (i) making nouns Given or New, (ii) assigning contrastive focus, (iii) choosing between definite and indefinite NPs, (iv) selecting subjects, (v) selecting topics for sentences, and (vi) representing the speaker's point of view (p.28). Chafe's approach is an apt starting point for an elucidation of knowledge in discourse because it unifies syntactic and cognitive considerations by considering the expression (mainly in English) of the six statuses identified. For my purposes here, I will concentrate on (i) givenness and (iii) definiteness, since they are more immediately responsible for the choice and interpretation of REs.

Chafe defines Given (or old) information as knowledge the speaker assumes to be available to or interpretable by the hearer at the moment of speaking, and New information as knowledge which the speaker assumes to be introducing into the hearer's consciousness (p. 30). Knowledge is restricted to referents, and Given and New is interpreted as "already activated" and "newly activated". Given information does not receive focus unless it is contrastive; it is typically pronominalized except when the speaker anticipates ambiguity in the interpretation; it is established on the basis of the verbal or situational context; and its duration in the hearer's knowledge is limited. On the other hand, new information is generally focal, it is not pronominalized and seems to be conditioned by discourse boundaries, that is, and after a change of scene the speaker may decide to treat old information as New.

In Chafe's view, givenness cannot be graded. And no intermediate levels can be established between Given and New because in those cases the speaker would have to assume that something is in the addressee's consciousness in varying degrees. Since no such intermediate degrees had been identified so far, Chafe concluded that givenness was not a scalar category, so he formulated Given and New as discrete categories.

There is at least one theoretical inconsistency in Chafe's approach as to the discrete character of givenness as "activation". The author posits the existence of cases such as *I saw your father yesterday*, in which a newly introduced referent (*your father*) can hardly be considered New in

⁴ The list of works cited in *The Oxford Handbook of Reference* (2019) exceeds 1,200.

the hearer’s consciousness. The concepts of “already activated” or “newly activated” would complement Given and New, and in the example, “your father” would be Given because the speaker can only assume the hearer has some knowledge of the referent but it is “newly activated” by this first mention. So the basic Given and New dichotomy requires at least one intermediate level. Also, due to the limited persistence of an item in the hearer’s consciousness, the speaker needs to examine systematically her assumptions so that something previously treated as Given may be treated as New at a later moment. Here Chafe points at discourse boundaries as the limit (p.33). But one can conjecture that the moment of “deactivation” will vary for different hearers, and so will the estimation of speakers in their “systematic examination” of assumptions. Consequently, “activation” should be viewed as a process that starts fully and progressively becomes weaker until new activation is required. Thus, if activation is the measure of givenness, it is plausible to maintain that givenness is scalar. Examples such (13) provided by Chafe (1976, p. 32) to support the discreteness of the dichotomy Given-New seem deliberately simple.

(13) There was a small earthquake (new). I felt one (given) last year at about this same time.

The prior mention of a referent (*a small earthquake*) is the most common basis for assuming that this referent will be given and pronominalized in the next mention (*one*). After a previous mention, givenness will extend to instances of similar referents, e.g., *There was a small earthquake* (new). *I am so afraid of earthquakes* (generic and given). So far so good, but Chafe leaves *last year* and *at about this same time* unanalyzed. Although it is a constructed example which lacks any context, we can assume that the first person pronoun (*I*) and the deictic (*this same time*) are Given, that *last year* is New and that *year* and the preposition *about* would have prominence focus.

(14)	I felt one last year at about this same time
	Given ———> New

It appears that the dichotomy Given vs. New as formulated by Chafe is not sufficiently specified to account for non-prototypical examples. However, the author adds “identification” of the referent as a second condition for givenness. When the speaker can assume the hearer can identify a referent, she will mark it as definite. Chafe specifies a range of assumptions made by speakers to mark referring NPs as definite: unique or salient referents (*the earth, the moon*), referents which stand out in a context (*the blackboard* in a classroom, *the dog* in a family), a prior mention in discourse (*I received a letter... the letter*), ad hoc categories, e.g., *the mechanic* (who fixed our carburetor last week), entailed referents (*We looked at a new house... the kitchen; I sold my bike... the money*) (Chafe, 1976, pp. 39-40).

The relationship between givenness and definiteness is briefly mentioned in Chafe’s article. Four possible combinations are identified in my examples shown in (15) and (16).

(15) That’s a lovely picture with those three ponies... That’s a nice one too. They are gorgeous pictures.

(16)

a.	Indefinite + New	a lovely picture
b.	Definite + Given	They
c.	Definite + New	those three ponies (!)
d.	Indefinite + Given	a nice one

The sentences in (15) are uttered by the same speaker at a museum in front of different pictures. In this situational context and assuming no prior mentions of any of the referents⁵, the four possible combinations of definiteness and givenness are illustrated in (16). *A lovely picture* (16) is an indefinite first mention, no assumption of previous knowledge or identification of the referent is assumed to be new to the hearers. *They* refer anaphorically to (at least) the two pictures previously mentioned by means of the personal pronoun, so it is definite and Given. *A nice one* (d) is indefinite, but although indefinite entails newness, since the indefinite referent (*one*) has been categorized previously (*picture*), the speaker can safely assume that the hearer

⁵ Strictly, *those three ponies* is not a participant in the representational structure since it is a post modifier in the NP *a lovely picture with those three ponies* (in fact “ponies” is marked by the speaker with tonic prominence as New) but this has been deliberately set aside for the discussion of Chafe’s taxonomy.

will be able to identify the particular referent which is mentioned, despite the fact that the referent of *one* and *a lovely picture* are different. Finally, examples like (16c) are classified by Chafe as Definite and New⁶. The author argues that “in such cases the definiteness is established on some other basis than immediately prior mention, *which would create givenness as well*” (Chafe, 1976, p. 43, my emphasis). There is a contradiction in the classification of cases like (16) as New and the explanation that the conditions for making these referents definite make them Given too, but Chafe leaves this contradiction unresolved. Apparently, two contexts are mixed up. *Those three ponies* is Definite and Given for the hearer because the referents can be identified in the picture but, at the same time, they are Definite and New in the discourse because there is no prior mention. Both the need for a distinction between textual and extra-textual levels of givenness and the shortcomings of a simple dichotomy Given-New were noticed by Prince (1981), whose scale of Assumed Familiarity will be discussed in the next section.

2.3 A taxonomy of Assumed Familiarity: Prince (1981)

For Prince (1981, p. 235) the purpose of communication is the construction of a discourse model, for which the text serves as a set of instructions containing discourse entities, attributes and links. Discourse entities are equivalent to discourse referents, which represent individuals, classes of individuals, or concepts, and are expressed by means of NPs. The linguistic form of NPs expresses different degrees of “familiarity”, roughly akin to givenness (p. 235). But Prince expresses a dissatisfaction with previous accounts of givenness, including Chafe’s, derived from what she considers a too broad –and arguably vague– cognitive approach to the phenomenon, confusion in the various definitions of givenness, and an insufficient linguistic categorization. Givenness had previously been applied in overlapping ways to the assumptions made by the speaker as to the hearer’s predictions about the appearance of linguistic items in sentences (predictability) based on what is in the hearer’s mind (saliency), and hence on the hearer’s assumptions or inferences (shared knowledge) (p. 231). The author proposes to substitute the term “assumed familiarity” for givenness as a way to avoid confusion, and to specify taxonomy of linguistic forms of NPs based on the assumptions of the addresser about the familiarity of the

⁶ Chafe’s example is *I talked with the carpenter yesterday*, without any verbal or situational context (Chafe, 1976, p. 43).

addressee with discourse referents. This is ultimately a classification of nominal referents into familiar (Given) and unfamiliar (New) with a number of sub classifications.

Prince sets out to formulate what she calls “the problem” of information in communication by narrowing down to their textual dimension both (i) the assumptions of the addresser about the addressee, and (ii) the addressee’s inferences drawn from the linguistic forms. In turn, textual forms are seen to respond both to the addressee’s expressive needs and extra-linguistic reality. Prince’s model of information in communication connects addressers and addressees through textual forms, in particular the expression of discourse entities in NPs. The form of NPs conveys the addresser’s assumptions about the information available to the addressee and also serves as basis for the addressee’s inferences about referents. Prince’s theory of discourse should be developed in three subsequent areas: (a) a taxonomy of the values of assumed familiarity, (b) a taxonomy of morphosyntactic realizations of referents, and (c) an account of correlations between both taxonomies (p. 233). In her 1981 seminal article Prince established the taxonomy of Assumed Familiarity but no systematic taxonomy of linguistic forms was attempted at, and the correlation between both was left as an area for further study. The model is presented in Figure 4, where “the problem” is represented by “?”.

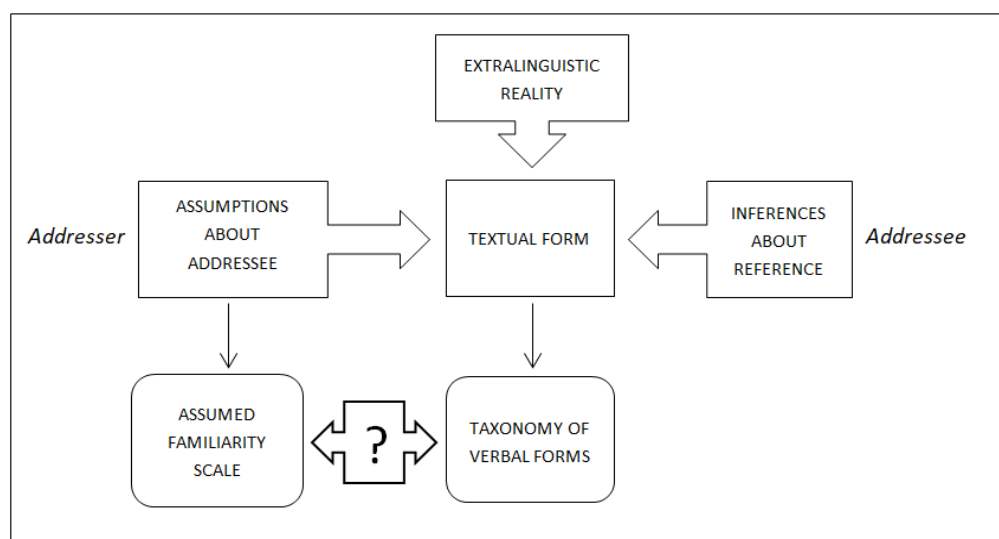


Figure 4. Prince’s model of assumed familiarity.

Familiarity has six basic parameters (shown in Figure 5): two types of New information: (i) brand-new⁷ and (ii) unused, two types of inferable information: (iii) inferable and (iv) containing

⁷ Brand new was further subdivided into unanchored expressions (eg., *a bus*), and anchored (eg., *a bus I took to come here*), that is, linked to another discourse entity. This distinction has been set aside in the present discussion for simplicity’s sake.

inferable, and two types of evoked information: (v) textually evoked and (vi) situationally evoked.

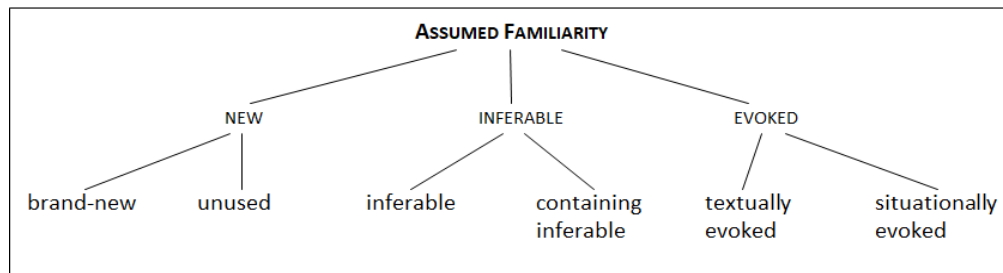


Figure 5. Taxonomy of Assumed Familiarity (Prince 1981, p. 237, simplified).

Brand-new entities are both new in the discourse and in the addressee's discourse model (e.g., *a famous jazz artist*). Unused entities are first mentions in the discourse but assumed to be part of the addressee's discourse model (e.g., *Keith Jarrett*). A discourse entity is inferable if the addresser can assume the addressee can derive the referent logically or plausibly from some other referent (e.g., a jazz trio → *the pianist*). Subclasses of inferables are expressions containing inferables, that is, the source of the inference is part of the expression (e.g., a first mention of *the jacket of the CD*, or *one of the tracks*). After a first mention of an entity, the referent will be part of the discourse model and available for identification of subsequent mentions (e.g., *Keth Jarret* → *him*). Referents can also be available in the extra textual context and their corresponding REs will be situationally evoked (e.g., [the object in your hands] → *this dissertation*). The taxonomy is illustrated with selected examples from a fragment of naturally occurring discourse in (17).

(17)

a.

some products // multi-- // er // go through from plant to supermarket shelf with **one company** // such as **bananas**, quite often, are produced on a **company's plantation**.

b.

And **they** grow **the bananas**, export **them**, and wholesale them in **this country**.

c.

Other products are bought on **the commodity**

	exchanges , like to a large extent tea // cocoa and a few other things like Rowntrees buying cocoa from Ghana but now they // seem to buy it anywhere that they can get it cheaply.
d.	And erm // so if they're buying it on the, on the market , th-- the company should pay a fair price // for, for what they've bought.
e.	(...) And // to be a fair traded product, the charter says that erm // the company who are selling the products should have // an input at that level ⁸

The bold-faced expressions in (17) can be classified as follows:

assumed familiarity	Examples
brand new	some products, one company, bananas, a company's plantation
unused	Rowntrees, Ghana
inferable	they (in 6b), the commodity exchange
containing inferable	the company who are selling the products
textually evoked	them (in 6b), the market
situationally evoked	this country

Brand new entities are all new in the discourse and new for the hearer. They appear in singular and plural NPs with indefinite articles (*some, one*), zero article in plural (*bananas*) or attribute (*a company's*). Unused entities are unmodified and unexplained. They are proper nouns

⁸ BNC. G3U (spoken) [623-626, 629].

mentioned for the first time but assumed to be part of the hearer’s discourse model. The reference of *they* is inferred logically from member to set (*a company* → *they*). The difference between this inferred entity and the textually evoked reference to *Rowntrees* (*they seem to buy... they can get...*) or the coreference between *bananas-they* should be clear enough. As to the inference to identify *the commodity exchange*, it requires cultural knowledge, i.e., there is a place where products are traded by companies. The referent of *this country* is typically context dependent and as classified as situationally evoked. The NP *the market* is correferential with *the commodity exchange* and hence textually evoked but arguably it could be treated as inferable (the market is not “anywhere that they can get it cheaply”). This second classification should be discarded according to the hierarchy or scale of use of Assumed Familiarity. As shown in Figure. 6 evoked entities are preferred over inferables.

Prince (1981, p. 245) identifies the following pattern of use of entities in discourse:

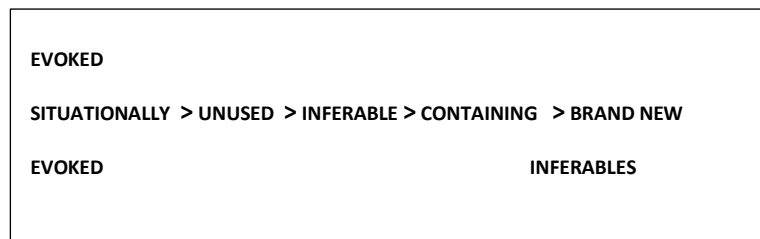


Figure 6. Prince’s familiarity scale (simplified).

Other things being equal, in accordance with the Gricean Maxim of Quantity⁹ the hypotheses made by the speaker to choose a referring expression from the Assumed Familiarity taxonomy follow the order in Figure 6 from Evoked/Situationally evoked (most preferred) to Brand new (least preferred). This scale is not built on a probability basis, with evoked as the most likely entities and brand new as the least. Instead, the hypothesis is that in conversation when speakers are cooperative, they word their utterances so that hearers make the most of old entities.

Prince illustrates her scale with two analyzes, one of a fragment of an informal spoken narrative and another of a short fragment of Dell Hymes’ *Foundations in sociolinguistics* (1974). The differences in Assumed familiarity between the spoken and the written text stem from the

⁹ Make your contribution as informative as is required. Do not make your contribution more informative than is required (Grice, 1989, p. 27).

metalinguistic inferencing and the abstractness of the written text, which produce in the written text (i) a lower number of evoked entities and a higher number of inferables, (ii) an increased complexity in the inferencing, (iii) no brand new entities, and (iv) few inferables. Interestingly, Prince doubts the reliability of her own classifications. Her analysis is presented “to be taken with a large grain of salt” and characterized by “shakiness” (p. 248). The author notices a blurring between unused and inferable entities and an extreme complexity of entities and attributes which complicates the analysis. By way of explanation –or apology– Prince indicates that “a more knowledgeable reader [than her] would of course have more Unused entities and fewer inferables” (p. 252). This is not very promising for any application of the taxonomy to a corpus of the type attempted here. Furthermore, no conclusions are drawn from the analysis, not even whether familiarity is binary –like Given and New– or ternary. Instead, a call is made to refine, revise or replace the taxonomic model of Assumed Familiarity before it is coupled with existing linguistic taxonomies of linguistic form.

Although Prince did not draw any conclusions, her article did identify the problem and formulated it in clearer terms than Chafe, and would provide the basis for authors such as Ariel or Gundel to refine the taxonomy by introducing concepts such as “accessibility” (Ariel, 1990), “activation” and “in focus” (Gundel et al., 1993). Ariel’s Accessibility Theory will be examined in 2.5 and section 2.6 2.6 The scale of Givenness: Gundel et al. (1993) will be devoted to Gundel’s correlations between cognitive status and REs. But first it is necessary to introduce Givón’s continuity scale, which serves as the basis for the coding of topic accessibility (Givón, 1983, p. 17) and as the foundation for Ariel’s Accessibility Theory.¹⁰

2.4 The scale of topic accessibility: Givón (1983)

Givón’s approach to the progression of information in discourse can be seen to continue right where Prince’s left it: the correlation of linguistic structures with degrees of givenness, now called “continuity” or “accessibility”. Continuity is presented as a central property of discourse across languages since it allows for the combination of propositions in units varying in hierarchy. Continuity operates semantically at various levels but finds its expression in linguistic forms. The macro-level of thematic continuity applies to the whole discourse and has the weakest structural links, notably conjunction. At the intermediate level of action, continuity functions by

¹⁰ Ariel admits that she extends some of the claims made by Givón (and other scholars) regarding accessibility (Ariel, 1990, p.17), although she makes clear that she was not aware of Givón’s formulation when she published her first account of Accessibility marking (ibid. p.225 note 2). Nevertheless, given the shared general approach and the particular categorization, the discussion here presents Ariel’s theory as a development of Givón’s.

tempspoken sequence and adjacency, as expressed by verbal tense, aspect and modality. Givón's 1983 study focuses specifically on the micro-level of topic/participant continuity within the thematic paragraph, that is, one with the same theme that also maintains topic and action continuity. Topic/participant continuity is expressed through several grammatical and prosodic devices including choice of subjects, pronominalization, and focus strategies (e.g., stress, cleft constructions) (p. 8).

Three major topic functions can be identified in the thematic paragraph depending on the position of topics in the chain of sentences, namely initial, medial and final which in turn conditions their continuity and persistence. Their characteristics are presented in Figure 7. Chain-initial topics are newly-introduced or changed. Continuity or discontinuity is considered in terms of the preceding discourse, while persistence is seen in terms of the succeeding discourse. In this regard, chain-medial topics are only relatively persistent.

	POSITION/FUNCTION	NEWLY-INTRODUCED	CONTINUING	PERSISTENT	DEFINITE NP
TOPIC	INITIAL	✓	✗	✓	✗/✓
	MEDIAL	✗	✓	✓/✗	✓
	FINAL	✗	✓	✗	✓

Figure 7. Features of topic functions in the thematic paragraph.

The availability of topics is expressed by the choice between definite and indefinite, which is conditioned by what the speaker can assume the hearer to be familiar with, i.e., is part of the hearer's "discourse file" (1983, p. 10). Although Givón does not cite Prince, his concept of familiarity is equivalent to Assumed Familiarity and the discourse file is akin to Prince's "discourse model" with an added distinction between a permanent file (stored in the long-term memory) and a temporary file (stored in the short-term memory). Definiteness is the primary expression of familiarity. Since medial and final topics have already been identified, both are definite. New initial topics are usually indefinite although it is also possible to find familiar ones, i.e., definite topics in chain-initial position (this is presented as a less frequent alternative in

Figure 7. Since familiarity for the hearer largely depends on memory, the process of identification of topics is favored by the nearness of the previous occurrence, with the easiest identification being when the topic is in the previous clause and the most difficult when the topic is newly-introduced. Additionally, not all topics are equally topical; those in subject position are more topical than those in non-subject positions. When a referent is introduced for the first time or has low activation in working memory, a more detailed form is used, indicating lower. Conversely, a simpler form is used when the referent is already highly activated and thus more accessible. This concept is known by various terms such as accessibility (Ariel, 1990), cognitive status (Gundel, Hedberg & Zacharski, 1993), or attentional activation (Givón, 2017). Generally, according to the principle of iconicity, the more unexpected or complex the information, the more detailed the coding required to convey it (Givón, 1983, p. 18). Identification is also affected by the presence of other topics in the preceding discourse. In this case, the fewer topics available, the easier the identification. However, “availability” or “identifiability” seem difficult to measure in a direct way and so Givón switches over to “continuity”, a concept taken from gestalt psychology, given the assumptions that (i) what is continuing is more predictable, and (ii) what is predictable is easier to process; and conversely, (iii) what is discontinuous is less predictable, and (iv) what is less predictable is harder to process (p. 12). This terminological change also signals a reversal in the steps to solve “the problem” as formulated by Prince. Instead of identifying degrees of familiarity first and then finding linguistic correlates, now linguistic devices to code topics and their distribution are correlated with psycholinguistic measurements. Regarding application to corpora, the advantages over previous formulations are significant. And both the quantification and the cross-linguistic potential of the model make it a solid foundation for the study carried out in the present research.

The specific details of quantification of (i) referential distance, (ii) potential interference of topics with other referents and persistence, and (iii) persistence of topics in number of clauses are a matter of discussion, and so is the coding of accessibility. But rather than a full discussion, the analysis of (18) below is only intended to provide an illustration of categories and identification of problems of application. Nevertheless, Givón’s scale of topic accessibility (Figure 8) offers a linguistically-centred, measurable tool which can be adapted to the coding of referential expressions in cross-language studies. Such an adaptation should take into account Ariel’s development of the accessibility scale (Ariel, 1990, ch.4). But before explaining the accessibility theory, some valuable observations can be made about Givón’s scale.

The first thing to note is that the scale is in fact a combination of scales: a phonological scale (zero anaphora > unstressed > stressed pronouns > full NPs), a word-order scale (R-dislocation >

neutral > L-dislocation > Y-movement¹¹), and semantic roles (agent > dative > accusative > others). Let's see how the coding can be applied to (18a).

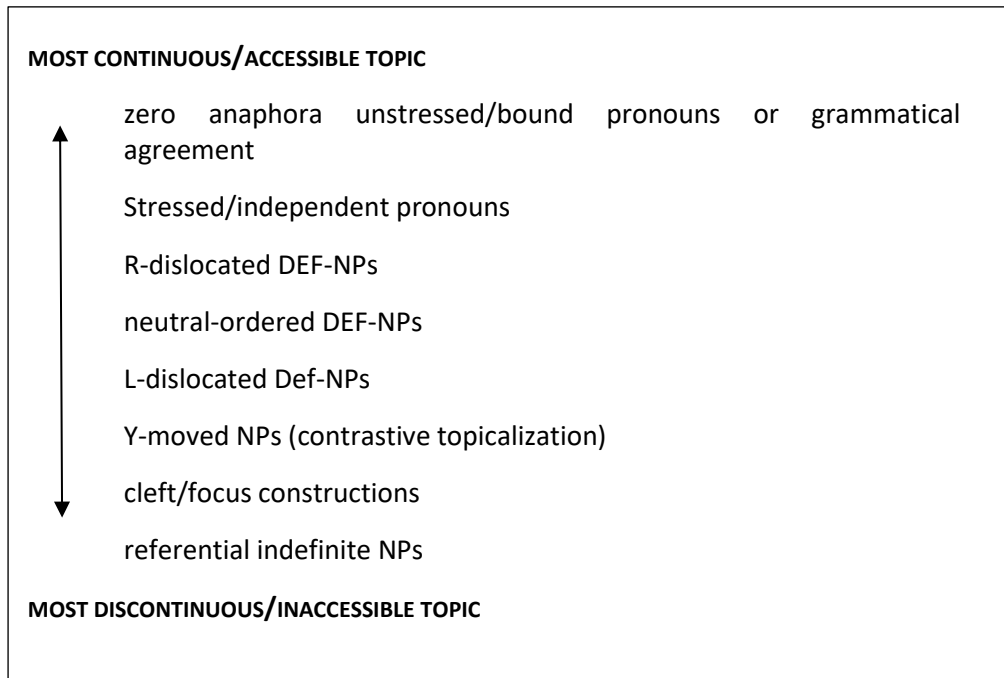


Figure 8. . Givón's scale of accessibility (Givón, 1983, p.17).

(18)

- | | |
|----|--|
| a. | In this action the plaintiff, Anna Jane <family name deleted> sues for damages for serious injuries she received in a motor car accident on the sixth of June, nineteen eighty seven.(1) |
| b. | (...) // The results of the accident were truly appalling.(2) |
| c. | // The plaintiff was just eighteen at the time (3) // she was in |

¹¹ Right and left-dislocation do not require illustration since they are common topicalization processes ("thematizations" in Halliday terms) but the less frequent Y-movement (SVO > OSV) is exemplified in the following exchange:

Speaker A: *We'll all miss Bill and Agatha.*

Speaker B: *Bill, we'll all miss.* (cf. Givón, 2001, p. 225)

	her A level year at school.(4)
d.	// In the car with her were her boyfriend Peter, his sister Jane and another school friend Lucy .(5)
e.	// All three of the plaintiff's friends were killed in the accident (6) and the plaintiff sustained very grave injuries // which kept her in hospitals and a rehabilitation centre // for almost three years.(7)
f.	It was not until the twenty third of May of nineteen ninety that she was finally discharged home to the care of her parents.(8)
g.	// In the accident she sustained a very severe closed head injury, amid shaft fracture of the right humerus // fractures of the lower left radius and ulna and a fracture of the right femur.(9)
h.	// She also suffered injuries to the left side of her chest and a laceration over the eye which went down to the bone.(10)
i.	She was a, she was admitted to Hinchinbrook hospital, Huntingdon (11) but ∅ was deeply unconscious (12) and ∅ not responding to stimulus.(13)
j.	Within a few hours she was transferred to the neurosurgical unit at Addenbrookes hospital, Cambridge.(14)
k.	There she remained critically ill for several months,(15) initially ∅ needing treatment with a ventilator to assist her breathing.(16) ¹²

Example (18) belongs to the public or institutional domain, in particular courtroom speech. It is a monologue and presumably written to be read aloud in front of the judge and the other party (lawyer and defendant) but not the plaintiff given the circumstances. Continuity is expected to follow the predictability and processability requirements assumed by the speaker, given the

¹² BNC. JJT (spoken) [1, 5-14]

impossibility to interrupt the reading for clarification. The thematic continuity of the first section of the passage is provided by the overall theme “claim for damages” (since liability had been admitted previously). Example (18) is taken from the very beginning of the claim so the value of referential distance of initial topics is maximal.

The action continuity develops the sequence of events after the accident suffered by the plaintiff, Anna Jane <Surname>¹³. And the topic continuity is kept by means of the main participant, referred to by the def-NP *the plaintiff*, unstressed pronouns *she*, *her*, or zero anaphora (indicated by \emptyset). If the excerpt is considered as a thematic paragraph, the strong continuity (backwards) and persistence (forwards) of the main participant is seen in its presence in every sentence with the exception of (2) and its function as subject in sentences 1-3-4-7-8-9-10-11-12-13-14-15-16.

CODING	EXAMPLES
Zero anaphora	sentences 12-13-16.
Unstressed pronouns	all pronominalized subjects (bold typeface), her (object) (5) & (7)
Stressed pronouns	None
R-dislocated DEF-NPs	None
L-dislocated DEF-NPs	None
Y-moved NPs	None
Focus constructions	fronting: in the car with her (5), in the accident (9), within a few hours (14), there (15)
	passivization (subjects): All three of the plaintiff's friends (6), she (11) & (14)

¹³ The BNC deletes all surnames from transcripts and recordings to preserve anonymity.

Neutral-ordered DEF-NPs	sentences 1-2-3-4-7-10-15
Cleft	It was not until the twenty third of May of nineteen ninety (8)
Referential indefinite NPs	<i>a motor car accident (1); hospitals, a rehabilitation centre (7); a very severe closed head injury, a mid shaft fracture of the right humerus, fractures of the lower left radius and ulna, a fracture of the right femur (9); a laceration over the eye which went down to the bone (10); treatment with a ventilator (16)</i>

The prediction that the more discontinuous/hard to process topics are, the more coding material they will require is strongly upheld by the referential indefinite NPs. And the reverse prediction that the more continuous topics will require little coding material is also supported. Topic continuity is maximal in clause complexes (11)-(12)-(13), and in non-finite subordinates (16), and in these instances total predictability is marked by zero anaphora. However, there is one exception to the overall pattern: the reference to the main participant as “the plaintiff” when there is no potential ambiguity¹⁴ (3) and also when the topic is within short referential distance (6). This choice of a full NP in cases where a pronoun or zero anaphora would produce no ambiguity is observed throughout the whole text of the claim and goes against Givón’s prediction. The reason is that in legal discourse the parties are conventionally and regularly identified by their role (e.g., defendant, claimant, plaintiff). The conclusion to be drawn for our purposes is that predictions should be adjusted to register/genre, in our case, narratives. The absence of stressed pronouns and dislocated NP in the sample is no coincidence either. These structures are characterized by spokenness and informality (Tizón-Couto, 2017, p. 304) so they are bound to be absent from legal discourse. Givón (1983, p. 19) admits that they are only found in unplanned colloquial registers but it is not clear how the subscales should be applied in register-sensitive studies and which coding categories apply. For instance, the word order subscale only includes R- and L-dislocations but omits clefts and other topicalizations.

¹⁴ The three topics in sentences 2-3-4 (not included in example 7) are “liability”, “the case”, “speeches”, and “judgment”.

Givón may have also overemphasized the role of distance and undervalued the role of structure/syntactic function. Chapter 3 reviews a selection of the abundant psycholinguistic literature derived from Carminati's Position of Antecedent Hypothesis (PAH) (Carminati, 2002). Based on the author's experiments in Italian, the PAH states that null (zero) subject pronouns tend to be used with antecedents in a preverbal subject position, while overt subject pronouns are chosen when the antecedent has a less prominent position (e.g., dative). Before the PAH was formulated,¹⁵ Fox (1987, p.131) pointed out several counter-examples to Givón's predictions about the use of pronouns and full NPs in anaphora. In (19) the choice of a full NP is justified by the syntactic role of the anaphor.

(19) But Lytton could not control Clive's appetite for life. Clive was a hungry-for-experience heterosexual.¹⁶

Anaphoric reference in a second sentence after two same-gender referents have been mentioned in a previous sentence will be a pronoun if the referent is the subject in the previous mention. Otherwise a full NP is necessary. That is why *Clive* is the subject of the second sentence in (19). In (20) there are also two same-gender potential referents for the pronominalized anaphora.

(20) We see many Vanessas in the portraits that remain of her (...) The young face as smooth, with firmly lined brows and liquid gray-green eyes. She had sensuous lips. She rarely used make-up. Somewhere Virginia speaks of her "passionate mouth". Her voice was beautifully modulated.¹⁷

In (20) the listing structure (*Vanessa(s)... the young face... she... she...*) justifies the pronominalization despite the presence of a nearer same-gender referent. *Her voice* is Vanessa's rather than Virginia's because it comes in a next mention on the list.

The previous objections call for a refinement of the scale for its consistent application to different modes of discourse but as it is, the scale has demonstrated its potential for cross-language studies¹⁸. Givón's scale was further developed in Ariel (1990) with a view to integrating

¹⁵ Carminati (2002) does not cite Fox (1987).

¹⁶ From *A house of Lions*, p. 45, cited in Fox (1987, p. 128).

¹⁷ Cited in Fox (1988, p. 126).

¹⁸ *Vid.* Hidalgo (2000).

discourse reference and anaphora within an accessibility theory taking into account social and pragmatic factors. The next section discusses whether Ariel's theory can solve the shortcomings identified in Givón's model.

2.5 Accessibility theory: Ariel (1990)

For Ariel (1990), discourse processing involves accessing antecedents, which requires retrieving different types of contextual information, from the more immediate linguistic and situational to the more general encyclopaedic knowledge although ultimately, antecedents are stored in memory, conceived of as one system with different phases of activation. The more accessible, i.e., the most recent, unambiguous, and salient, items are, the more strongly activated they will be (p. 14). Drawing on Sperber and Wilson's Relevance theory (1986), Ariel hypothesizes an inverse relationship between accessibility and processing effort, with the most accessible information requiring the least processing effort. In order to facilitate communication, addressers use the forms available in the language to guide addressees to retrieve contextual information. Since such forms not only facilitate processing but also indicate the amount of processing effort, an analysis of the formal marking will provide an account of discourse and cognitive functions in terms of information accessing and interpretation. In her 1990 monograph, Ariel centers on the accessibility marking of NP antecedents. Examples (21) and (22) illustrate the three types of contextual information that needs to be activated to retrieve referents (in bold-typeface): (i) encyclopaedic knowledge, (ii) physical environment, and (iii) linguistic context.

(21)

a.

The New Inn at Coln St Aldwyns, Gloucestershire, is under threat again. **The pub**, built around 1600, was bought by a developer in 1988, who wanted to turn it into housing.

b.

The Coln St Aldwyns Society was formed to fight **the closure**. **The developer** was eventually defeated through **the planning system**, where it was decided that **the pub** amounted to an important social amenity.

- c. **The pub** was then sold as a going concern and \emptyset refurbished.¹⁹

(22) “This place has been taken over by new owners” (A neighbour of Coln St Aldwyns speaking to another while walking by The New Inn).

Processing (21) requires retrieving the referent of definite descriptions and proper names (*The New Inn, Coln St Aldwyns, Gloucestershire, The Coln St Aldwyns Society, the planning system*) from encyclopaedic knowledge, while the referent of pronouns (*it*) and the zero anaphora can be retrieved from the linguistic context. In the constructed example (), the referent of the deictic (*this place*) is found in the physical environment. But the correlation between linguistic forms and types of context is not one-to-one. The linguistic context can also be given in definite descriptions (*the pub, the developer, the closure*). Also pronouns can be accessed through the physical environment, e.g., by substituting “it” for “this place” in (22). And all three types of context can be activated by the same linguistic form, e.g., a definite description in (23).

- (23) a. **The local** has been taken over by new owners (encyclopedic knowledge: the only pub in Coln St Aldwyns).
- b. **The local** has been taken over by new owners (two neighbours walking by The New Inn).
- c. The New Inn has been sold as a going concern. **The local** will reopen soon.

The multiple correlations between accessibility markers and types of context are represented in Figure 9 using broken lines.

¹⁹ BNC. A14 [756-760].

ACCESSIBILITY	MARKERS	CONTEXT
Low	definite descriptions proper names	encyclopedic knowledge
Intermediate	deictics	physical environment
High	pronouns gap (zero anaphora)	linguistic context

Figure 9. Ariel's geographic context-form correlations.

It is easy to demonstrate that a one-to-one correlation between contextual types and accessibility markers cannot be maintained. This leads Ariel to do away with the referential-anaphoric distinction (p. 7), that is, all REs should be considered anaphoric. Such equation can be problematic for specific indefinite descriptions (e.g., *When he returned from **a holiday** in August he had **some unwelcome news***), which are arguably referential but not anaphoric. But this will be discussed below as a shortcoming in Ariel's model.

Also, claiming that any referential form can be used with any contextual type would not explain the choice of NP form, and consequently Ariel (p.16) argues that what is coded in natural languages is the degree of accessibility of an antecedent (low, intermediate, high), rather than its contextual source (encyclopedic knowledge, physical environment, linguistic context). Retrievability is the benchmark to establish the degree of activation of entities that the addresser attributes the addressee, which in turn determine the type of accessibility marking. In other words, the accessibility marking indicates the level of difficulty for the addressee to find the referred entities as estimated by the addresser. Ariel's model has a clearer representation in Figure 10 with accessibility in the center as an interface between contextual types and linguistic markers.

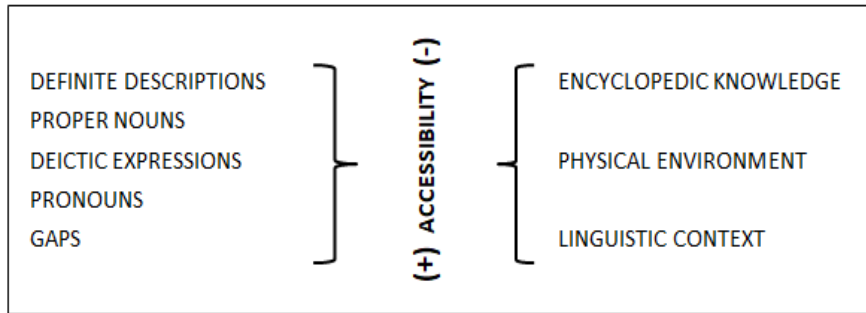


Figure 10. Ariel's model of accessibility.

Ariel (p. 28-29) posits four descriptive factors that make accessibility to antecedents higher or lower:

- (a) Distance between antecedent and anaphor.
- (b) Unity of anaphor and antecedent: in frame/world/point of view/segment/paragraph .
- (c) Competition for the role of antecedent.
- (d) Saliency of referent: being a topic or a non-topic.

(a) and (b) manifest the physical or cohesive relationship between the anaphor and the antecedent while (c) and (d) reveal the degree of activation of the antecedent. Using a corpus of four samples (2,200 words x 4) from four written text types (editorials, popular academic texts, news items and short stories) Ariel formulates the accessibility marking scale (Figure 10) and accompanies it with three principles which associate particular forms with specific degrees of accessibility (p. 80-81):

- (a) Informativity: (-) accessibility > (+) lexical information
- (b) Rigidity: (+) accessibility > (-) ambiguity in entity identification
- (c) Attenuation: (+) accessibility > (+) phonological attenuation

Ariel's theory of accessibility offers similar advantages as Givón's topic continuity model for cross-language studies and also shares some of the latter's shortcomings. Accessibility theory is presented as a convincing explanation of the use of REs. The categorization is linguistically based, detailed and ranked along a unified scale formulated with descriptive and explicative criteria. Ariel claims that universality applies to the principles that explain the choice of forms in terms of the degrees of accessibility, rather than the scale itself but most cited examples from other languages confirm the scale, and divergences and seeming counter-examples are argued

to conform to the principles. All this is promising for cross-language analyzes but a more pressing concern would be to check the validity of the accessibility marking in other registers, in particular, conversation. The fact that the only real texts Ariel analyzed were written may have biased her results at least regarding reference and point of view. Examples (24), (25) and (26) illustrate this point.

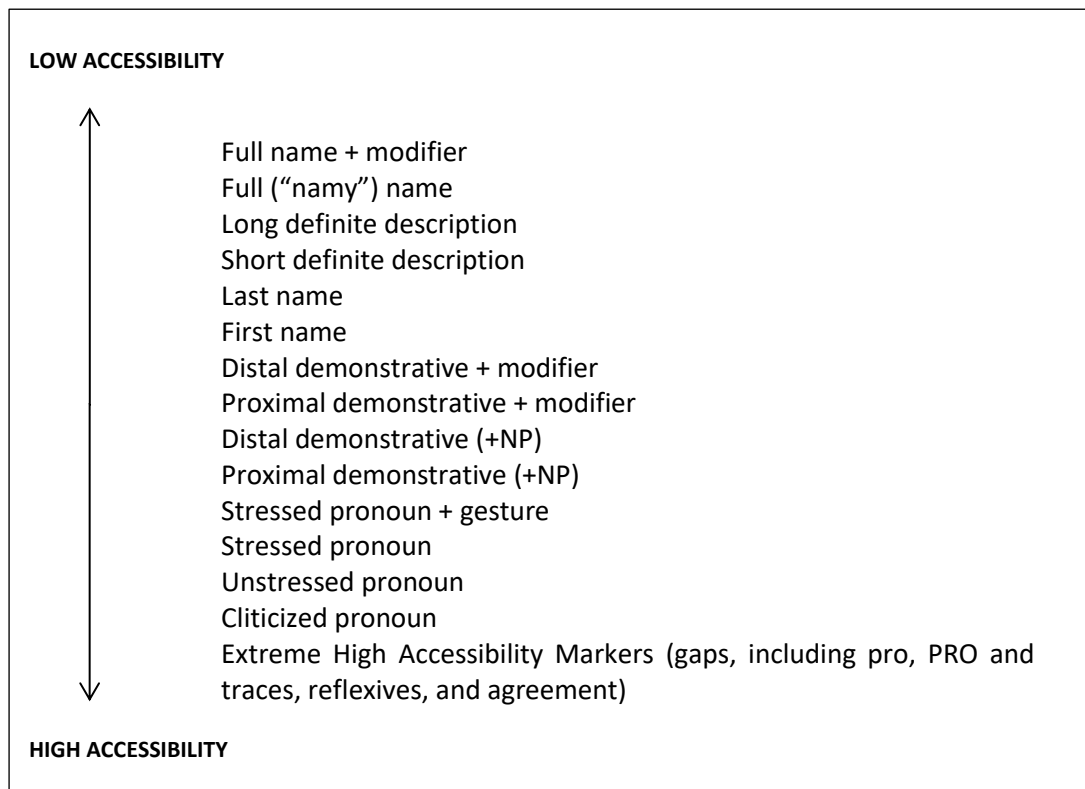


Figure 11. Accessibility marking scale (Ariel 1990 p.73).

(24) Doris: Er Golders Green

Unknown: Yes, yes.

Doris: erm well Hampstead Garden Suburb of

Unknown: Oh I know.

Doris: And I was with them when I had this holiday with my sister and we went abroad.²⁰

²⁰ BNC. K64 (spoken) [122-126].

(25) Carole: And we pushed her all round the pool but then we bought her a ring, just a ring// nice little one an-- //she's fine in that.

Pat: Mm.

Carole: But she took a dislike to it for some reason, she wouldn't go in it.

Pat: Mm.

Carole: But then **that holiday** was a bit unusual because she wasn't well all the time we were there really // not properly // she had that virus that was // mm²¹

(26) Simon: It's the same if you're erm erm tell her the take aways and how many twelfths in like a whole and stuff like that.

John: So it's all about sharing things out and it gets into this sort of fractions when we get when there's not enough to go round and we have to start cutting things up cutting the pizza up.// Okay erm now have you got any work to do during **the holiday** any homework?²²

The prediction made by the Accessibility scale ranks the three markings in decreasing degrees of accessibility for the hearer, shown in Figure 12.

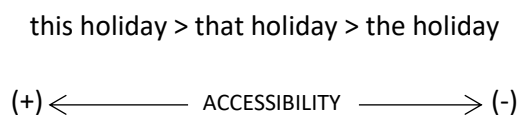


Figure 12. Accessibility of demonstratives and definite description.

Before applying the Accessibility scale to the above examples it should be remembered that any analysis of spoken language from a corpus presents a considerable difficulty given the frequent reliance of speakers on contextual cues of every kind. The role of the facial expressions of interlocutors, the objects in the physical environment, shared glances, or proxemics, to mention but a few, give a measure of the complexity of the factors responsible for the saliency of information/referents and the potential disparity between interpretations of participants in conversation and an analysis of a sample of spoken text, sometimes with no audio available.

²¹ BNC. KHB (spoken) [3412-3416].

²² BNC. FMH (spoken) [598-600].

With this proviso, the uses of markings in (24), (25) and (26) do not conform to the standard prediction in Figure 12. In (23) the speaker is telling her addressee about a private job she made for a Jewish family who lived in Golders Green (London). Without any previous mention of *the holiday* nor contextual cue (e.g., photo), the speaker uses the proximal deictic + modification (*with my sister*). The modification does mark the lower accessibility of the hearer to the referent but other things being equal, the hearer's oriented choice of demonstrative should have been *that*.²³ The reason for the choice of a proximal marker seems to be that it fits the point of view of the speaker. To explain this seeming inconsistency, Ariel suggests that the Accessibility scale also ranks empathy: "the higher the Accessibility Marker used, *given that retrievability is not affected*, the more the speaker empathizes with the referent under discussion" (p. 221, my emphasis). The italicized condition is key here. Since the position on the scale of near and distal demonstratives is different, there must be a difference in retrievability, no matter how minimal. Otherwise the concept of "retrievability" would be used in a broad all-or-nothing sense, something which would call into question the *raison d'être* of the scale.

In the text sampled in (25), several speakers (Pat=60, Carole's mother, Carole=36, Charlotte=2, Carole's daughter, and Joelle=18, au pair) are talking about some family photos. In one of the photos there is a baby referred to in the conversation only by the pronoun *her* (Charlotte?) who happened to dislike her rubber ring and who had a virus, which triggers what sounds like a family memory: *that holiday was unusual*. The referent is available to all hearers in different degrees of accessibility, presumably highest to Carole, medium-high to Pat and lower to Joelle. This raises one further complication for the application of the Accessibility scale as analytical tool. Who is the addressee that the speaker has in mind when establishing the degree of accessibility and choosing the marking? The easy answer is the immediate interlocutor. In (25) then, the distal demonstrative does not sound the optimal choice for the interlocutor in terms of accessibility. It is not difficult to see that the justification is the temporal distance so again the unity of the scale seems to fall short to accommodate what looks like a major variable.

Third and last, example (26) is probably taken from a conversation between a father (John) and his son (Simon). The child must be a first or second grader who has just started learning fractions and the father enquires about homework for "the holiday", a referent which seems readily available to the addressee given the situation although no previous mention is found in the text. Nevertheless, the speaker selects a low accessibility marker for his question. One could

²³ Using "the holiday" here would be barely acceptable and require a change of referent (e.g., the only holiday I had with my sister).

simply take the Accessibility scale at face value and say that the speaker has considered the hearer had a low accessibility regardless of situational factors. This would render predictions irrelevant and leave speaker choices (e.g., *this holiday/the holiday*) largely unexplained apart from saying that the speaker used marker (a-b-c) because he assumed the hearer to have degree X of accessibility to referent Y. This explanation is in fact circular reasoning.

With demonstratives –as with any other marking– the addition of more information, e.g., a relative clause, will turn the whole marking into low accessibility while still maintaining the hypothesized ranking.



Figure 13. Accessibility of more informative demonstratives and definite descriptions.

Ariel (p.53) gives the constructed examples (27) and (28) to prove the relative ranking of the marking:

(27) **This/That holiday we spent in Cyprus** was really something.

(28) The holiday we spent in Cyprus **was really something**.

In addition to the difference in accessibility, her analysis stipulates that (27) probably refers to the speaker and her addressee both activating a common memory, stronger if *this* is used. In (28) the referent can be a memory shared by the speaker and someone other than the hearer. In Hebrew the proximal/distal distinction exists although the distal is rather infrequent and sounds strongly marked; and the proximal/unmarked demonstrative will be used to refer to long-forgotten memories. In Ariel's view, both in English and Hebrew the proximal and distal intermediate accessibility markers (*this/that*) will raise livelier memories (from the episodic memory) than the low accessibility marker (*the*), which seems to activate encyclopedic knowledge.

The previous explanation is necessary to consider the accessibility of equivalent examples (29) and (30) in Spanish:

(29) **¿Estas/¿Esas/Aquellas vacaciones que pasamos en Chipre** fueron algo especial.

(30) **Las vacaciones que pasamos en Chipre** fueron algo especial.

The first thing to note in (29) and (30) is the threefold distinction of demonstratives (masculine: *este-ese-aquel*, feminine: *esta-esa-aquella*, neuter: *esto-eso-aquello*, plus plural forms) with the addition of middle distance *ese* to the basic distinction proximal/distal. From a very limited survey among native speakers, none would use the proximal *estas vacaciones* with the further information of the relative²⁴ unless as an anaphoric reference to a previous mention, and it is inconsistent to provide so much information for such an accessible referent. There were even more serious doubts regarding the acceptability of the middle distance *esas vacaciones* plus the relative in any potential context. On the other hand, *Aquellas vacaciones fueron algo especial* would raise no objections as the point of view of the speaker. Thus, the only real choice of the more informative markers in Spanish would be that between the distal + relative and the long definite description: *Aquellas/las vacaciones que pasamos en Chipre fueron algo especial*. The difference perceived between both markers is that *aquellas vacaciones* emphasizes the distance (long ago) expressed from the point of view of the speaker while *las vacaciones* is a neutral expression of a referent accessible to speaker and hearer, i.e., an unmarked topical theme. These interpretations call for verification but raise doubts as to the unidimensional marking of accessibility and its distribution across languages.

A major objection to Ariel's theory has been her neglect of indefinite expressions (Reboul, 1997, pp. 98-99). Ariel ignores indefinites because she finds them irrelevant to accessibility (Ariel, 1990, p. 225 note 2) but indefinite NPs are commonly used with referring intentions whenever the speaker has a specific entity in mind, as in example (31), taken from Fodor & Sag (1982, p. 355).

(31) A student in the syntax class cheated on the final exam.

For Fodor and Sag (1982, pp. 355-6), who cite two previous studies, there is one use of the indefinite NP in example (31) as a referring expression ("some particular student in the class cheated"), the same as proper names or demonstratives. It is true that this kind of reference is not anaphoric and so Ariel is justified in not considering it but at the same time indefinite descriptions can be referential and mark the lowest accessibility: zero accessibility. What causes the problem is that early in her work Ariel does away with the distinction between reference and anaphora (p. 7) and her whole theory is built on the basis that all anaphoric expressions are referential, so reference is taken for granted and remains undiscussed.

²⁴ Without the relative, "Estas vacaciones fueron algo especial" would be unusual and require a double time frame, eg., someone describing (now) a photo of the holidays or a home video (then).

An alternative solution to “the problem” offered by Gundel et al., (1993) will be examined in the next section. These authors propose a scale of six cognitive statuses to explain the use of REs in five languages including English and Spanish. Their classification, based on an empirical study, attempts to explain the distribution and interpretation of referring linguistic forms (determiners, pronouns) in terms of pragmatic factors.

2.6 The scale of Givenness: Gundel et al. (1993)

Gundel’s model of Givenness continues the tradition of approaches that attempt to explain the identification of referents in discourse by correlating linguistic forms and knowledge, in particular Prince’s (1981) and Givón’s (1989). First a theory is formulated to explain the distribution and interpretation of REs in discourse in terms of cognitive statuses, understood as location in memory and attention state (Gundel et al., 1993, p. 274). Then a six-fold taxonomy of cognitive statuses is put forward with their corresponding pronominal, demonstrative and nominal expressions in English, Chinese, Japanese, Russian and Spanish. Figure 14 combines the Givenness hierarchy and its correlations with English and Spanish (pp. 275-284). It should be noted that the Givenness scale considers primarily the expression of referents in NPs, and only secondarily factors such as syntactic class, word order or intonation. The scale is arranged from left to right in degrees of restrictiveness regarding the number of potential referents, with “in focus” as the most restrictive status and “type identifiable” as the least.

	IN FOCUS > ACTIVATED > FAMILIAR > UNIQUELY > REFERENTIAL > TYPE					
	IDENTIFIABLE					
	INDENTIFIABLE					
ENGLISH	<i>It</i>	<i>HE, this, that</i> <i>this N</i>	<i>that</i> <i>N</i>	<i>the N</i>	Indefinite <i>this N</i>	<i>a N</i>
SPANISH	∅ <i>Él</i>	<i>Él</i> <i>este, ese,</i> <i>aquel</i> <i>este N</i>	<i>ese N</i> <i>aquel</i> <i>N</i>	<i>el N</i>	∅ N <i>un N</i>	

Figure 14. The Givenness hierarchy and correlations in English and Spanish.

Gundel et al., (pp. 276-79) organize the cognitive statuses along the following lines. “In focus” referents are located in short-term memory and receive the current focus of attention. This is the necessary condition for the use of (unstressed) personal pronoun or zero pronouns, often coreferential with the topic of the previous clause. “Activated” referents are also in short-term memory but their activation may come from long-term memory, the linguistic or situational context including the participants themselves, and they are expressed by demonstratives and stressed personal pronouns. “Familiar” referents are found in long or short-term memory depending on the presence of a previous mention. The sufficient condition to qualify as “familiar” is met by distal demonstratives. “Uniquely identifiable” referents are stored in the addressee’s memory and can be recognized by means of the nominal itself with the definite article. Referents which are not uniquely identifiable by the simple definite description will require information in the rest of the clause. With the “referential” status the addresser points at a particular object which can be retrieved or constructed as an existing representation of a type. This condition is necessary for all the previous statuses but only sufficient for the indefinite use of *this* in colloquial English. Finally, in “type identifiable reference” the addressee only has access to the class of objects designated by the expression. This is sufficient for the use of the indefinite article *an* in English.

The main difference between this hierarchy and previous typologies is that the six statuses are related implicationally from the more activated and restrictive to the least (left to right in the hierarchy), that is, if a referent meets the conditions for status X, say “activated”, this entails its meeting conditions for all lower-level statuses, i.e., “familiar”, “uniquely identifiable”, etc., represented in Figure 14 by “>”.

This hierarchy of implications is shown in examples (32), (33) and (34), where provides a better account of demonstrative and definite expressions examples such as than Ariel’s Accessibility scale. In all three cases the referent is at least uniquely identifiable by the addressees (*the holiday*) and this explains the possibility of using *the holiday* in all three cases, but in (32) the speaker has presented it “in focus” (*this holiday*) and in (33) as “familiar” (*that holiday*). The entailments predicted by the Givenness scale accounts for the series of acceptable choices of REs in examples (32), (33) and (34), presented in Figure 15. As can be seen, the same form can be used for more than one status in discourse, something that Ariel’s scale does not predict or explain.

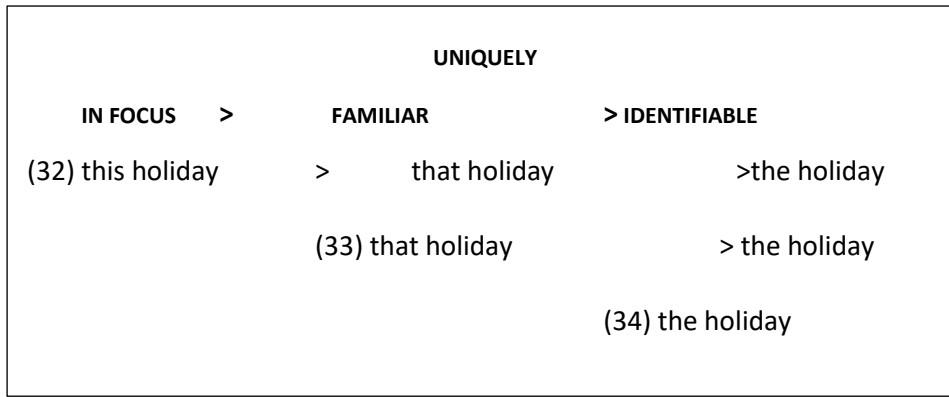


Figure 15. Implicational relations of cognitive statuses in examples 32-33-34.

It should be noted that the reverse implication is not possible. In example (33) *that holiday* would be unacceptable, and so would be *this holiday* in (32). The Givenness scale looks superficially like Prince’s Familiarity scale. “Brand new entities” parallel “type identifiable”, “unused” corresponds roughly to “familiar” and “containing inferable” to “uniquely identifiable”, but Prince’s categories are discrete and mutually exclusive while Gundel’s statuses are entailed. Gundel et al. pay special attention to Prince’s “inferables”, defined as logically or plausibly derived from entities already evoked or inferred (Prince, 1981, p. 236). Gundel et al. (1993, p. 281) give two long examples, one in which “a whole lengthy paragraph” is inferable from the typed affidavit the speaker is reading, and another in which “the pulse” is inferable from a patient’s medical condition. It is worth noting that all the inferables given by Prince are definite, e.g., “I got on a bus” > *the driver was drunk*. Generally, inferables cannot be expressed by means of pronominals or demonstratives (“I got on a bus” > **that driver had a lisp*, **s/he had a lisp*) but Gundel et al., (*ibid.*) convincingly argue that inferability is a matter of activation, from low (type identifiable in *a whole lengthy paragraph*) to high (familiar or in focus), as seen in example (35).

(35) Right, any time you read a story, whether it be religious or science fiction, or whatever, in which somebody is taken out of one body and put into another body erm and the story goes, and then <unclear> was turned into a pig, or whatever, erm, presumably that author has it in mind that you can still identify <unclear>, that same guy, first in one body and then in the body of a pig.²⁵

²⁵ BNC. HYD (spoken) [106].

In (35) activation seems powerful enough for the inferable to be represented by a demonstrative: a story in which somebody was turned into a pig > *that author*. The conclusion is that *contra* Prince, inferable is not a separate category in a familiarity or Givenness scale but rather a factor contributing to activation.

Regarding the universality of the Givenness scale, the correlations presented in Figure 14 seem straightforward enough, with the exception of indefinite-*this*. Gundel et al., (1993, p. 275, note 1) do not consider indefinite-*this* as a different use of the near demonstrative but a different form altogether, characteristic of colloquial English. Like all definite expressions, it is referential and arguably an extension of the cataphoric use of the near deictic. Two conditions are set out for the use of indefinite-*this*: (i) the referent is noteworthy, and (ii) likely to be talked about later. Gundel et al., (1993, p.277) only give one constructed example (36) to illustrate this referential status.

(36) **I couldn't sleep last night. This dog (next door) kept me awake.**

In (36) an existing representation of the referent can be retrieved or constructed by the hearer, and the referential status entails mere type identification (i.e., *a dog kept me awake*). This form was not found in any other of the five languages studied.

More recently, Hedberg, Gundel, & Borthen, (2019, p. 109) explain that the form is more natural when the speaker keeps on referring to the same topic. The authors illustrate this use citing an example from Maclaran (1982, p. 90).

(37) **He put a/this 31-cent stamp on the envelope, and only realized later that it was worth a fortune.**

The use of the indefinite demonstrative is felicitous because conditions (i) and (ii) above are met (cf. **He put this 31-cent stamp on the envelope, so he must want it to go airmail*). The indefinite-*this* has been extensively discussed in English (Prince, 1981a; Ionin, 2006; Hedberg et al., 2019). The best account of indefinite-*this* is provided by Prince (1981a) and citing examples from spoken language only. She found total consistency in the distribution of indefinite-*this* as first mention, often to introduce new topics that were going to be talked about. The tests for this form are replacement by indefinite article *a/an* and occurrence in existential-*there* constructions, and phonologically, indefinite-*this* is unstressed. All three conditions are met in example (38).

(38) There's a big bang // I'm driving **there's this great big bang** and the bonnet lit up²⁶

Only indefinite *a* can substitute for *this*:

(38) a. There's a/*the great big bang...

However, contrary to Prince's findings, in (38) there is a previous mention of the explosion by the same speaker introducing it as new topic right before the pause. Indefinite-*this* constructions seem frequent enough in both spoken and written English. The BNC gives 57 instances of "there's + this"²⁷, out of which 19 are spoken, as in (39).

(39) there's two parts, there's this scene in the pub and then there's this er scene on the cliff top and the second scene one's a bit better²⁸

Again, the two instances of indefinite-*this* in (39) can be replaced by the indefinite article (*there's a scene in the pub... there's a scene on the cliff*) but arguably, the definite article could be equally acceptable here (*there's the scene in the pub... there's the scene on the cliff*). It must be also considered that there is a previous mention of scene in the pub, introduced as brand-new information *there's a scene in the bar...*, the same as the first mentioned in (39). In "there's + def. NP" constructions we find the so-called "list-*there*", a variant of the existential-*there* which often appears in multiple answers to questions both with definite and indefinite NPs and a characteristic intonation: *There's the A ↗, (the B ↗, etc.) and the C ↘* (Rando & Napoli, 1978, p. 300-1). It can be contended that in *There's the scene in the pub* the referent is given and uniquely identified, i.e., that the interactants have seen the scene in question, whereas in *There's a scene* the referent is brand-new and type identifiable only. Then the indefinite-*this* would be found in between, referential as specific indefinite NPs but not uniquely identifiable.

Counter examples such as (39) indicate that the little evidence of indefinite-*this* obtained from naturally occurring conversation is insufficient to draw conclusions as to its distribution. I have my reservations regarding its status as unique form but have no doubts regarding the special

²⁶ BNC. KB7 (spoken) [8612].

²⁷ The BNC only lists one instance of "there is + this".

²⁸ BNC. JSB (spoken) [198].

use of the demonstrative for referents which are noteworthy and topics which are continued in the discourse. Yet, it remains to be demonstrated whether these expressions are non-anaphoric, as Hedberg et al., (2019, p.109) imply when they state that this form introduces a new topic.

The previous discussion becomes particularly relevant in view of the recent argument by Hedberg et al. (2019, p.109) in favour of the existence of an indefinite-*este* in Spanish, something unattested in any language other than English in the early work by Gundel et al., (1993). The authors give examples (40) and (41) to justify the indefinite use as the typical way to start of a joke by introducing a brand-new referent.

(40) Ya (sic) este tío a mi lado, y... (There's this guy next door to me and...)²⁹

(41) Hay el tío este, y... (There's the guy this, and...)³⁰

This sounds like one possible use of the Spanish proximal demonstrative to introduce a new referent and the evidence provided to support it is indefinite is that *un tío* can be substituted for both *este tío*, and *el tío este*. According to the authors, this use of the proximal demonstrative is endowed with an affective value “connoting nuances of vividness and emotional engagement on the part of the speaker” (*ibid.*), a characteristic shared with the indefinite-*this* in English. No example is given of such affective connotation and certainly examples (40) and (41) hardly illustrate it. Giving only two decontextualized and incomplete examples of a specific register is not enough to attest an extended use, let alone a grammatical category. In addition, the authors treat the prenominal and postnominal *este* as equivalent. Since the normal position of demonstratives is prenominal, the postnominal position is marked although authors are inconclusive regarding the type of marking. Brugè points out a depreciatory meaning in the use of the postnominal demonstrative, but this meaning does not seem to be identified in all cases by all native speakers (Brugè, 1996, p. 1, note 3). Its use may be categorized as informal, as in (42), although it is by no means restricted to spoken language.

(42) ¿qué tal te va con el tío este que te gusta? (How are you doing with the guy this you like?)³¹

It is not clear whether the depreciatory meaning in (42) is due to the postnominal demonstrative or the appellative “tío”. This noun can be used to refer to a referent whose name is not known to

²⁹ The authors indicate they asked native speakers of Spanish without giving their nationality. In (38) there must be a typographic error. The utterance should be “Va este tío...”

³⁰ This example is not acceptable in Peninsular Spanish. A more natural way to begin a joke would be “Viene el tío este, y...”

³¹ CREA. Grupo G6, Obras públicas, párr. 4

predicate either a positive or negative quality, as in *¡Qué tío más pelma!* (What a boring guy!) or *¡Qué tía más lista!* (What a smart girl/woman!). In fact most examples in the CREA lack this depreciatory meaning or even express appreciation, as seen in (43).

(43) [Nicolás Casaus] todo lo observa con un carácter risueño, humorado, es fantástico **el hombre este**.³² (Nicolás Casaus observes everything with a cheeful, humorous spirit, he's brilliant, the man this)

But the above does not compromise the applicability or predicting capacity of the model, whose advantage compared to previous approaches lies in the hierarchy of implications along the scale. Gundel et al., (1993, p. 293) acknowledge the uneven distribution of givenness statuses, extreme in the case of “referential”, of which they found only one instance in their sample. Overall, their results support a considerable parallelism in the distribution of givenness statuses and their linguistic forms in English and Spanish.

Apart from obvious differences such as the realization of “in focus” by means of zero pronouns in Spanish, which is not possible in English, or the threefold distinction of Spanish demonstratives, the distribution of forms follows similar patterns. Definite NP is the most frequent form in both English and Spanish and, as predicted, in both languages this form is used for unique status –the necessary condition for the form– but also for familiar, activated and in focus. Likewise, indefinites *a* and *un*, which meet the necessary condition for type identifiable, only extend to referential (Gundel et al., 1993, p. 292). Even the relative occurrences of the different forms are not dissimilar, considering that the samples analyzed contained 655 tokens in English and half that figure in Spanish. These similarities make the hierarchy of givenness as suitable tool for the cross-linguistic analysis of referential forms.

It should be stressed that all models discussed so far adopt a scalar approach, though the scale may vary in the number and type of dimensions featured. The next section presents Kibrik's multifactorial model of referential choice (Kibrik, 2011) as an alternative non-scalar approach.

³² CREA. Hoy por hoy, 13/05/97, Cadena SER, parr.1

2.7 The cognitive multi-factorial model of referential choice (CMF): Kibrik (2011)

Starting from some observed shortcomings in previous approaches to referential choice, Kibrik (2011) does not give an alternative explanation or correlation between cognitive factors and linguistic forms but offers a reformulation of “the problem”. His approach is cognitive, like Prince’s (1981), Givon’s (1983), Ariel’s (1990) or Gundel et al.’s (1993) but concepts such as activation, saliency or accessibility are deemed only vaguely cognitive and so the author constructs a stronger framework derived from psychology and neuroscience in the formulation of his hypothesis, namely, that referential choice is based on the speaker’s and hearer’s working memory (WM) and attention (Kibrik 2011, p.366). A second shortcoming of previous approaches is the circularity of explanations, i.e., cognitive statuses are based on the referential choices derived from them. Instead, Kibrik establishes referential activation separately from the linguistic choices. Thirdly, previous quantitative measures of factors affecting referential choice have been offered (e.g., distance to antecedent) but each factor seems only partial, so the CMF approach combines and computes multiple activation factors in the model.

Kibrik’s theory of referential choice runs as follows: attention and working memory are cognitive constructs responsible for reference and referential choice. Attention and working memory are related but independent processes in that one thing is the selection of a referent and another is the higher or lower activation. Attention operates intentionally by selecting referents, a cognitive process which results in the linguistic correlate of reference or mention. Attention controls the activation produced in the working memory, and the degrees of activation are linked to the referential choices (e.g., low activation requires a full NP, for a high activation, a shortened form will suffice). In turn, only after a speaker has decided on a particular mention of a referent (e.g., as subject) does linguistic choice become possible. Attention is a volitional process of selection while working memory activation functions automatically, dependent on attention (Kibrik, 2011, p. 381). The model is represented in Figure 16.

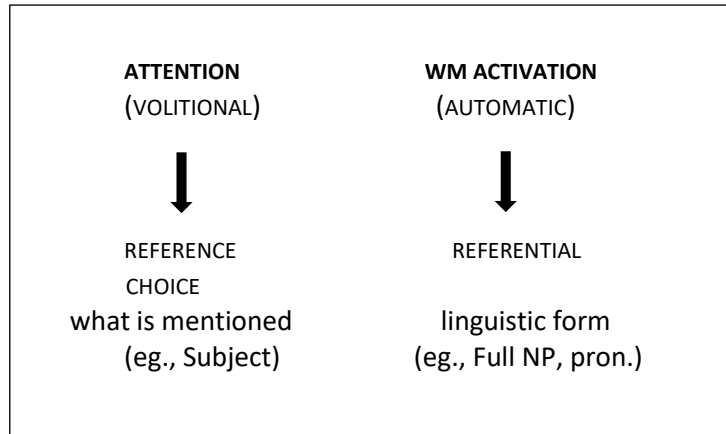


Figure 16. Kibrik's theory of attention and WM activation.

Referential choices in example (44) illustrate the possible combinations of attention and activation in cognition and in discourse.

- (44) a. Brenda you know I always said // wouldn't it be lovely to be thin and I
said thank God
- b. Jean No!
- c. Brenda for a bit of fat on you!
- d. Jean Oh absolutely!
- e. Brenda I said because
- f. Jean Well I remember Jackie Evans telling me,(1) she came back from // sh-
she came up to meet me in London one day(2) and she came up with //
the woman, a German woman, who at that time was // a buyer for Ar
my and Navy // er // women's fashions(3) // and this woman said that //
the model girls // who are so thin(4) // she said(5) // they're al ways
bursting into tears ause they're under such stress to keep their weight
down(6) // and / their boyfriends don't like it because // the girls are
lovely to have on their arms to take out,(7) you know everybody sort
of goggles,(8) you know,(9) lovely slim girl with yellow half way down
her back etc.(10) // but, in fact, these girls get very, very ratty!(11)

g Brenda Mm // have you seen Jackie // lately?³³

In (44) Jackie Evans is mentioned by Jean in (f1). This referent is attended to for the first time and has not been activated in over nine hundred turns in the conversation and consequently has not been mentioned. Jean’s attention brings the referent into the conversation by means of a full NP (First name + Surname) but at this moment t_n it is not activated. It becomes immediately activated at t_{n+1} and so when in (f2) the referent is attended to (mentioned) again, a reduced referential device is used. Activation extends and attention is maintained in (f3), hence reference by means of a pronoun. The referent is not attended to in the rest of Jean’s turn but presumably remains activated from (f4) to (f11). However, activation decreases quickly and in the next turn Brenda uses the first name (Jackie) instead of a pronoun. This would correspond to Chafe’s semiactive activation state, in between active state (short-term memory) and inactive (long-term memory) (Chafe, 1995, pp. 53-54). The possible combinations of attention and activation together with the previous partial analysis of reference in (44) are presented in Figure 17.

Cognitive structure	–attention – activation	+attention –activation	+attention +activation	–attention +activation
Linguistic structure	referent is not mentioned	referent is mentioned by a full NP	referent is mentioned by a reduced referential device	referent is not mentioned (but it is activated)
Example: referent ‘Jackie Evans’ in 34	(a)-(e)	(f1)	(f2)-(f3)	(f4)-(f11)
Referential device	n/a	<i>Jackie Evans</i>	<i>She</i>	n/a

Figure 17. Attention and activation in cognition and discourse (Kibrik, 2011, p.382, my examples).

³³ BNC. KBF (spoken) [935-941]. BNC transcripts deliberately omit names to keep anonymity. In order to maintain the full NP reference of the original mention, in (f1) Jackie has been given an invented family name. Sentences have been numbered to locate referential devices easily.

It should be noted that while attention decays gradually, linguistic forms are discrete, so that at a certain point a different form is chosen. Accordingly, Kibrik (2011, p. 378) formulates the main law of referential choice in the following terms: “If activation is above a certain threshold, the speaker chooses a reduced referential device, such as [a pronoun]. If activation is below such a threshold, a full NP is used.” This has two caveats: (i) thresholds are not categorical, there are certain intervals on the scale where referential choice is almost inevitable (e.g., very low activation excludes a reduced referential form) but there are some intervals where two forms are equally appropriate, and some others where one form is preferred and another is only marginally possible; (ii) there are some checks to referential choice independent of activation called “filters”, notably “referential conflict”, which favors a full NP when the addressee may have assigned the reduced form to the wrong referent (pp. 380-1).

One advantage of Kibrik’s model over previous approaches is that attention and WM activation are constructed as factors determining referential choice but remain independent from the actual linguistic choices. This is important to avoid circular reasoning of the type noted in Ariel’s explanations above, that is, mapping factors on referential choice and then taking linguistic forms as demonstration of the operation of factors (*vid.* also Fox, 1987a). Kibrik (2011, p. 395) does take into account a number of factors which affect activation derived from discourse context (e.g., distance to nearest antecedent, subject role) or the referent’s internal properties (e.g., animacy, status of protagonist). Then a sufficient number of factors are computed cumulatively in an aggregate activation score. The particular factors will be dealt with below but the fundamental idea of the model is that the activation score is given a value between 0 and 1, and that above certain threshold a semantically reduced form (zero or pronoun) is possible. If it is not, then a full NP will be chosen. The model is presented graphically in Figure 18. Kibrik supports his model with numerous studies in psychology and neuroscience because he considers that referential choice is almost exclusively based on cognitive controllers and here comes my first misgiving. Every referential choice is ultimately cognitive but reference in naturally occurring discourse has a communicative dimension that cannot be solely explained in terms of attention and WM activation. Pragmatic factors play a significant role in reference, as Gundel et al. (1993) have demonstrated by linking givenness and Grice’s maxim of quantity. Givón (2017) also discusses quantity, labeled “code-quantity”, in connection with mental effort or cognitive complexity, and hypothesizes that activated information requires the smallest amount of code

and processing effort. Conversely, the activation of an inactive referent and the processing of larger coding and change require more mental effort (p. 50).

Kibrik only mentions the addressee in connection with the “filters” to referential choice. The author admits that the speaker’s assessment of the recoverability of a referent by the addressee informs referential choice, but this is excluded from the model in favor of the more basic process of activation-based selection. The hearer is also taken into consideration in the speaker’s strategies regarding choice. The referential choices made by a speaker can be egocentric or overprotective depending on their reliance on the speaker’s discourse model or the hearer’s respectively. An instance will be given in the discussion of example (43) below but these strategies seem to offer a ready-made explanation to whatever the model does not predict on the basis of activation scores. Then the actual choice will be taken as evidence that the speaker computed activation factors differently from the model’s predictions, which is a kind of circular reasoning.

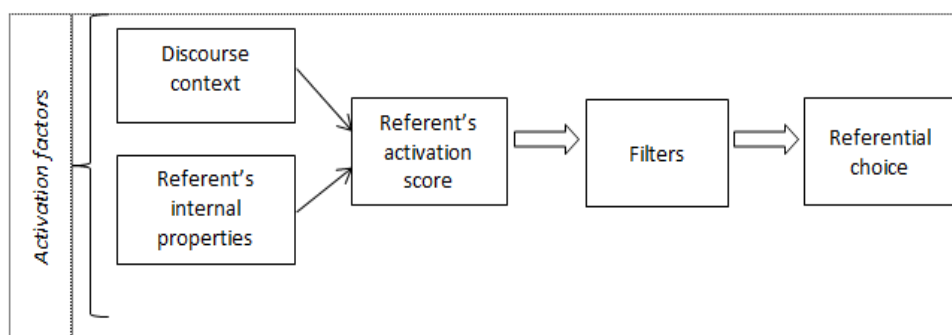


Figure 18. The CMF model of referential choice (Kibrik, 2011, p. 394).

The previous objection affects the theoretical soundness of the approach. A second and practical objection concerns the oversimplified referential choice between full NP and reduced referential forms, i.e., zero or pronoun. Obviously this distinction creates a big area of indeterminacy regarding the possible choices among all the intermediate forms in between (e.g., demonstrative + NP, demonstrative, etc.). Not only are there many other referential forms available in English, but also they can be ranked in degrees of givenness or accessibility, as in Ariel’s Accessibility marking scale (Figure 10 above). For instance, how does an intermediate form such as the first name in (34.g) compute? Is the speaker using an overprotective strategy as opposed to the egocentric choice of a pronoun? Does Kibrik imply that the same activation score can lead equally to a long definite definition or a demonstrative NP and that the difference is explained by the speaker’s strategy? Then the explanatory power of this model is little improved compared to previous approaches.

Kibrik demonstrates the model by establishing values for 11 activation factors and assigning a numerical weight to each value. Once the total activation score is computed in intervals, they are matched to actual and potential³⁴ choices of referential devices in the corpus text along the scale in Figure 19, which ranges referential choices along a cline of activation from minimal activation on the left end to maximal on the right.

Potential referential form	full NP only	full NP, ?pronoun	pronoun / full NP	pronoun, ?full NP	pronoun only
Attested referential form	full NP			Pronoun	

Figure 19. Referential forms and correspondences (Kibrik, 2011, p.432).

The list of activation factors developed for English comprises 11 dimensions, of which the first six are demonstrated in the analysis of referential choice in “The Maggie B”, a children’s story.³⁵ The factors computed are: (i) Rhetorical distance to the antecedent, (ii) Linear distance to the antecedent, (iii) Paragraph distance to the antecedent, (iv) Linear antecedent role (S, Od, suppressed NP), (v) Protagonisthood, and (vi) Animacy (Kibrik, 2011, p. 436).³⁶

Let’s take the first activation factor “distance from the point in question to the antecedent”. The simplest measure is number of clauses (Givón, 1983). This measure is broken down by Kibrik into (i) Rhetorical distance, roughly equivalent to clausal distance minus hypotactic material, (ii) Linear distance, that is, total clausal distance, (iii) Paragraph distance, only for written texts, and (iv) Linear antecedent role, i.e., the syntactic role of the linear antecedent (subject, object). For protagonisthood, i.e., being first or second in series, to be factored in, the combined rhetorical and paragraph distance is also measured. And animacy also counts above a value of linear distance. The motivation for the particular values and numerical weights assigned to each factor is beyond the present discussion. Suffice it to say that ultimately every factor is directly or indirectly a function of distance measured formally or semantically. The previous distinctions

³⁴ An experiment was carried out with native speakers to obtain alternative acceptable referential choices to the actual forms used in “The Maggie B” text. The purpose was to demonstrate the non-discrete character of activation, that is, the areas (i.e., activation scores) in which alternative forms are equally or preferably acceptable.

³⁵ *The Maggie B*, by Irene Haas, Prentice Hall, 1975.

³⁶ The rest are supercontiguity, temporal/spatial shift, weak referent, predictability and antecedent is introductory.

seem straightforward enough for written texts. However, the framework should cover both written and spoken discourse and accordingly Kibrik establishes distance on the basis of “elementary discourse unit” (EDU), originally introduced in Kibrik (2001). EDUs are defined as “quanta, or moments, of discourse time: discourse progresses in steps equaling EDUs. While uttering a current EDU, the speaker plans the next one. In terms of semantic and grammatical content, EDUs often coincide with clauses” (Kibrik, 2011, p. 377)

Since written discourse progresses largely in clauses, EDUs will account mostly for distance in spoken discourse, and as such they cannot be very different from information units. An obvious problem arises from the frequent disparity between syntactic and information units (and EDUs) in naturally occurring conversation. Example (45) illustrates the complexities of identifying discourse units in speech. Such identification is a precondition to measuring “distance to antecedent”, which will be discussed in example (45).

(45) I said Gerry and I, I had no hesitation, as I said, in putting the boot in // and Brenda and Dave // take the same the attitude to children // that // when they are small, you have to tell them no //³⁷

Example (45) is a fragment of a turn in which five pauses identify five information units. In addition, the lower pitch signals two further units (*I had no hesitation, as I said*) but out of the seven information units, only three correspond to clauses. Identifying the structure of dependency, given in Figure 20, is necessary to establish the rhetorical distance between referents. It comprises a double quotation (1-2) linked paratactically (+). The first quotation is direct speech, i.e., parataxis (1"2), while the second is indirect speech, i.e., hypotaxis (β " α). Finally, there is a clause complex dependent on “attitude” ($\beta\chi\alpha$). What matters here is (a) how EDUs are identified and (b) how the various measures of distance can be scored. It is impractical to compute EDUs as information units because in order to do so, a full prosodic analysis would be required and audio recordings are often not available in spoken corpora. Even if the audio is available, the annotation process would be extremely time-consuming. Considering pauses is more realistic and effective because corpora such as the BNC or the COCA are already annotated for pauses.

First, rhetorical distance is measured as the number of horizontal steps in a dependency diagram of the type shown in Figure 20. This is the functional equivalent (*vid.* Halliday &

³⁷ BNC. KBF (spoken) [968]. The last discourse unit has been slightly simplified for clarity's sake. The recording of this conversation is available at <http://bncweb.lancs.ac.uk/>.

Mathiessen, 2004, p. 391) to Kibrik's rhetorical graph (Kibrik, 2011, p. 438). For instance, the distance from *they (when they are small)* to the antecedent (*children*) is 1 although the linear distance is 2. Rhetorical distance accounts for the "closeness" of constituents kept apart by intervening quotations, e.g., in (45) the rhetorical distance between *Gerry and I* and *Brenda and Dave* is zero despite the double quotation in between. Secondly, paragraph distance can only be rendered in speech as turn distance but these measures will be vastly disparate since paragraph distribution does not come anywhere near the variation of length in turns, as example (45) demonstrates.

Thirdly, linear distance seems the most homogenous measure for written and spoken discourse, especially combined with rhetorical distance. Fourth and last, linear antecedent role is certainly a factor in speech and writing with a demonstrated correlation with activation and choice of reduced forms (Tomlin, 1995 & 1999).

Kibrik illustrates his model by cherry-picking four expressions in "The Maggie B" referring to Margaret and James, the two protagonists of the story, one is a proper name (*Margaret*) and the other three are pronouns (*shex2, him*). Kibrik admits the simplicity of the demonstration but defends the theoretical validity of his analysis. The resulting mapping of activation scores and referential choice is perfect, that is, it did not need to be corrected by referential filters. This is hardly surprising in a text written for ages 4 to 8 years, as Kibrik has to acknowledge.

The validity of any model of referential choice, including the CMF, is to be tested on naturally-occurring interaction because this is the only way to speak with authority about communicative phenomena. In what follows the multifactorial-model will be applied to four referential devices in example (46), which present a sequence of related referential choices in conversation. The interlocutors, Jean and Brenda, are talking about Neil, an acquaintance of theirs. At some point in the conversation Brenda introduces Neil's mother in order to blame her for Neil's low self-esteem. Numbers indicate the turn in the BNC. Linear distance has been measured by the number of EDUs totaled by pauses plus ends of turn. All expressions with "Neil's mother" as referent appear in bold typeface and the ones analyzed below have subscripts.

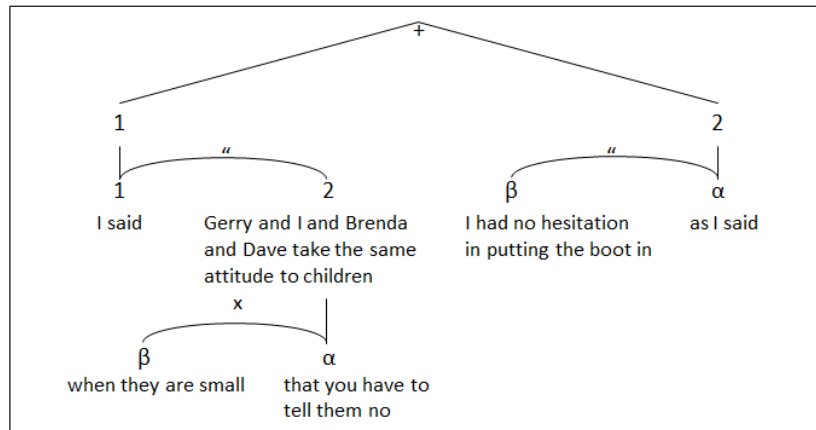


Figure 20. Dependency diagram of example 45.

- (46) Jean 958 (...) **this all goes back to** his absolutely, appallingly, stupid mother!
- Brenda 959 He's really on a downer, isn't he?
- Jean 960 He is, he said // **my mother₁** said **she** could have been a forensic scientist if it ha—if I hadn't been born!
- 961 // Well Brenda you can tell, I hit the roof!
- 962 // I mean normally I never criticize **the woman₂** because after
- Brenda 963 No!
- Jean 964 all mothers are sacred // but I just had to put the boot in on **her**, I'm afraid, I said // stuff!
- 965 // I said **she₃** could have taken a degree in her spare time in th—**she's** only **she's** not yet forty // I said that's absolute rubbish I said th-- the world is full of these damn women going around saying, if only I hadn't had children I could have been Lord Chief Justice of England, I said, it isn't true!
- 966 // I said an-- er I said do you think that I wasn't a career woman, I said I gave it all up for yo-- er to have to look after my young babies // and then when the babies were no longer young, when I // got through that phase of my

life I went back and combined // looking after a
home very adequately, thank you!

967 // With quite a difficult job, I said this is a // I said **your mother** is living in a fantasy world, of course, I see **the stupid bitch**₄ prancing around Stowmarket with her silly nose in the air!³⁸

Figure 21 presents the activation scores of four referential forms used in example (46) identified with subscripts 1-4. The top line indicates the potential referential choices predicted by Kibrik's findings together with the matching intervals of scores. In other words, for activation score between 0.3 and 0.5 the preferred choice will be a full NP and marginally a pronoun, for an interval between 0.6 and 0.7 both a full NP and a pronoun are equally acceptable, and so on. The first problem to solve in order to measure activation scores is how to count EMUs. This has been mentioned above but other phenomena such as frequent overlaps need to be addressed. Should turn 963 be counted as one EMU or zero, as it overlaps with the beginning of Jean's turn 964? I should add that this fragment was not selected because it displayed any particular conversational features but simply because of its considerable number of referential forms in a short piece of conversation. Out of four referential devices, my results match the model's predictions in two cases (✓); in the third the speaker seems to have made a marginal choice (indicated by "?") for a referent with an activation score within the estimated range; and the fourth form, a full NP, seems to be the wrong choice since the activation score of its referent would require a pronoun only.

Reference device Interval	Full NP, ?pronoun 0.3-0.5	Full NP / pronoun 0.6-0.7	Pronoun, ?full NP 0.8-1.0		Pronoun ≥ 1.0
Actual form	my mother ✓	the stupid bitch	?the woman	She ✓	n/a

³⁸ BNC. KBF (spoken) [958-967].

		x			
RhD	2=0.5	1=0.7	2=0.5	1=0.7	
LinD	3=-0.2	1=0	2=-0.1	2=-0.1	
ParaD	2=-0.5	0	0	0	
Lin. anteced. role	Predication= 0.2	Subject =0.4	Subject=0 .4	Predication =0.2	
Protagonist hood	2 nd in series=0.1	RhD+P araD≤2 =0	RhD+Para D≤2=0	2 nd in series=0.1	
Animacy	LinD≤3=0.2	LinD≤2 =0	LinD≤2=0	LinD≤2=0	
Activation score	0.3	<u>1.1</u>	0.8	0.9	

Figure 21. Activation scores of four referential forms in example 46.

The model appropriately distinguishes categorical from alterable referential devices. Categorical pronouns allow no referential alternative, as *she* in (36.960) above, while alterable pronouns can be replaced by a full NP. That is the reason for the alternative devices in Figure 19 and Figure 21. The activation scores for *she* in (36.960) would have fitted the last column on the right in Figure 21 but this column has been left blank because my purpose is to discuss whether cognitive factors by themselves explain how choice is made rather than illustrate every referential choice. When there is no choice, as happens with categorical pronouns, the cognitive factors are overridden by other motivations, often grammatical.

Let's concentrate on the deviations from the model's predictions. With an activation score of 0.8, the expected referential choice in (36.962) should be a pronoun (*she*), which is perfectly acceptable at this point in the discourse. But so is *the woman*, since the interlocutor did not seek any clarification or provide negative feedback. Incidentally, several turns later and after a long inserted sequence, Jean refers to Neil pronominally but despite the low rhetorical distance and no competing referents Brenda is in doubt. The inserted sequence is long so example (47) only presents the last fragment.

- (47) a. Brenda That's obviously her, that was her answer.
 b. Jean<unclear> that's her answer // yes.
 c. Brenda You just sort of wa-- // you know, argue it an--
 d. Jean I know.// and and **he** says too // **he** had to admit that he's
 lazy.
 e. Brenda Who Neil?
 f. Jean Neil // yeah³⁹

The problem for the hearer to retrieve the referent (47) provides some evidence that linear distance interacts with rhetorical distance reducing activation⁴⁰. It could also be the case that referential choice is not solely explained by cognitive factors. However, it is very difficult to find counterexamples to the model's predictions because in cases such as (47), when the speaker chooses a device that mismatches the activation scores, it can always be argued that the speaker is using an egocentric strategy (the device corresponds to a higher activation than that existing at the particular point in discourse) or overprotective (the device corresponds to a lower activation score at the particular point). Returning to example (46), maybe Jean is being overprotective when she uses *the woman* instead of *her* but nothing supports the choice of this strategy (no potential ambiguity, no change of topic). Alternatively, the speaker may have chosen a full NP to introduce a lexical item which conveys her attitude to the referent (of which there is ample evidence). The choice of *woman* seems neutral enough but the speaker's age (62) points at the now dated distinction *woman/lady*,⁴¹ and the abusive terms used previously and afterwards leave little doubt regarding the speaker expressive motivations. This explanation may be debatable but with an activation score requiring a pronoun only, the choice of the full description *the stupid bitch* can hardly be given an explanation in terms of "filters". A more plausible explanation is provided by Gundel et al.'s activation model (1993). The referent (Neil's mother) is not only activated but in focus, then a pronoun should be the appropriate choice but the in focus status presupposes lower activation statuses, how do speakers make the choice?

³⁹ BNC. KBF (spoken) [973-979].

⁴⁰ That's why rhetorical distance is given a value of 0.7 and linear distance is given negative values to a maximum of >3=-0.3.

⁴¹ This conversation was recorded in 1991.

The explanation given by Gundel is based on pragmatic factors, in particular Grice's maxim of quantity. The choice of a full NP and a short definition instead of a pronoun flouts the maxim of quantity giving rise to implicatures that the lexical choices make unequivocal.

My contention here is that referential choice cannot be reduced to activation factors. The case of insults is offered as a demonstration of the shortcomings of the multifactorial model but predictably any other expressive speech acts (e.g., praising, apologizing) will equally modulate or "filter" the referential choice. I can provide a personal example shared by every parent. My husband and I have a daughter, Carla. She is eleven years old. If I wrote a book about her, which I have done, I would make most of my referential choices, especially the unconscious ones, in terms of activation, and most often the choice would be between a full NP and a pronoun or zero. Nevertheless, at times I would consider whether my readers are able to retrieve the referent and, perhaps, be a little overprotective. In conversations with my husband about her, I choose from a wider variety of options, from the obvious *Carla, she, and our daughter* to *this lovely girl, your daughter, the poor thing*, and a whole range of longer and reduced expressions, even *Ms + surname*. Given that the activation score remains constant, the choice can only be motivated by the addresser's intentions, i.e., pragmatic factors. A model that ignores such factors and focuses only on cognitive ones may at best give detailed and accurate explanations of activation and working memory processes but its predictions regarding referential choice, especially when the choice is reduced to a full NP and a pronoun or zero, will implicitly overstate a stability of verbal patterns which any analysis of naturally-occurring conversation will call into question.

The previous criticism does not diminish the theoretical soundness and validity of Kibrik's model and indeed it is the theoretical result that Kibrik defends the construction of a non-circular, cognitively-based system of multiple interacting activation factors (Kibrik, 2011, p. 443). A different issue is the application of such time- and effort-consuming procedure to even medium-sized sets of natural discourse data. Kibrik points out three areas in his approach that call for further development: (i) the additive formula of the activation score is deemed too simplistic for cognitive plausibility; (ii) the size of the samples is too small; and (iii) the languages studied, Russian and English, too few and uniform. Accordingly, Kibrik presents three lines of improvement:

- (i) Implementing a neural network method of calculation of the activation score.
- (ii) Performing a corpus-based study of an already annotated corpus.

(iii) Testing the cross-linguistic applicability of the CMF model to referential choice in other languages in experimental settings.

The question to decide is whether these potential improvements make the CMF model appropriate for the type of study intended in this dissertation. The neural network method complicates the calculation of the activation score leaving referential choice unaltered. On the other hand, (ii) and (iii) seem particularly relevant. Regarding the application of the CMF by means of a corpus analysis, the basic requirement would be annotation for discourse structure. There is one such corpus available, the RST discourse Treebank⁴², but it only samples written articles of a specific register. The RST consists of 385 Wall Street Journal articles from the Penn Treebank. This still leaves the problem of annotating spoken discourse unresolved.

More recently, Kibrik, Khudyakova, Dobrov, Linnik & Zalmanov, (2016) conducted a thorough study to test whether referential choice is predictable on the basis of machine learning algorithms using 25 factors animacy, protagonism, distance, syntactic role of antecedent etc.) And the model's predictions of the choice of pronouns and full NPs were accurate 90 percent of the time. The reason is that in many situations more than one referential option is possible. In fact, "many" is an understatement meaning virtually all instances except when referential choice is categorical. This further corroborates my intuition that referential choice cannot be predicted solely on cognitive grounds.

2.8 The study of reference

All the models considered so far have important aspects in common although developed to varying degrees. For instance, they all share a cognitive approach to reference phenomena but while Kibrik's CMF model is purely cognitive, Gundel et al.'s Givenness approach also includes pragmatic factors. Likewise, every approach reviewed includes assumptions about the addressee's ability to retrieve referents, but while some regard them as a central factor, others contend such assumptions are more marginal. A third and final common element is the shared focus on the interpretation or processing of reference in discourse. This latter bias is due to a fundamental interest in explaining reference phenomena in native speakers. Obviously, for a

⁴² Available at <https://catalog ldc.upenn.edu/LDC2002T07>.

study which involves language learners with different degrees of language competence, production also needs to be addressed.

2.8.1 Reference in Psycholinguistics

Psycholinguistics-based studies of reference and anaphora have focused specifically on production so a review of their main findings is in order. Regardless of the type of approach, the central question in all studies of reference in communication is about choice: how linguistic forms are chosen, how predictable the choice is, and how choice can be best explained. Studies of both production and interpretation attempt to identify rank, and quantify as much as possible the factors that affect the addresser's choice, be it givenness, familiarity, activation, or memory, but there is no general consensus on the center on which referential choice pivots. For psycholinguistics, it is most relevant to determine whether and to what extent reference production is a process based on the speaker's internal states or on the speaker's assessment of the hearer's knowledge, in other words, is reference addresser- or an addressee-oriented process? Arnold's (2008) comprehensive review of research in psycholinguistics concludes that it works both ways but the extent and factors determining the orientation deserve some attention.

As has been discussed above, speakers choose between explicit and attenuated lexical forms (e.g., descriptions vs. pronouns) and between acoustically prominent and attenuated pronunciations based on judgments about the difficulty for the hearer to retrieve the referent. There is solid evidence that speakers make such decisions at two levels. Firstly, addressers make global assumptions about what a generic addressee knows, and specific assumptions about addressees as individuals and as members of social groups (Schober & Brennan, 2003), and accordingly tune lexical choice and pronunciation to the community membership of hearers (Eckert, 2004). The global assumptions tend to be made by a single calculation, and target how referents are initially conceptualized (e.g., by means of an explicit description) but fail to explain the choice of attenuated forms and zero pronouns, and so a second set of local assumptions is hypothesized by means of which speakers also make fine-tuned dynamic decisions based on what is in focus in the discourse at a particular point, the most basic distinction being that between given and new referents.

The various degrees, scales and formulations of givenness have been amply discussed in the previous sections. Let's just say that accessibility, and so attenuation, is strongly predicted by previous mentions, syntactic role of antecedent, thematic roles, focus constructions, and parallelism, that is, prior discourse models the accessibility of discourse entities. Nevertheless,

accessibility is a property of the mental representations of entities in the discourse model not to be identified with particular reference devices. So how do speakers make judgments of accessibility?

One answer is that speakers assume that their focus of attention is common to the addressee so that by calculating their own mental accessibility to referents (excluding non-public information) their referential choices will be aligned in production and comprehension, as Pickering & Garrod (2004) contend. However, this explanation fails to distinguish which component referential choice is speaker-based and which is hearer-based. For Arnold (2008) the relationship of these two aspects of production can be understood by considering the psychological processes supporting speakers' choices, in particular what she terms the "Expectancy hypothesis". This hypothesis stipulates that "during language comprehension, listeners focus their attention on discourse entities in proportion to their estimation of the likelihood that the entity will be mentioned" (p. 505). This view has an important implication for understanding production as a mechanism that facilitates comprehension unintentionally. The said discourse factors (previous mentions, subjecthood, etc.) are all correlated with a higher probability of subsequent mention, for instance addressers are more likely to refer back to an entity in goal role than in source role (Arnold, 2001) or in subject position than in object position (Arnold & Tanenhaus, 2011). What this hypothesis postulates is that comprehenders are aware of these likelihood patterns and the fact that likelihood of next mention is a function of non-linguistic accessibility and activation. This account is not only compatible with models such as Ariel's and Gundel et al.'s but also frees these approaches from the circular explanations criticized by Kibrik (2011). Nonetheless, this raises another question: why do speakers mark accessibility through their referential choices? In order to answer the question, Arnold (2008) provides two discourse patterns derived from psychological processes: (i) the subject bias, and (ii) disfluency biases. Examples (48) and (49) illustrate both.

- (48)
- a. It's the story all about a man who had two very nice daughters.
 - b. The man's name was Mufaro.
 - c. And he had two daughters, and their names // were Manyara and Nyasha.
 - d. Mufaro was a very proud father.

- e. Both his daughters were very beautiful and he also thought they were very wise.
- f. But **Manyara**, when **she** was alone with her sister Nyasha, was not always very nice to her.
- g. **She** bullied her.
- h. One day **she** said, I'll become the queen and then you'll have to do everything I say.
- i. You can be my servant.
- j. // Alright said Nyasha.
- k . If that's what's going to happen I'd be pleased to work for you.⁴³

Example (48) is a fragment of a spoken narrative told by an adult to primary school children. When the speaker says *She bullied her*, the hearers are likely to perceive the subject referent (Manyara) as more accessible than the object *her* (Nyasha). There are two main factors supporting this interpretation. The first is that the speaker has referred to *Manyara* as subject in (48) and the second is the parallel patterns in (48.f) *Manyara was not always very nice to her* and (48) *She bullied her*. But a prior question is why the speaker chose to put the reference to Manyra as subject in (48.f) in the first place. The constraint is partly grammatical since the relational process would be difficult to phrase otherwise. However, an alternative phrasing could be "Nyasha was a victim of her sister's jealousy". This would render (48.g) ambiguous as it is, and if the speaker were to maintain pronouns for both referents, then passivization would be required ("She was bullied by her sister") so that subjecthood would reinforce the likelihood of coreference of *Nyasha* and *she*. Two possible explanations for the choice can be given. The speaker chose the phrasing in (f) to signal the hearers to focus the attention on Manyara. This explanation is addressee-based. Alternatively, choosing the phrasing of (48.g) is the result of Manyara being more accessible to the speaker and therefore she is placed earlier in the utterance, i.e., as subject. This is consistent with evidence supporting the view that more accessible entities tend to be placed earlier in the utterance and conversely, that less accessible entities tend to be delayed (Wasow & Arnold, 2003). This is not altogether dependent on assessments of accessibility to referents by the addressee but rather on production constraints. Likewise, speaker disfluency points in the same direction (Arnold, 2008 & 2010).

⁴³ BNC. F72 (spoken) [82-93].

Arnold (2008, p. 508) notes how disfluency markers (e.g., uh, erm, repetitions, repaired words) supply comprehenders with information regarding referents because they are more likely with some types of referents, as illustrated in example (49).

- (49) a. Just wanna wrap this up now // erm by bringing in the erm example of Greece.
- b. Er the er er // Greek revolt.
- c. Erm // just to recap on that slightly.
- d. It started round about eighteen twenty one although actually there there'd been erm er simmering discontent in the // amongst the // Christians in the Balkan area for some time.
- e. We we needn't worry too much about that thought but erm the Greek revolt itself in eighteen twenty to one to round about eighteen twenty five // had gone on without any European intervention.
- f. To some extent // this was due to the influence of the er of Metternich.⁴⁴

Disfluency indicates that the speaker is having difficulty in referring to some entity because of some added processing load, and experimental research indicates that its distribution is more frequent in the case of new or unfamiliar entities (Arnold & Tanenhaus, 2011). This is illustrated in (49) where most fillers and hesitations occur before new information: *the example of Greece, the Greek revolt, simmering discontent amongst the Christians, the influence of Metternich*. It is noticeable that no similar disfluency precedes pronominal reference (*this, that, it, that, this*), which confirms that the production of given information is easier than new. It is not plausible that the speaker produces these hesitations and fillers intentionally so one can conclude that disfluency occurring with some referents is another speaker-oriented process to be considered together with placing accessible information in subject position. Both processes are speaker-oriented and both facilitate interpretation, although unintentionally.

⁴⁴ BNC. DJC (spoken) [2-7].

There are at least two more speaker-oriented factors affecting the choice of referential form: planning load and referent competition (Arnold, 2010, p. 195). When planning upcoming discourse, longer utterances are likely to demand more processing effort than short ones so pronominal subjects can be expected to occur more often in shorter than longer utterances, as Arnold, Bennetto & Diehl, (2009) demonstrated. In another experiment, Arnold & Griffiz (2007) had participants tell a story based on a two-panel cartoon, one with one character, and another with two different-gender participants. Pronouns were more frequently used when telling the story in the one-character panel than in two-character stories, in other words, the presence of several referents in the discourse reduces the frequency of pronouns. Since discourse status remained constant in the experiment, there was no ambiguity as to gender, and the content was the same (apart from the presence of the second character), the authors concluded that the mental representation of the second character produced a cognitive load that reduced the accessibility of the first.

The evidence provided by psycholinguistics confirms that both discourse status and cognitive load are responsible for referential choice. Psycholinguistic studies also confirm that referential forms are designed with a view to interpretation by addressees but modulated by production constraints and accessibility of non-linguistic discourse entities (Arnold, Eisenband, Brown-Schmidt & Trueswell, 2000; Kaiser, 2011; Kehler, Kertz, Rohde & Elman, 2008).

Chapter 3. SLA research and anaphoric reference

The previous chapter presented a variety of theories of reference and anaphora within the cognitive paradigm, understood in a broad sense. The aim of this chapter is to introduce the main approaches to the acquisition of REs and review the studies on the interlanguage of Spanish learners of L2 English. It should be noted that the focus and scope of this research is the cognitive dimension of anaphora as a discourse phenomenon. Consequently, the Chomskyan theory of anaphora, centered on the dependency relations between NPs within the sentence, will be summarized but not discussed (*vid.* Huang, 2000, Chapter 2, for a detailed review). Section 3.1 frames theoretical approaches in anaphora. Section 3.2 lays down the basis for a distinction between null and non-null subject language. Section deals with the topic by considering the domain in Second Language Acquisition (SLA). Finally, section 3.4 examines previous studies on the acquisition of anaphora.

3.1 Theoretical approaches in SLA

Since the 80s, SLA studies has been a predominantly internalist discipline, that is, the focus of the theory is the individuals' knowledge of language understood as a grammar that generates acceptable sentences and excludes unacceptable ones, rather than an externalist discipline oriented to the behavior of learner groups or individuals. In the Chomskyan paradigm, language knowledge is claimed to be modular that is, made up by relatively autonomous subsystems with different structures and functions than other subsystems. However, the predominance of cognitivism does not mean that other approaches, alternative approaches generally centered on the social dimension of language, have not been formulated and applied. But cognitivism has been the benchmark against which other SLA have been compared (e.g., Atkinson, 2011) so the main tenets of generativism will be presented before going into research in SLA.

3.1.1 Generative approach

Universal grammar (UG) comprises the set of principles that allows for language acquisition in children, regardless of the native tongue. Whether the common elements among languages are principles, and variation is derived from language-specific parameters, the so-called Principles and Parameters Model (P&P), or whether variations in languages are explained in terms of lexical items specifications, the Minimalist Program (MP), Generative Grammar has provided an

influential theoretical framework for studies in language acquisition in general (Hoekstra, & Schwartz, 1994) and in second language acquisition in particular (Slabakova, Leal, & Dudley, 2020; Whong, Gil, & Marsden, 2004).

The fundamental concern of generative scholars has been the I-language, the internalized language, more precisely the computational system of the human brain responsible for producing the E-language, that is, for *generating* the externalization of language (Chomsky, 1986). Considering the complexity of acquisition and the success of children in acquiring their mother tongue despite the indeterminacy and poverty of the available input, Chomsky hypothesized an innate knowledge of linguistic structures common to all humans, a Universal Grammar, and established as a first goal of generative linguistics to explain its properties, the initial state common across all individuals. Obviously, UG by itself is not enough to acquire a language, and linguistic input is necessary to develop the mother tongue. Then, by identifying the steps followed by the child to attain a mature grammar, generative grammar will be able to account for the process of language acquisition. In other words, acquisition is conceived of as the transition from an initial state unspecified for the particular properties of an individual language to a final state with language-specific rules and structures.

Generative approaches to language acquisition have followed two main formulations of the theory: the Principles and Parameters framework (Chomsky, 1981), and the Minimalist Program (Chomsky, 1995). According to the P&P theory, UG is a linguistic domain-specific module of the mind that is combined with linguistic input to generate an I-language. The principles are constraints on grammatical well-formedness that apply universally, while Parameters are certain options of a property which are realized in a particular grammar. A typical example can be seen in subjects. While the category subject is found in every language and hence is posited as a principle, the obligation to make the category explicit (non-null subject) or the possibility to omit subjects (null subject) depends on language-specific factors, the so-called Null Subject Parameter⁴⁵. Null subjects have been a constant focus of attention and a case in point of theoretical discussion in Generative grammar approaches (Biberauer, Holmberg, Roberts & Sheehan, 2009; Camacho, 2013, Chomsky, 1995), which in turn has given rise to a plethora of SLA studies (Isabelli, 2004; Liceras & Fernández Fuentes, 2019; Montrul, 2004; *inter alia*).

The principles delimit all cases of acquisition while the parameters are set on the basis of specific grammars and so give rise to cross-linguistic differences (Rothman, Pascual & Cabo, 2013, p. 47). The language faculty helps the acquirer cognitively by establishing limits to that

⁴⁵ This is in fact an overgeneralization that will be qualified in 3.2.

which can be hypothesized regarding the input and grammar formation. This is compatible with learning in its ordinary sense, in particular regarding lexical items and language-specific forms. All this is hypothesized for first language acquisition in children. Now a fundamental question to be answered by SLA theories is how much of L1 acquisition is shared by L2 acquisition, in particular what is the initial state of learners regarding UG. Admittedly, SLA theories, like any theory, tend towards idealization, that is, despite individual variation, the formulation aims at defining and explaining the attributes common to all individuals in the kind, in our case L2 learners. Once the class is identified, the variation among L2 learners can be characterized.

SLA research developed within the Principles and Parameters model of grammar concentrated on demonstrating the learners' access to UG by investigating properties with different parametric values in L1 and L2. Providing evidence that a particular parameter was acquired would support the hypothesis that learners had access to UG (Slabakova et al. 2020, p. 8). The study of the acquisition of anaphora carried out by Flynn (1987a) is a typical application of the Principles and Parameters model. The starting hypothesis, consistent with UG, is that the L1 and L2 acquisition processes share common underlying principles, the discovery of which will improve both models of acquisition. The author cites previous studies (e.g., Flynn, 1987b) demonstrating that adult L2 acquisition of anaphora is constrained by a principle of *directionality* that favors forward pronouns (when the possible antecedent precedes the anaphor⁴⁶). This principle of directionality reflects a parameter with a value set by the L1 experience. In particular, the forward directionality for pronoun anaphora observed in English is consistent with the right branching direction of this language.

Flynn provided a placement test to the participants, dividing them into three proficiency groups (low, middle, high) and tested by a standardized elicited imitation task using a set of complex sentences varied in branching direction (right/left branching) of the subordinate clause and in the direction of pronoun anaphora (forward/backward), illustrated in (50).

⁴⁶ Flynn's classification of anaphora follows Binding Theory and distinguishes between forward pronouns (the anaphor is c-commanded by antecedent), e.g., *The professor annoyed the dean when she presented the budget*) and backward pronouns (NP follows the pronoun, e.g., *When she presented the budget, the professor annoyed the dean*). This is known as "backward/forward pronominalization" (Van Vallen & LaPolla, 1997, p. 226) but reverses most classifications of anaphoric reference, which establish the direction on the basis of the antecedent: in (retrospective) anaphora the antecedent precedes pronoun, and in anticipatory anaphora, or cataphora, the antecedent follows the pronoun (Halliday & Hassan, 1976; Stirling & Huddleston, 2010). However, this alternative terminology does not change the claims made by the author.

- (50) a. When he entered the office, the janitor questioned the man.
b. The mayor questioned the president when he entered the room.

Sentence (50) displays left branching (subordinate clause before the main clause) and backward anaphora, and ((b) is an example of right branching (subordinate clause after the main clause) and forward anaphora.

In Flynn's study two related questions are addressed: (i) Will adult L2 acquisition of English resemble child L1 acquisition of English by showing a forward directionality preference regarding pronoun anaphora? And (ii) Will L2 learners of English use the right branching of English to construct the forward direction of anaphora in L2 acquisition (like L1 learners of English do)? Regarding question (i), since adults are well aware of the reversibility of the direction of anaphora, the forward directionality should not be a constraint on L2 acquisition of English. On the other hand, if establishing a forward anaphora is part of the construction of English grammar, both L1 and L2 learners of English would show a preference for forward directionality in the acquisition of pronoun anaphora. As to question (ii), it would be possible that the branching direction (BD) of the learners' L1 affected the L2 acquisition of anaphora, and if the values of this BD parameter in L1 did not match those in L2, this parameter would have to be reset in L2 acquisition. Thus with matching parameters (RB in both L1 and L2) L2 and L1 acquisition would follow similar patterns, but with not matching parameters (LB in L1 but RB in L2), the learners would not have initial guiding hypotheses regarding the value of BD in the L2 until they have reset it. In order to test the potential effects of BD parameter, the experimental design included two groups of learners: one of L1 speakers of Spanish (largely a RB language) and another of L1 speakers of Japanese (mainly a LB language).

The study's results indicated that the Spanish L2 acquisition of English resembles results for L1 in their control of the subordination of clauses in pre- and post-posed positions, and in the significant preference for forward pronouns, also with considerably more anaphora errors made on backward pronouns. On the other hand, the results for the Japanese subjects indicated a different pattern from L1 acquisition of English and Spanish L2 acquisition of English. Japanese speaking subjects produced a lower mean amount of correct pre- or post-posed subordinate clauses as compared to Spanish subjects; and they showed no evidence of directionality preference. The main conclusions point at the significant effect of the branching direction in L2 acquisition. Matching in right branching (Spanish and English) facilitates acquisition. The reverse is also demonstrated: no matching in branching patterns (Japanese is left branching) produces more errors during acquisition until learners reset the parameter to match L2. Lynn's results provide evidence for parameter transfer, and also for the role of parameter setting in L2

acquisition of anaphora and in the forward directionality principle. More generally, these results support a parameter setting model of L2 acquisition since common abstract principles are shown to constrain both L1 and L2, in particular the integration of linear order of antecedent and anaphor and clausal structure.

A theory of UG precisely aims at specifying such principles, common to all languages and hence involved in L1 and L2 acquisition. In the Minimalist Program, developed in the 90s, variation is explained in terms of feature specifications of lexical items (Chomsky, 1995). In the 2000s, SLA research adopted the view that formal features (case, person, gender and number) are the building blocks of grammatical representations, and that functional categories (as opposed to lexical categories) represent semantic features such as definiteness, uniqueness, past and perfective. All these features are combined in lexical items such as nouns and verbs and reflected in functional categories on a linguistic tree structure (Adger & Svenonius, 2011). Following this model, Lardiere formulated her Feature Reassembly Hypothesis (Lardiere, 2009), which claims that L2 acquisition involves reconfiguring the sets of lexical features that occur in the L1 into feature bundles appropriate to the L2. In Lardiere's words:

Acquiring a second language grammar necessarily involves determining how to assemble the lexical items of the target language (...) this will require that the learner reconfigure or remap features from the way these are represented in the L1 into new formal configurations on possibly quite different types of lexical items in the L2. (p. 175)

Park's (2004) minimalist approach to null subjects and objects in second language acquisition illustrates the conceptual shift from the P&P model to a model based on formal features. Put briefly, features are linguistic elements carrying meaning, which can be conceptual (the semantic interpretation) or grammatical (functional in a grammatical sense). Conceptual meanings are carried by the so called *interpretable features* (e.g., plural), since they can be interpreted by our Conceptual-intentional system. On the other hand, *uninterpretable features* indicate a grammatical function (e.g., case or grammatical gender). Park does not study anaphora as such but mentions zero anaphora in relation to pronominal arguments so it is relevant to the present discussion.

Park's study demonstrates how minimalism approaches pronominals in SLA. The starting point is the observation that L1 Speakers of Spanish drop more subjects in L2 English than speakers of Korean (White, 1985; Wakabayashi, 2002). According to the MP framework, SLA involves the

learning of formal features of the target language and thus Park sets out to demonstrate that the difference between the processes of acquisition of L2 English between Spanish and Korean learners is conditioned by the interpretability of agreement features. Both Spanish and Korean are null subject languages but while the licensing of Spanish null subjects is dependent on [+interpretable] agreement features in the verb morphology,⁴⁷ Korean has [-interpretable] agreement features, the same as English (although null subjects are possible in Korean for pragmatic reasons). As a result, it is hypothesized that learning the obligatory status of English subjects is easier for Korean learners than Spanish speakers.

Park argues that the pragmatic module is active in both in discourse-oriented languages like Korean and in sentence-oriented languages like English.⁴⁸ But the difference lies in whether a language chooses zero anaphora or overt pronouns to refer to the topic. According to Givón's scale of accessibility for anaphoric devices, Korean uses zero anaphora, English usually selects independent pronouns and Spanish uses bound pronouns (grammatical agreement) (*vid.* Figure 8 in Chapter 2). Thus, both Korean and Spanish learners of English will have to learn to use overt pronouns for topic referring NPs. The difference is that Korean speakers will have to *unlearn* to use zero anaphora and Spanish learners *unlearn* to use bound pronouns in topic chains.

The main conclusion in Park's study is that language variation between Korean and Spanish is explained by the properties of formal features, and that L2 acquisition also involves learning the formal features of the target language. In this case the formal feature that allows null subjects is agreement. The difference between a language with [+interpretable] agreement features like Spanish and languages with [-interpretable] agreement features such as English and Korean seems to be responsible for the degree of difficulty in learning English subjects, easier for Korean speakers and more difficult for Spanish speakers.

As seen in the studies cited above, Generative SLA research has been divided into two areas: (i) access to Universal Grammar, and (ii) L1 influence on L2 acquisition (Gregg, 2003; Rothman, Pascual & Cabo, 2013; Slabakova et al., 2020). The reason is that either (i) or (ii) is considered the main factor to explain why some aspects of language are more difficult to learn than others. Lubbers Quesada (2015, p. 6) identifies three possibilities regarding (i):

⁴⁷ The standard assumption is that person and number features on a verbal functional head are uninterpretable (syntactic) features but Park seems to be assuming that person and number features could be interpreted as imposing a semantic restriction on the applicability of the verbal predicate, i.e., person and number are interpretable features (Taraldsen, 2021).

⁴⁸ Korean has been classified as a discourse oriented language because empty arguments can be identified through discourse topics. On the other hand, English is considered a sentence oriented language given its reliance on morpho-syntactic cues, i.e., pronouns, to identify arguments.

- a) L2 learners have direct access to UG; i.e., their initial state is UG.
- b) L2 learners have partial access to UG, which is accessible only through L1; i.e., the initial state is L1 but the interlanguage is constrained by the principles of UG.
- c) Adult L2 learners have no access to UG; the innate capacity is hardly available after puberty.

The task ahead of empirical studies has been to assess the validity of the previous answers but no definitive conclusion has been reached although the first seems to have gathered more evidence than the other two (Epstein, Flynn, & Martohardjono, 1996a). Assuming (a) amounts to saying that first and second language acquisition are two parallel cognitive processes. If (b) is correct, the two processes are sequential and L2 acquisition relies on the knowledge of L1. In case (c) the two cognitive processes are fundamentally different. The difficulty to reach a conclusion is derived from the abstract and unobservable character of the construct in question, which can only be reached by means of observational statements. Gregg (2003, pp. 837-838) argues that since native-like competence can be attained, the ideal learner hypothesized in first language acquisition theory is valid for SLA. The obvious difference between this idealization and the variation in SLA would need to be explained by secondary causes such as deficiencies in input, motivation or acculturation. On the other hand, the existence of essential differences between the initial state of children and adult learners is consistent with “a uniform ideal final state, albeit one that differs from the final state attained by the L1 native speaker” (p. 838). Some scholars talk about deficits in the L2 acquisition or competence due to the loss of a learning mechanism from childhood. O’Grady (2003, p. 52) gives two reasons for this. The first is that the language faculty deteriorates with age, as seen in the foreign accent of almost anyone learning a second language after age six, or the difficulty to perceive subtle semantic contrasts such as the *the/a* distinction in English. A second reason responsible for syntactic deficits in the computational system is not strong enough to process demanding patterns such as relative clauses involving a direct object. An alternative explanation is that adult learners are unable to “reset” parameter values for L2 (Eubank & Gregg, 1999).

Numerous SLA studies focus on whether adult learners continue to access UG after puberty and the effects of changes occurred during the critical period (Birdsong, 1999; Singleton & Ryan, 2004). More specifically, the question is whether L2 grammar is constrained in the same way as L1 grammar. Logically, the initial state for adult learners is different from that of children

because one acquisition process has been attained but advocates of the *Full access/Full transfer* hypothesis (Schwartz & Sprouse, 1996) argue that the values of L2 grammars can be restructured to match those of L1 grammar. On the other hand, the *partial access* model assumes that learners only have access to UG principles instantiated in their mother tongue. This is known as the “representational deficit hypothesis” (Tsimpli & Dimitrakopoulou, 2007). The “deficit” in L2 acquisition affects uninterpretable features, no longer accessible from UG and only transferable from L1. One example is the difficulty of English learners to acquire grammatical gender in Spanish, which establishes the agreement between nouns and determiners, and nouns and adjectives. Since agreement is triggered by an [-interpretable] feature, success in the acquisition of grammatical gender supports the Full access/full transfer hypothesis, while failure supports the representational deficit hypothesis (Slabakova et al., 2020, p. 17). Although the third possibility seems to have gathered less evidence, it could be the case that no aspect of UG is available to L2 learners (Epstein et al., 1996a).

The influence of L1 on L2 acquisition has been centered on which structures or features are transferred from L1 to L2. Here there are also three logical possibilities. The first is *full transfer*, that is, learners make hypothesis following their native grammar (Schwartz & Sprouse, 1996). Other scholars claim that there is a *partial merging* of grammatical properties from L1 to L2, that is to say, the two language systems are partially overlapped in the mind (Vainikka & Young-Scholten, 1994). There is also the possibility that no properties of L1 are transferred into L2 (Epstein et al., 1996a).

Although abundant studies have provided compelling support for the availability of UG in SLA (Rothman, Pascual & Cabo, 2013) transfer alone or the L2 input cannot explain all the differences between L1 and L2. In a study on the interpretation of English reflexive pronouns by Chinese and Spanish Speakers, the results obtained by Thomas (1989) were inconsistent with the transfer hypothesis. As this study approaches reflexives from a generative perspective, it is convenient to introduce Chomsky’s binding conditions for anaphora. The author claimed that anaphoric pronouns are subjected to the same binding conditions in English and Spanish:

- a) An Anaphor (reflexive or reciprocal) must be bound in a local domain.
- b) (Non-reflexive) pronominal must be free in a local domain.
- c) An R[eferential] expression must be free. (Chomsky, 1995, p. 96)

Reflexive pronouns are subject to similar constraints in English and Spanish by being obligatorily coreferential with an antecedent in the same clause.⁴⁹ In other words, reflexives cannot refer to an NP in a different clause, as shown in (51).

(51) Susan_i heard that Mary_j had bought herself_{*i/j} a new 10-speed bicycle.

The possible interpretation of the antecedent of the reflexive (*herself*) is constrained by a binding principle termed “clausemate condition”. This principle, which applies to reflexives, requires that *herself* refer only to *Mary* given that *Mary* and *herself* are “mates” in the subordinate clause. Naturally between antecedent and anaphor there are also agreement requirements (gender, number and person) but in (51) coreference between *Susan* and *herself* would be ungrammatical because *Susan* is a constituent in the main clause. Thus, the referential relationship between *Susan* and the reflexive is termed “disjunctive” (indicated by “*”). This constraint applies in Spanish⁵⁰ but Chinese is more complex having two analogues of the English reflexive, one used for antecedents in different clauses and another for antecedents in the same clause with various restrictions. Accordingly, transfer of L1 into L2 predicts different responses by Chinese and Spanish learners in general and in particular one would expect more mistakes by Chinese learners. The Chinese learners did allow binding across clauses (e.g., identifying *Susan* as the antecedent of *herself* in 49 much more frequently than native speakers. This deficit could be due to an inadequate transfer of L1 grammar into L2. But Spanish learners equally allowed long-distance reflexives. The author found the responses “puzzling” because the learners did not follow the interpretation pattern despite the resemblance between English and Spanish reflexives (Thomas, 1989, p. 291).

Since the transfer hypothesis is based on UG principles, it cannot be expected to explain the acquisition of the same category in a group of L1 learners and then fail to do so in a different group of L1 learners, that is, predicting interlanguage features through variations in the access to UG cannot be reliant on L1. The obvious explanation is that transfer/access to UG is limited and dependent on other factors and variables. Even though this was done to prevent within task effects on the interpretation of referents, Thomas worded one of the sentence types in her

⁴⁹ This is generally the case but there seems to be at least one difference between English and Spanish reflexives regarding *sí-mismo*. In *Juan_i leyó el trabajo de Pablo_j acerca de sí mismo_{i/j}* the reflexive can corefer with either antecedent. But this is not allowed in English: *Juan_i read Pablo's_j report about himself_{*i/j}* (Thomas, 1993, p. 26).

⁵⁰ *Susan_i oyó que Mary_j se_{*i/j} había comprado una bicicleta de diez marchas.*

research (52) so that pragmatic effects could be tested against the Position of Antecedent Strategy (PAS).⁵¹

(52) After the medical tests were completed, the doctor_i informed Bill_j about himself_{i/j}.

The purpose of sentence (52) was to test whether learners use the PAS as a strategy, with subjects being preferred as antecedents, or as a condition, barring non-subjects as antecedents for reflexives. Interestingly, the three groups tested favored the pragmatic factor over the subject position (natives 54.18%, bilinguals 64.25%, and learners 48.64%) (p. 290). Although Thomas does not draw any conclusions from these results, they suggest that other (pragmatic) variables affecting L2 acquisition need to be explored beyond UG accessibility. One influential hypothesis regarding some unexplained difficulties in L2 acquisition is the Interface hypothesis (IH) (Sorace & Filiaci, 2006; Sorace, 2011). This approach is an extension of the generative model in that the syntactic domains are considered as modules and the properties of these domains are governed by formal features but also hypothesizes an interface module concerned with information related to individuals and events and the relations between them (Burkhardt, 2005). The model claims that language structures involving an interface between syntax and other cognitive domains are less likely to be acquired completely –even by near native speakers of the L2– than structures that do not involve this interface. The reason is presumably that the cognitive resources required to manage the new syntactic features are highly demanding. Since the hypothesis was formulated, there has been extensive research of the syntax-discourse interface, frequently focused on pronominal interpretation and dislocation structures (Sorace, 2011).

An obvious advantage of interface approaches over previous generative models is their explanatory power regarding phenomena that extend inter-sententially like reference. Prenominal reference is a case in point. The study of intra-sentential pronoun anaphora in Generative grammar has produced interesting results contributing to our understanding of UG (Huang, 2000) but most of this body of theory has been devoted to syntactic dependency relations, null-subjects and reflexives, and so has spurred extensive research on null-subject languages (Lubbers Quesada, 2015) but very few studies have been conducted on Spanish learners of English (Flynn, 1987a), and anaphora has been treated as dependent on another linguistic feature (Gandón-Chapela & Gallardo-del-Puerto, 2019; Park, 2004).

⁵¹ The PAS hypothesis predicts that null pronouns tend to co-refer with more prominent antecedents than overt pronouns and that the most prominent position is the subject (Carminati, 2002).

In terms of theoretical perspectives, interface approaches stand between generative linguistics and psycholinguistic approaches. In turn, psycholinguistic approaches generally focus on the processing of anaphora, although some recent research has been devoted to the production of the category. Since the present research is situated within the psycholinguistic paradigm, psycholinguistic approaches will be reviewed in detail in 3.3. Now an application of the interface hypothesis is presented and the section will finish with a brief account of other theoretical approaches, such as discourse-pragmatic and Neo-Gricean approach.

Quesada & Lozano (2020) is a recent study of referential expressions in Spanish L2 learners of English dealing with the syntax-discourse interface. The interface hypothesis was originally formulated in very broad terms so from previous studies the authors have gathered evidence that the learners of L2 Spanish find problems in several specific areas, namely 3rd person subjects (rather than deictic/indexical subjects) and topic-continuity contexts (rather than topic-shift and contrastive focus contexts) (Lozano, 2009, 2018). With this in mind, the study investigates the factors that determine the choice of referential expressions in Spanish learners of English at three levels (beginning, intermediate, advanced) using a corpus of written production from the Corpus of English as a Foreign Language (COREFL). Research proceeded by establishing the overall patterns of distribution of referential expressions of learners and then assessing if and to what extent several variables (discourse configuration, topic-continuity, protagonishood, potential antecedents) affect the choice of referential expressions in narrative, the degree of transfer from null subject Spanish to non-null subject English, and the transfer of the Position of Antecedent Strategy of L1 to L2.

Regarding the overall distribution of pronouns, the most interesting results demonstrate that L2ers produce few null subjects even at beginner level, which contradicts previous research demonstrating the transfer of null-subjects from Spanish into English (Roebuck, Martínez-Arbelaiz & Pérez-Silva, 1999; White, 1985; Zobl, 1990, *inter alia*). The contradictory evidence regarding the transfer of null subjects is observed in other contexts: (i) in topic continuity, where Spanish learners of English produce more overt pronouns and fewer null pronouns than natives (further confirming the interface hypothesis of previous studies); (ii) in coordination and subordination, where Spanish L2ers also produced more overt pronouns in coordinate clauses than natives and zero null subjects in subordinate clauses; (iii) with subject antecedents, where

the L2ers largely produced overt pronouns, contrary to the prediction of the PAS hypothesis.⁵² Given the careful research design, number of variables, and data analysis, the substantial and compelling evidence against transfer of null pronoun features from Spanish into English provides one of the hypotheses of the present study to gather further confirmation or disproof of its predictions regarding production of anaphoric expressions in L2.

3.1.2 Discourse approaches

3.1.2.1 Discourse-pragmatic approach

Discourse-pragmatic approaches to language description have focused the attention on pragmatic competence, defined by Chomsky as the “knowledge of conditions and manner of appropriate use (of the language), in conformity with various purposes” (Chomsky, 1980, p. 224). In Chomsky’s view, grammatical competence characterizes language as an instrument with physical and semantic properties and pragmatic competence constitutes the rules and principles to use the tool effectively. The common element in all definitions of pragmatics is that meaning is dependent on the situational context, which includes the language users (Leech, 1983; Levinson, 1983; Mey, 1993).

Discourse-pragmatic research in the acquisition of reference has focused on the diverse contextual factors that explain the introduction of a new referent in discourse, the linguistic form employed by the speaker for its first and subsequent mentions, and the interaction between verbal and contextual cues that allow the hearer to identify referents (Slabakova, 2013, p. 491). As was observed above, a purely syntactic account of anaphora has been deemed seriously constrained and consequently scholars have advocated pragmatic or discourse-based accounts of anaphora interpretation (Pollard & Xue, 2001).

Compared to purely formal approaches to SLA, discourse-pragmatic approaches to interface phenomena such as anaphora need to address the complex issue of distinguishing between formal and pragmatic constraints (e.g., Blackwell, 2000). Thus, hypotheses and observations regarding L1-L2 transfer and access to UG need to be refined. An example is found in the central assumption made in Thomas’s (1989) study, discussed earlier. The author claims that English and Spanish share the same constraints regarding reflexives on the basis of syntactic observations. But if pragmatic and lexical requirements are taken into account, coindexation in

⁵² The authors explain this discrepancy with previous evidence as a possible result of the research method: production in their study vs comprehension/interpretation in previous studies (e.g., Pladevall Ballester, 2013), and so advocate triangulation, that is, the combination of production and comprehension methods, to investigate the same phenomenon.

anaphora constructions differs substantially (Huang, 2000; Wexler & Manzini, 1987). Accordingly, Finney's (2002) transfer hypothesis reverses Thomas's claim, i.e., that Spanish and English are markedly different in the interpretation of anaphora. In a pragmatic language like Spanish, in addition to syntactic binding, binding domains for indicative and subjunctive are also restricted by pragmatic constraints which do not apply in a syntactic language such as English (p. 299).⁵³ The variance is shown in example (53).

- (53) a. John_i demands that he_{i/j} visit the museum.
b. Juan_i sabe que [pro_{i/j} tiene cáncer] (Juan knows that [3rdS has cancer])
c. Juan_i quería que [pro*_{i/j} guardara el secreto (Juan wanted that [3rdS keep the secret])

In (53.a), pronominal *he* could refer to *John* or any other male (although *John* would be the preferred referent in English). In (53) the null pronominal (*pro*) has free co-reference. It could refer to Juan or any other referent mentioned before. In (53) the null pronominal must not be co-referent with the matrix subject *Juan*. Finney argues that subjunctive constructions can have a co-referent matrix subject in English (a non-null pronominal language), as seen (53.a) stress used to signal disjoint reference (*HE* ≠ *John*). On the other hand, the null pronominal used in some subjunctive constructions like (53.c) may be “constrained by a pragmatic requirement that a null pronominal subject in an embedded clause be obligatorily disjoint from the subject in the matrix clause” (p. 301). The restriction would be pragmatically motivated in that it avoids potential ambiguity in the pronominal reference.

The results of different tasks (act-out, written, grammaticality judgment) administered to adult Spanish L2 English learners of intermediate and advanced levels indicate that subjects in general ignored pragmatic requirements of the L1 in favor of L2.⁵⁴ The overall results in the act-out and written tasks for intermediate and advanced learners were similar to the English group so no

⁵³ Finney follows Huang's distinction between “syntactic languages” (e.g., English, French, German), and “pragmatic languages” (e.g., Chinese, Japanese, Korean). The latter are characterized by massive occurrence of zero anaphors, existence of pragmatic zero anaphors or empty pragmatic categories, pragmatic obligatory control, and long-distance reflexivization, while the former have a limited occurrence or disallow the said features (Huang, 2000, p. 262). Huang does not mention Spanish among the “pragmatic” languages.

⁵⁴ The experiment also included a second hypothesis as to the transfer of lexical restrictions of Spanish verbs regarding reflexives which do not apply to English. No evidence of this was obtained either.

significant evidence of transfer of pragmatic constraints was found. However, in one act-out task with limited time and no contextual information, intermediate learners showed a significant lower level of performance than advanced learners and native speakers. A possible explanation given by Finney is that transfer of L1 anaphora features could be associated with lower proficient L2 learners when processing constraints are imposed (p. 316).

Finney's study raises two interesting issues for research in anaphora acquisition. The first is that not establishing the relevant parameter (of formal feature) can bias the experimental design and hypotheses. This may seem obvious but if Finney had based his investigation on the common syntactic constraints of reflexives in Spanish and English (rather than the pragmatic differences), the same results could have been interpreted as a demonstration of L1 transfer, since the examples of anaphora were resolved by appealing to the structural constraints of English, largely shared by Spanish reflexives, as demonstrated in Thomas (1989). A second and related issue is that anaphora resolution admittedly requires syntactic, lexical, pragmatic and discourse knowledge in both English and Spanish so arguing that L1 pragmatic constraints were successfully discarded by learners in order to perform tasks that mostly required syntactic knowledge of L2 seems to be only a partial account of anaphora resolution and calls for research that tests pragmatic transfer by means of tasks that require such competence. This has been a major concern in interface approaches to anaphora.

Some scholars (Levinson, 2000; Huang, 2004) have noted that Chomsky's binding conditions are insufficient to explain the binding patterns of anaphora, and proceeded to formulate alternative accounts based on Levinson's revised model of Gricean maxims. Levinson (2000, pp. 76, 114, and 136) reduces Grice's maxims to three, namely Q[quantity], I[nformativeness], and M[anner]:

- a. The Q principle: Do not provide a statement that is informationally weaker than your knowledge of the world allows, unless providing a stronger statement would contravene the I-principle.
- b. The I-principle: "Say as little as necessary", that is, produce the minimal linguistic Information sufficient to achieve your communicational ends (bearing Q in mind).
- c. The M-principle: Indicate an abnormal; non-stereotypical situation by using marked expressions that contrast with those you would use to describe the corresponding normal, stereotypical situation.

These principles apply to language production and interpretation in general but also explain one discursive dimension of anaphora that formal accounts miss, remarkably, the scale of REs (e.g., Ariel, 1990) in parataxis, as shown in example (54) (Levinson, 2000, p. 149).

- (54) a. Susan went to the library and \emptyset continued to read Wuthering Heights.
- b. Susan went to the library and she continued to read Wuthering Heights.
- c. Susan went to the library and the woman continued to read Wuthering Heights.
- d. Her mother wanted her to stay at home and finish her novel, and urged Susan to leave. Susan went to the library and she continued to read Wuthering Heights.
- e. Susan went to the library and the dreamy girl continued to read Wuthering Heights.

The I-principle explains the forced coreferential meaning of the zero pronouns in (54.a) (i.e., the zero pronoun is enough to identify the referent). In (54.b), Susan is the preferred antecedent unless the context biases an alternative, as seen in (54.d) precisely because of the application of the Q-principle. In (54.c) the disjoint reading is strongly preferred (coreference would contravene the M-principle) but it could be restored with additional material. It should be noted that, contrary to binding conditions, pragmatic principles apply in degrees of preference and as a matter of choice, but when language users decide to contravene them, instead of producing ungrammatical utterances, their utterances are still meaningful but raise different implicatures. Viewed pragmatically, the choice of referential expressions illustrated in (55) (zero > pronoun > name > description) fits the pattern of minimal forms attaining maximally informative readings (I-principle) while contrastive maximal forms (e.g., the woman) point at a complementary interpretation by the M-principle.

3.1.2.2 The discourse-oriented approach

The discourse-oriented approach examines language acquisition through real-life communication contexts. It focuses on how learners comprehend and produce language within meaningful interactions, emphasizing the importance of discourse structures. There has been abundant research on the acquisition of L2 null subjects (e.g. Spanish) by learners whose L1 is non-null (e.g., English, French, or German) including multiple L1-L2 language pairs, both with

strong-inflection languages such as Spanish, Italian, Greek, Turkish, Portuguese, or Arabic, and inflection-poor languages such as Korean, Chinese, or Japanese. Regarding the production and comprehension of REs, these studies have found consistent evidence of residual optionality in adult learners as compared to native speakers (e.g., Italian: Belletti, Bennati & Sorace, 2007; Sorace & Filiaci, 2006; Spanish: Lozano, 2018; Montrul & Rodríguez Louro, 2006; Greek: Margaza & Gavarró, 2020; Tsimpli, Sorace, Heycock, & Filiaci, 2004). On the other hand, the number of studies that have focused on pronoun comprehension and production in learners of non-null-subject languages, like English, Dutch, French, and German, has been substantially more reduced and their findings have shown conflicting results (e.g., German: Ellert, 2013; Dutch: Roberts, Gullberg & Indefrey, 2008; English: Contemori & Dussias, 2016, and Contemori, Asiri & Perea Irigoyen, 2019, for L1 Spanish; Diaconescu & Goodluck, 2004, for L1 Romanian; Cunnings, Fotiadou & Tsimpli, 2017, for L1 Greek; French: Schimke & Colonna, 2016). More specifically, the studies of the production of pronominal subjects by Spanish L2 English speakers are extremely limited in comparison with the directionally reverse research on English L2 Spanish speakers.

The results of the studies on L2 English have been inconclusive because some demonstrate no difference between learners and native speakers (Contemori & Dussias, 2015; Cunnings et al., 2017), while some others show evidence of a reliance on L1 strategies for the interpretation of pronouns in L2 (Roberts et al., 2008), or more reliance on discourse cues in L2 speakers than in natives (Schimke & Colonna, 2016). In order to reconcile the apparent contradiction, Carla Contemori has carried out extensive investigation on anaphora resolution in Spanish L2 speakers of English with several researchers recently (Contemori, 2021; Contemori & Dussias, 2015, 2016, 2020; Contemori et al., 2019). These investigations have dealt with a considerable number of questions, factors and features, summarized in Figure 21.

Online	Processing	Discourse-based	Intrasentential	Anaphora	High proficiency
Offline	Production	Listener-based	Intersentential	Cataphora	Interm. Proficiency
Full NP	1 st mention	Ambiguity	High complexity	Topic-cont.	Referent gender
Pron.	Next ment.	No ambiguity	Low complexity	Topic-shift	Referent salience

Figure 22. Factors, levels and types of research on anaphora in Spanish L2 English learners.

The distinctions made in Figure 22 cover a substantial area of studies on REs within the paradigm of psycholinguistic research with a general discourse approach. Contemori's research

is of particular relevance to this dissertation given its scope and focus, especially in view of the scarce number of studies of anaphora in Spanish L2 learners of English. The studies Contemori has conducted as main researcher has adopted both online and offline methodologies, either by measuring eye-tracking during listening (processing of REs) or taking behavioural measures in storytelling tasks (production of REs). The studies have also addressed the debate between a discourse-based approach, i.e., the speaker's, and a listener-based approach, reviewed in section 2.8.

Another important question that formal studies of anaphora have set aside is the production and processing of REs at intersentential level. Likewise, cataphora has rarely been taken into consideration in previous investigations. The selection of learners with intermediate and high proficiency levels of L2 is justified to search for evidence of transfer, something which has been sufficiently demonstrated in beginner learners. The comprehension and production tasks manipulate related factors such as ambiguity, complexity, and topic-(dis) continuity, order of mention, gender and salience of referents. In turn, these discourse cues and constraints have an effect on the cognitive demands of both interpretation and production of fuller or leaner REs.

3.1.3 Neo-Gricean approach

The neo-Gricean account of anaphora was put forward as a complementary theory to Chomky's binding conditions in various ways, e.g., by keeping binding condition A as a rule of grammar and reducing conditions B and C to the Q principle. The particular division of labour between binding conditions and pragmatic principles has been subjected to revision (Levinson, 1991) but there are no convincing counterarguments to the interaction between syntax and pragmatics in the determination of anaphoric processes, and some scholars (Levinson, 2000; Huang, 2004) argue that even part of the current grammatical explanation of anaphora may be shifted to pragmatics. The idea is that several patterns of anaphora, especially inter-sentential anaphora, are solved by means of pragmatic inferencing based on principles, given the speaker's knowledge of the rules of grammar.⁵⁵

Cognitive and discourse-pragmatic approaches do not by any means exhaust the possibilities of research in SLA. Sociocultural theory, language socialization, complexity theory, the identity

⁵⁵ Whether pragmatic principles are innate processing tendencies (Sperber & Wilson, 1986) or rational solutions to communicative problems (Levinson, 1991) is a discussion that exceeds the scope of this dissertation.

approach, conversation analysis for SLA and the sociocognitive approach have all proposed socially oriented explanations for L2 learning based on the situatedness of knowledge in context and a focus on actions and processes (Atkinson, 2011). However, these approaches have not produced any models of anaphora to be discussed or considered as alternatives to the cognitive-discursive approach applied here.

3.2 Anaphoric subjects: Spanish vs. English

The stated focus of the present research is whether the mode of production affects the acquisition and use of REs by Spanish L2ers of English. A major typological difference between English and Spanish concerns the possibility of dropping subjects in Spanish finite clauses and the obligatory presence of subjects in English, that is, the difference between null subject or pro-drop, and non-null subject or non-pro drop languages. This section examines how anaphoric subjects work in Spanish vs. English. In Spanish the explicit realization of the subject is not obligatory (Fernández Soriano, 1999; Luján, 1999) while in English, with the exception of coordinate⁵⁶ and non-finite clauses⁵⁷, the subject is obligatory (Biber, Johansson, Leech, Conrad, & Finegan, 1999; Nariyama, 2004). It has been noted that native English speakers frequently use coordinate clauses with zero anaphors to improve discourse cohesion (Leclercq & Lennart 2013, p. 13-14; see also Williams 1988, p. 356). The use of zero anaphors in English is also seen as a way to enhance the flow and sequentiality of events in spoken narratives, whereas using explicit REs often makes the events appear more separate (Oh, 2006, pp. 831-832). Thus, despite English being a non-null subject language, zero anaphors and the constructions that allow them are used to achieve maximal discourse cohesion. This investigation examines one of the discourse-syntactic contexts where maximal reference continuity can be achieved and where zero anaphors, the most minimal forms, are allowed: reference maintenance in syntactic coordination contexts.

The distinction between null subject and pro-drop and non-null subject or non-pro drop languages should be taken as a default option in the use of subjects that establishes an unmarked pattern of the zero pronouns as subject in Spanish and a corresponding pattern of unmarked non-focal pronominal subjects in English, as seen in example (55).

⁵⁶ In informal registers, first and second person pronominal subjects are also often omitted (*vid.* Nariyama, 2004).

⁵⁷ The subject can be omitted in non-finite clauses when the subject of a non-finite subordinate clause is coreferential.

- (55) a. Cuando \emptyset_i habla así, Major_i parece un “thatcheriano”.⁵⁸
 b. When he_i speaks like that, Major_i seems a Thatcherite.

The null pronoun used in Spanish as subject in (55.a) is equivalent in its anaphoric use to the non-focal subject pronoun in (55.b) (coreference indicated by subscripts). On the other hand, the explicit –or tonic– Spanish pronoun is an emphatic form which can realize the same syntactic functions and corresponds to the focal English pronoun, illustrated in example (56).

- (56) a. Cuando él_{*i/j} tenía once años, su padre_i sufrió una trombosis cerebral.⁵⁹
 b. When HE_{*i/j} was eleven, his father_i suffered a brain thrombosis.

In Spanish, pronouns are an unstressed word class by default, by analogy with clitics and affixes. When they are tonic, pronouns become prominent (Luján, 1999, p. 1283). In (56.a), the tonic pronoun (*él*) is coreferential with “Tony Blair”, introduced previously, and at the same time the tonic form favors the disjoint reading (*él* ≠ *su padre*; *HE* ≠ *his father*), in other words, the contrastive meaning blocks the coreferential interpretation in the sentence.

Summing up, Spanish null pronouns are the default subject expressed through verbal inflection⁶⁰ and correspond to non-focal subject pronouns in English. The class of overt pronouns is the marked alternative for subjects in Spanish and corresponds to focal subject pronouns in English. While all of them can function as anaphors, the marked forms typically have contrastive or emphatic meanings.

The typological distinction between the two languages is that the Spanish verbal paradigm displays overt person/number morphology while the inflectional information of the verb in English does not identify the subject (Camacho, 2013, p. 31). Descriptions of null/non-null pronouns include first, second and third person pronouns in subject and object functions but here the discussion is circumscribed to the third person. The reason is that first- and second

⁵⁸ CREA. ABC Electrónico, 20/04/1997, párr. 1.

⁵⁹ CREA. El Tiempo, 07/04/1997, párr. 5.

⁶⁰ Direct and indirect objects in Spanish can be realized by unstressed pronouns and clitics, e.g., *Nos contó (a nosotros) que era poeta* [Us he told (us) that he was a poet].

person pronouns are generally deictic and exophoric⁶¹ and it is the third person that is generally endophoric and anaphoric⁶² (Halliday & Hassan, 1976; Stirling & Huddleston, 2002).

Two terminological clarifications regarding anaphora should be made at this point. The anaphor usually follows the antecedent but it is also possible for the anaphor to come first. The two cases are sometimes referred to as “retrospective” and “anticipatory” anaphora respectively (e.g., Stirling & Huddleston, 1999) but the classic distinction between anaphora (backward reference) and cataphora (forward reference) will be used here. Secondly, “anaphor” will be used for the whole NP involved in the coreferential relationship, which may be a single pronoun (the anaphoric marker) or a full NP (e.g., *his father*) including an anaphoric marker (*his*) indicating that the interpretation of the NP requires an antecedent (*Tony Blair*).

When comprehenders come across a pronoun, they must identify an appropriate referent. Since language processing normally works backwards, the antecedent is searched for in the preceding linguistic context and only when it is not found there, as in (56), comprehenders link the anaphor to a NP in a subsequent position (Kush & Dillon, 2021). This makes cataphora more demanding in terms of processing effort and less frequent than anaphora. Example (56) can be reversed without altering the coreferential relationship between anaphor and antecedent, as shown in (57).

- (57) a. *Major_i parece un “thatcheriano” cuando ∅_i habla así.*
b. *Major_i seems a Thatcherite when he_i speaks like that.*

However, if the explicit subject is used instead of the null pronoun, the anaphoric and cataphoric relationship changes notably. Coreference no longer sounds natural, especially in cataphoric contexts such as (57.a), and the same reading occurs in English with the focal subject in (57.b).

- (58) a. *Cuando él_{*i/j} habla así, Major_i parece un “thatcheriano”.*
b. *When HE_{*i/j} speaks like that, Major_i seems a Thatcherite.*
c. *Major_i parece un “thatcheriano” cuando él_{i/j} habla así.*

In examples (58.a) and (58.b), when the subordinate precedes the main clause, the reference of the pronoun and the NP is disjunctive (Luján, 1999, p. 1284). This exclusive reference does not

⁶¹ 1st and 2nd person pronouns refer to the speaker and hearer (person deixis) but can be exceptionally anaphoric when a written text combines two discursive situations, e.g., direct speech and third person narration.

⁶² In general the anaphoric uses of the 3rd person pronoun contrast with the deictic uses of the 1st and 2nd person. However, sometimes deixis and anaphora blend, e.g., *Sue is coming over later. We [Sue + speaker] are having lunch together* (Stirling & Huddleston, 2002, p. 1454).

seem to occur in (58.c.) But it should not be concluded that the disjunctive reference is dependent on the explicit pronoun preceding the full NP although without further context the contrastive meaning seems unjustified. The exclusive reference also occurs when the tonic/focal pronoun follows the potential antecedent, as shown in (59).

- (59) a. Cuando Major_i habla así, (él_{*i/j}) parece un “thatcheriano”.
b. When Major_i speaks like that, (he_{i/j}/HE_{*i/j}) seems a Thatcherite.

Finally, the pronoun will not be coreferential with an NP in the same clause complex in either English or Spanish, regardless of the pronominal form, if the subordinate clause containing the antecedent is part of the predicate of the main clause, as seen in (60).

- (60) a. [∅/Él]_{*i/j} parece un “thatcheriano” cuando Major_i habla así.
b. [He/HE]_{*i/j} seems a Thatcherite when Major_i speaks like that.

The restriction here is universally formulated as Principle C in Binding theory: a name (*Major*) cannot be coreferent with an identical antecedent (*él*). In examples such as *He_{*i/j} saw Major_i in the photo*, coreference produces a violation of Principle C (Chomsky, 1986).

There is one case in which Spanish does not allow the choice between null and overt subject: impersonal constructions, typically but not exclusively related to weather predicates. The equivalent constructions in English have the so-called “expletive” subjects, illustrated in example (61). These subjects are non-referential.

- (61) a. It seems that the Third Law of Aerodynamics is especially at work in this case.⁶³
b. ∅ Parece que la Tercera ley de la aerodinámica funciona especialmente en este caso.

The typological features of null/non null subjects in English and Spanish are summarized in Figure 23.

⁶³ BNC. A0X [1100].

	Spanish	English
Typology	+pro drop	-pro drop
Subject	±null	-null
S-Ellipsis	-marked	(coordination only)
Overt-S	+marked	±marked (±focus)
Recoverable	+morphologically	-morphologically
Reference	+referential	±referential
Cohesive	anaphoric / cataphoric	

Figure 23. Typological features of subjects in English and Spanish.

The development of the Minimalist Program questioned the Government and Binding model in general and affected the Principles and Parameters approach in particular, on which the null/non-null-subject distinction is based. This caused an intense debate in both theoretical linguistics and SLA. The theoretical construct of parameters was salvaged through the Borer-Chomsky Conjecture: “All parameters of variation are attributable to differences in the features of particular items (e.g. the functional heads) in the Lexicon” (Roberts & Holmberg, 2010, p. 32). The problem is that anaphoricity is not a property of specific lexical items (as can be seen by the fact that binding conditions cannot be formulated as constraints on lexical items) but on uses of lexical items (Huang, 2004, p. 305). This renders the Minimalist Program and even the new microparadigm approach barely relevant to inter-sentential anaphora in SLA. Thus, recent research in SLA anaphora within the Minimalist paradigm is based on a featural setup of overt and null anaphora that accounts for intra-sentential binding and parameter setting is reinterpreted as a computational process in which learners “dissociate and integrate linguistic components consistent with the properties of a specific target grammar” (Berkes & Flynn, 2015, p. 132)

3.3 Corpora and anaphoric reference

This section is divided into two further sections: the first section discusses the importance of reference and anaphora in corpus-based research, highlighting Biber's foundational work (1988) and its impact on language use in spoken and written texts. It emphasizes corpus linguistics' focus on linguistic performance and analysing reference expressions across discourse types (c.f 3.3.1). In the second section, we provide with a summary of the methodologies and considerations for collecting and analyzing learner language data, including developing learner

corpora and research approaches for studying language acquisition. It covers the evolution of learner corpora, the distinction between corpus-based and corpus-driven methods and the application of various analytical techniques in learner language research (c.f 3.3.2). In this second section, we also provide with an overview of the the dichotomy between spoken and written corpora (c.f 3.3.2.1).

3.3.1 Corpus linguistics

Reference and anaphora have been central to corpus-based research since Biber's seminal work in 1988. Corpus linguistics, a methodology rather than a distinct subdiscipline like cognitive or psycholinguistics, involves analyzing machine-readable texts to represent specific language varieties (McEnery et al., 2006). Critical features of corpus linguistics include a focus on linguistic performance, descriptive rather than universal linguistic analysis, and quantitative and qualitative models (Leech, 1992). Biber et al. (1998) expanded this by emphasizing extensive, principled text collections for analysis. These approaches are crucial for examining patterns of REs in spoken and written discourse.

Biber's earlier research (1992) analyzed references in various spoken and written texts, revealing that spoken genres often have more frequent REs than written ones, but written genres exhibit a higher frequency of distinct referents. Biber et al. (1998) further explored REs across language varieties, focusing on information status (given vs. new), reference types, forms of expression, and the distance between anaphor and antecedent. Their findings showed that spoken registers use REs more frequently and have shorter distances between anaphors and antecedents than written registers. Additionally, conversational texts heavily feature given information with exophoric pronouns, whereas academic texts predominantly present new information with complete noun phrases. These insights underscore the significant differences in reference patterns between spoken and written registers.

3.3.2 Learner Corpus Research

In this section, we will discuss the development and methodology of (LCR), which has evolved as a specialized branch of corpus linguistics focusing on language learning and acquisition and provide with the key variables to consider when selecting a corpus for linguistic analysis (c.f section 3.2). Additionally, we will explore the differences between written and spoken corpora (c.f section 3.3.2.1), where spoken corpora is preferred to analyze L2ers' interlanguage (Myles,

2005, 2015; Bell & Payant, 2021) and written corpora is argued to reflect better learners' explicit knowledge, as they have extra time to plan and reflect on the language (Myles, 2015; Bell & Payant, 2021). Understanding these variables and distinctions is essential for accurately interpreting language data and adapting research methodologies to specific linguistic contexts and needs.

The possibility of collecting large amounts of discourse data offered by computer technology allowed for the storage and analysis of learner production data and thus Learner Corpus Research developed as a branch of corpus linguistics specialized in language learning and acquisition. Learner corpora, like the International Corpus of Learner English (ICLE), represent the language produced by L2 learners and are crucial for cross-linguistic comparisons (Granger, 1994; Granger et al., 2009). ICLE, originally a part of the International Corpus of English (ICE) project, expanded significantly with ICLEv2, encompassing essays from university students with diverse linguistic backgrounds (Granger, 2000). The growth of LCR spurred projects like the Louvain Interlanguage Database of Spoken English, underscoring the increasing attention on spoken learner corpora (Gilquin et al., 2010).

Nesselhauf (2004) emphasizes that learner corpora must adhere to systematic collection methods, using external criteria such as learner proficiency levels and native language backgrounds to ensure data quality for research purposes. Unlike native speaker corpora, learner corpora face challenges in obtaining naturally-occurring texts in foreign language environments. Nesselhauf proposes a scale of naturalness in text production to classify learner corpus data based on the authenticity and spontaneity of language use (Figure 24).

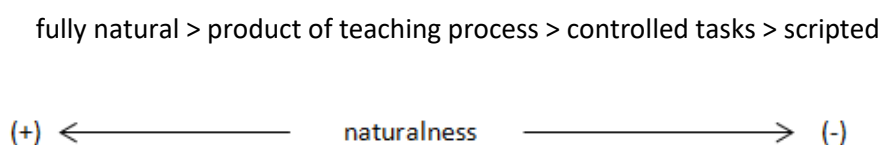


Figure 24. Nesselhauf's scale of naturalness (2004, p. 128).

Granger (2000) highlights the importance of selecting an appropriate control corpus of native speakers, considering dialectal and stylistic variations, and varying levels of proficiency among native speakers themselves. Critically, while native speakers (NS) and non-native speakers (NNS) comparisons often focus on deficiencies in learner language, Granger (2015) advocates a revised approach (CIA2) that centers on interlanguage variation and uses L1-L2 comparisons to elucidate learner language features from an L2 perspective. This approach, termed "Reference Language Varieties" and "Interlanguage Varieties," aims to broaden the scope of learner corpus studies

beyond traditional norms, promoting sensitivity to variability in learner language and exploring the impact of factors such as language aptitude scores (Granger, 2015).

However, selecting a learner corpus also involves choosing a methodological approach. According to Callies (2015, p. 35), "the choice of method(s) depends on the object(s) of study and the research question(s) being asked". As in corpus linguistics, LCR distinguishes based on the information needed between corpus-informed, corpus-based and corpus-driven approaches (Callies, 2015, p. 36). Note that we cannot make a strict distinction, as the researcher may use these three approaches simultaneously. Callies argue that in the corpus-informed approach, the data is used as a reference source but not a working tool, while in the corpus-based approach, the data is used to confirm or contradict existing hypotheses; often, it involves comparing the learner's language and native speakers. Finally, the corpus-driven approach is the most inductive of all approaches, where the researcher gathers the information needed based on computer techniques, such as statistical analysis.

Lozano and Mendikoetxea (2013, p. 69) pointed out the main distinction between corpus-based approaches (deductive approaches) and corpus-driven approaches (inductive approaches). While the former postulates a hypothesis and the corpus is used to confirm or contradict the hypothesis, the latter is used to create the hypothesis. This dissertation follows a corpus-based approach (i.e., deductive). Furthermore, Callies (2015, pp. 36-37) distinguishes between quantitative and qualitative analyzes. These two analyzes are closely related to the corpus-based and corpus-driven approaches. The former is related to quantitative analysis, which is primarily deductive and product-oriented, as it is designed to test a particular hypothesis, whereas the latter is linked to qualitative analysis, which is inductive and process-oriented, as it intends to generate specific hypothesis.

Furthermore, Callies (2015, pp. 36-37) distinguishes between quantitative and qualitative analyzes. These two analyzes are closely related to the corpus-based and corpus-driven approaches; the former is related to quantitative analysis, which is primarily deductive and product-oriented, as it is designed to test a particular hypothesis, whereas the latter is linked to qualitative analysis, which is inductive and process-oriented, as it intends to generate specific hypothesis. Additionally, Callies (2015) outlines how data is gathered and distinguishes between cross-sectional, longitudinal and quasi-/pseudo-longitudinal. He claims that cross-sectional learner corpora gather data at a single point in time. In contrast, longitudinal learner corpora

gather data over a prolonged period of time in order to investigate language development. However, quasi-/pseudo-longitudinal learner corpora, although they gather data at a single point in time, look at different proficiency levels. Importantly, this dissertation uses a corpus-based approach with a quantitative analysis, quasi-/pseudo-longitudinal. Designing a corpus involves several crucial variables, as outlined by Sinclair (2005) and detailed by researchers such as Bell & Payant (2021), Díaz-Negrillo & Thompson (2013), Gilquin (2021) and Quesada (2021). These variables shown in the table below are essential for the design, collection, and transcription of learner corpora.

KEY VARIABLES	DEFINITION	LITERATURE
Representativeness	The corpus should represent the target language used by a specific population	Bell & Payant, 2021; Díaz-Negrillo & Thompson, 2013; Gilquin, 2015; Lozano & Mendikotxea, 2013
Naturalness	Authentic language used in real-life situations.	Granger et al., 2015; Bell & Payant, 2021; Gilquin, 2015, 2020; Díaz-Negrillo and Thompson, 2013
Mode or medium	Spoken, written or multimodal	Bruyn & Paquot, 2021; Díaz-Negrillo & Thompson, 2013; Gilquin, 2020; Myles, 2005,2015; Bell and Payant, 2021
Genre or task type	Different text and task types	Bell & Payant, 2021; Gilquin, 2015; Lozano & Mendikotxea, 2013; Tracy-Ventura et al., 2021
Procedure	Environment (class, online, home); time and external sources (dictionary)	Bell & Payant, 2021; Gilquin, 2015
Language	L2ers L1 or L1s; metadata and native corpus	Gilquin, 2015, 2020; Lozano & Mendikotxea, 2013; Tracy-Ventura et al., 2021
Time frame	Cross-sectional or longitudinal and quasi-	Callies, 2015; Díaz-Negrillo & Thompson,

	longitudinal	2013; Gilquin, 2015 2020; Lozano & Mendikotxea, 2013; Myles, 2015; Tracy-Ventura et al., 2021
Annotation	Manual, automatic, or interactive	Bell & Payant, 2021; Díaz-Negrillo & Thompson, 2013

Table 1. Key variables in designing a learner corpus (adapted from Quesada, 2021).

This dissertation considers these key variables in the compilation of the Corpus of English as a Foreign Language (COREFL), ensuring it is representative of natural language use. The corpora include both spoken and written modes of production and use a story-retell task type, among others. Additionally, the data can be considered quasi-longitudinal, as it includes learners across various proficiency levels collected at a specific time point. These factors are further discussed and justified in Chapter 6.

3.3.2.1 Spoken and written corpora

Since this thesis involves both spoken and written data, it is essential to dedicate a section to exploring the dichotomy between (SLA) and (LCR). This section will help clarify how these two approaches interact with and differ from each other, providing a comprehensive framework for analyzing and interpreting the data. Recalling the previous section, we can notice that although second language acquisition (SLA) and learner corpus research (LCR) have devoted their studies to L2 studies, their paths have not yet been met. This dichotomy is based on different investigation aims; while SLA's primary focus is L2ers' competence, LCR is performance. Additionally, differences in terms of data analyzed (spoken vs written), main concerns (process L2 acquisition vs product-oriented), and amount of data (small vs large) prevent interaction between them. In the table below, we summarize a comparison between these two fields.

	SLA	LCR
Main objective	To understand the process of L2 acquisition	Product-oriented
Participants	Individual learners	L2ers and control native groups
Type of data	Spoken	Written and spoken

Type of tasks	Controlled tasks	Natural tasks
Corpus size	Small	Large, computerized
Type of corpus	Longitudinal	Cross sectional

Table 2. Comparison between SLA and LCR.

From the above table, we can identify various critical issues that keep SLA and LCR apart. SLA's primary focus is to investigate the process of L2 acquisition, claiming that spoken data is more suitable than written data. However, LCR is mainly product-oriented, focusing on performance rather than competence. Furthermore, one of the main criticisms is L2 development; SLA points out that LCR studies have yet to investigate L2 development (Myles, 2005), as the preferred corpus design is cross-sectional. This issue can be overcome by pseudo-longitudinal corpora: "[O]ne can use a cross-sectional design to create a pseudo-longitudinal study. In such a study, the emphasis, like that of a longitudinal study, is on language change (i.e., acquisition), with data being collected at a single point in time, but with different proficiency levels represented" (Gass & Selinker, 1992, pp. 32-33).

Despite the debate over the past years, it is clear that SLA and LCR are closer to converging together (Granger, 2021; Myles, 2021). Some studies (Granger, 2021; Lozano, 2021; Tracy-Ventura et al., 2021) look for future opportunities for both fields. Granger (2021, p. 3) suggests three possible interactions: corpus design, transfer and L2 development. This interplay can be achieved via bimodal and multi-task corpora coming from the same learner to make different comparisons; a combined SLA and LCR approach using experimental data, allowing triangulating studies (Gilquin, 2021) and more longitudinal or pseudo-longitudinal studies are needed in order to investigate L2 development. This dissertation contributes to building opportunities for both fields, using a bimodal, combined SLA and LCR approach and pseudo-longitudinal study. This section finishes with a short review of four LCR studies of reference, summarized in Figure 25. Overall, they share CIA methodology and compare NS and NNS data by sampling different categories and variables in several learner corpora with a view to teaching applications.

<i>Study</i>	<i>Approach</i>	<i>Category</i>	<i>Variables</i>	<i>Corpus</i>	<i>Interlang.</i>
Leńko-Szymańska, 2004	---	Demonstrative anaphors	Proximity, function	PELCRA ⁶⁴ & BNC sampler ⁶⁵	L2English L1Polish
Schiftner & Rankin, (2012)	(Accessibility theory)	Demonstrative reference	Proximity, function, reference, referent	ICCI ⁶⁶ & LOCNESS ⁶⁷	L2English L1German
Ryan, 2015	Accessibility theory	Pronouns, zero anaphora	Degrees of Accessibility	Film retelling compilation	L2English L1Chinese
Quesada & Lozano, 2020	Interface hypothesis	Referential expressions	Continuity, activation, proficiency	COREFL	L2English L1Spanish L2 English L1 Spanish
Diaz-Negrillo & Espínola Rosillo 2024	Mode of production (spoken vs. written)	Referential expressions	Topic continuity, coordination	COREFL	L1 Spanish- L2 English

Figure 25. Five LCR studies of reference.

Leńko-Szymańska (2004) studied the patterns of demonstrative anaphors in the argumentative writing produced by advanced Polish learners of English. The data were obtained from the PELCRA corpus of learner English and compared to the BNC sampler. Results showed an overuse of demonstratives, in particular distal demonstratives (i.e, “that” and “those”) and an underuse of *those* as pronoun as compared with the native norm. The study was pseudo-longitudinal since

⁶⁴ http://pelcra.pl/new/plec_40 (accessed July, 25, 2024).

⁶⁵ <http://ucrel.lancs.ac.uk/bnc2sampler/sampler.htm> (accessed July 28, 2024).

⁶⁶ International Corpus of Crosslinguistic Interlanguage (accessed July 28, 2024).

⁶⁷ Louvain Corpus of Native English Essays (<https://uclouvain.be/en/research-institutes/ilc/cecl/locness.html>) (last accessed July 28, 2024).

it sampled the essays written for the end-of-year exams by second and fourth year students at the Institute of English Studies (University of Łódź) and its main conclusion was that the patterns of learners' misuse do not change significantly over time. The author pointed at the absence of demonstrative anaphora from syllabi and ELT materials as a contributing factor. It should be stressed that the problems identified seldom involved explicit errors but were related to non-native patterns of use (p. 90). On the basis of Leńko-Szymańska's and other investigations of tertiary level learners' data, Schiffner & Rankin (2012) attempted a study of the same categories in the writing of school-age Austrian learners of English. The authors sought to identify developmental patterns in lower proficiency L1 German learners of English. It was hypothesized that non-target use of demonstratives would be shown in their learner corpora, and considering the increasing lack of a proximal/distal distinction in German demonstratives, distal demonstratives were expected to be underused as an effect of L1 transfer as compared to the LOCNESS data (British A-level student writing). One interesting finding is that even low proficiency learners show a native-like use of demonstratives as short-range anaphors. Otherwise, their use diverged from that of NS in their infrequent use of plural forms and of *this*, while *that* was consistently overused. The authors are very tentative regarding the comparison with previous studies when they hypothesize a general trend among learners to overuse the most salient or least marked forms (p. 78). The problem to establish comparisons derives from the differences in the corpora, in particular regarding textual types.

Ryan (2015) focuses on the tendency of second language speakers to underuse shortened forms for reference (pronouns, zero anaphora). Ryan applied Ariel's accessibility scale and after analyzing the use of referential forms by Chinese learners of English across the eight degrees of accessibility found that accessibility did not account for infrequent pronoun use. Participants did use shortened forms to refer to highly accessible referents but were more explicit than native speakers (full NPs) in all other cases. The author provides strong evidence to support the hypothesis that overexplicitness is a communicative strategy based on the principle of clarity. Regarding the implications for the theoretical approach, the coding system of Accessibility theory is proven to be limited in the number of factors affecting accessibility and only approximate in the weightings of the factors. More broadly, Ryan (2015, p. 853) suggests that overexplicitness is a feature of intermediate/advanced interlanguage due to the learners' prioritizing clarity over economy. It is expected that as proficiency increases, L2 learners'

pragmatic competence will come closer to that of native speakers' in resolving the tension between clarity and economy in favor of the latter.⁶⁸

More recently, Quesada & Lozano (2020) set out to establish the validity of the interface hypothesis hypothesis (Sorace, 2011) for intermediate proficiency L2 English learners and provide a detailed account of overexplicitness in the learners' use of referential forms across three proficiency levels as compared to native use in the COREFL corpus. The interface hypothesis states that "structures requiring an interface between syntax and other cognitive domains may present optionality at particular stages of bilingual development (...) but structures requiring only syntactic computations do not" (Sorace, 2011, p. 9). The hypothesis was originally formulated on the basis of experiments in anaphora resolution (syntax-pragmatics interface) to explain how near-native L2 learners of Italian had acquired the syntactic constraints on pronominal subjects, but still showed indeterminacy in their interface processing strategies when choosing between null or overt subject pronouns (Sorace & Filiaci, 2006, p. 341).

Since the interface hypothesis was formulated for advanced and bilingual speakers, Quesada & Lozano (2020, p. 961) studied the use of referential expressions in a sample of learners ranging from A1 to C1 proficiency levels in order to deal with developmental progression, and differentiated information status contexts so that the account of the syntax-discourse interface was more precise than previous explanations. Their results further demonstrate L2ers difficulties to manage the syntax-discourse interface by being overexplicit/redundant but, importantly, not ambiguous, with variations in proficiency and context type. This calls for a more subtle interpretation of the interface hypothesis since learners problems seem to be associated to contextual factors. Instead of the standard multiple-regression analysis, the authors advocate a linguistically motivated approach tackling factors individually (e.g., topic continuity) or combined in pairs (e.g., topic continuity and number of antecedents) so that a clearer picture of learners' competence is drawn ultimately providing relevant findings to SLA.

Díaz-Negrillo & Espínola Rosillo (2024)⁶⁹ examined how the mode of production affects narrative discourse configuration and the selection of REs in reference maintenance within syntactic coordination. It compares third-person singular grammatical subjects in intermediate and

⁶⁸ Givón (2017, ch. 2) devotes considerable attention to his "code-quantity" principle: "information that is already activated requires the smallest amount of code."

⁶⁹ This article was proposed as a pilot study for this thesis.

advanced L1 Spanish-L2 English speakers with L1 English speakers. Participants included ten individuals in each proficiency group (intermediate, advanced, and native), with L2 English participants being university students from Spain and L1 English participants being American university students learning Spanish. Data was collected through a story-retell task based on a silent film clip, first in written form online and then spoken on-site after a 15-day gap. The findings show that the mode of production impacts referential cohesion in L2 English but not in L1 English. In particular, L2 English learners struggle with spoken production even at advanced stages, while their difficulties with written production tend to resolve. For L2 English learners, maintaining referential cohesion is more complex than managing the discourse-syntactic structure of their narratives. At the advanced level, the overall narrative structure of learners matches that of native speakers in both written and spoken forms. However, advanced learners' spoken narratives still include more explicit referring expressions than native speakers.

Although, studies on anaphora in SLA both in experimental and LCR studies will be reviewed in section 3.4, the studies sampled above provide an initial glimpse into the kind of aims, approaches and methods found in the investigation of reference in LCR. Together with the particular objectives of the research, studies are sometimes intended to test theoretical approaches explicitly (Ryan, 2015; Quesada & Lozano, 2020). Corpus-based studies are mainly focused on production, either in available or self-constructed corpora with comparison (NS-NNS or NNS-NNS) as an important aspect of research while keeping the interlanguage as the centerpiece. The naturalness of the sampled data is a common concern in corpus research that has to balance authenticity and representativeness. Developmental issues increasingly attract the attention of researchers posing methodological problems. In the studies reviewed, the most consistent solution is the sampling of learners at various levels. This is cost-effective but still a pseudo-longitudinal approach. Longitudinal studies are time-and effort-consuming but allow for individual development and variation usually by means of multi-level modelling. Although no conclusions can be drawn, it can be seen how LCR has evolved from the simple descriptive analysis of aggregate data in cross-sectional designs to the use of more complex designs aimed at explaining learner variability (*vid.* Meunier, 2020).

3.4 Studies on L2 anaphora

The acquisition of REs in L2 English has been extensively investigated using experimental and corpus data. In SLA, the former type of data has been traditionally more often used than corpus data favouring controlled data over naturalness. These experiments can be grouped into offline vs. online. Both offline and online experiments measure the learner's knowledge/performance

of the L2. The main difference between these two methods is when the measure of the performance takes place. Offline methods measure the performance after the linguistic stimulus has been presented while online methods measure as the stimulus is being presented. As mentioned before, although experimental data is largely used in SLA, there are also corpus studies. However, we find that the amount of corpus studies in English is comparatively smaller than than in Spanish. The purpose is to review how previous studies have investigated anaphora resolution in L2. The following sections review the experimental studies (c.f 3.4.1) and corpus-based studies (c.f. 3.4.2) concerned with the acquisition of REs in SLA.

3.4.1 Experimental studies on L2 English anaphoric reference

This section reviews the experimental studies concerned with the acquisition of REs in SLA. We have divided them into two groups, experimental studies on the production of REs in L1 Spanish-L2 English (Pladevall Ballester, 2013; Contemory & Dussias, 2015, 2016, 2020; Contemori et al., 2019) and studies on the production of REs in other L1-null-subject languages-L2 English (Cunning et al., 2017, for L1 Greek; Mitkovska & Buzarovska, 2018, for L1 Macedonian; Prentza, 2014, for L1 Greek; Santoro, 2020, for L1 Chinese). Despite, the numerous studies on the acquisition and production of REs by L2 English learners the studies of the production of pronominal subjects by L1 Spanish-L2 English speakers are extremely limited in comparison with studies focusing on English learners whose native languages feature null-subjects.

Pladevall Ballester (2013) studied the acquisition of L2 English subjects by Spanish adult learners within the framework of the minimalist program. The limits of a syntactic approach have been sufficiently discussed, but this study makes a significant contribution to the understanding of transfer which is worth considering in some detail. The starting assumption is that Spanish learners experience difficulties in mastering the syntax of subjects in English because the different parametric values, or more precisely because of the variation in the clustered properties of subjects, formulated in the Minimalist Program as the Person Phrase Hypothesis (Platzack, 2004). The feature cluster comprises the null-overt, position and referential values of subjects and the experiments selected a situation of minimal exposure to L2 and no explicit teaching of subject properties. The purpose was to assess the effects of access to UG and transfer in a context of minimal input. The results would confirm the existence and degree of such effects in acquisition and at the same time distinguish them from the effects of learning. In

particular, learners were asked to complete judgment tasks about null/overt subjects in main and subordinate clauses, null/overt expletive subjects, and pre/post verbal subjects.

In view of the previous research, Pladevall Ballester (2013) gathers new data to tell whether adult Spanish learners of English actually acquire L2 features or use learning mechanisms to produce target-like structures. Results for beginners in all three subject properties of the cluster (null-subjects in main and embedded clauses, null expletive subjects, and subject-verb inversions) were statistically significant in their acceptance of the structures, a demonstration of L1 transfer, and their consistency across variables supported the hypothesized cluster. The results for the intermediate group improved in the three variables but still were significantly different from the native control group, which is consistent with the learners not being capable of resetting the parameter and the non-accessibility of uninterpretable features. The advanced group did come near the native-like use of referential null-subjects but still differed significantly in the other two properties (expletive subjects and VS structures). These results support Pladevall Ballester's hypothesis that adult learners in an instructed minimal exposure context have partial access to UG of adult learners and are unable to reset L1 features to target language specifications with uninterpretable features. Advanced learners did produce some superficially native-like structures, but the author explains this apparent convergence as the result of learning strategies, such as analogy or deduction, and the use of interpretable features. These data suggest that implicit teaching of English subjects is hardly effective, and the obvious conclusion is that explicit teaching of all the subject properties considered is required in situations of minimal input.

By contrast, the experimental studies by Contemori & Dussias (2015, 2016, and 2020) are of particular relevance to this dissertation given its scope and focus, and the scarce number of studies of anaphora in Spanish L2 learners of English. The studies Contemori has conducted as the main researcher has adopted both online and offline methodologies, either by measuring eye-tracking during listening (processing of REs) or taking behavioural spoken measures in storytelling tasks (production of REs).

Contemori & Dussias (2015) is a study of both online processing and offline production of REs by advanced L2 English learners. The tasks were devised to test the participants' comprehension of ambiguous and unambiguous pronouns in English in contexts requiring the first-mention bias and gender cues. Results showed an important difference between native speakers and learners in the production task in that the latter used a higher proportion of pronouns when there were two characters in the previous discourse with the same or different gender. The authors argue that a likely reason is because for Spanish speakers an overt pronoun is more explicit than a null

pronoun. This is so in Spanish but a pronoun is not explicit enough in their L2 since English is a non-null language and the pronoun is the default option so there is indication of L1 interference even in advanced learners. The cross-linguistic interference in the reverse direction (speakers of a non-null language learning a null-language) has been amply demonstrated by evidence of overuse of overt pronouns in contexts where zero would be more appropriate pragmatically (e.g., Belletti et al., 2007).

On the other hand, the production results indicate convergence between learners and native speakers. Learners seem to be using the gender cue (shared by L1 and L2) and also to have acquired the first mention bias, i.e., that a third person pronoun tends to refer to the subject in the previous sentence. Contemori & Dussias (2015) showed that learners of English processed pronouns like natives using gender and first-mention bias in globally unambiguous sentences. It should be stressed again that apparent contradictions are resolved when complex categories that involve multiple syntactic, discursive and pragmatic factors are targeted precisely.

Also focused on proficient Spanish L2 English learners, Contemori & Dussias (2016) conducted a second study on the production of REs aimed at determining whether the choices of forms are discourse-based or listener-based.⁷⁰ The learners were tested by means of a story elicitation method in order to investigate the effects of salience and topic-shift. The discourse-based hypothesis predicts that the speakers' selection of referential forms is conditioned by the accessibility of referents, with the more accessible entities producing less specific linguistic forms and the less accessible entities producing more specific forms (Fossard et al., 2018). On the other hand, the listener-based hypothesis claims that REs are selected on the basis of both discourse properties and the listener's cognitive functions (Kuijper et al., 2015).

Contemori & Dussias (2016) hypothesized that L2 learners' inconsistent use of referential expressions is due to the extra cognitive demands rather than cross-linguistic interference with L1 and found additional evidence for the listener-based approach. The referential choices of learners differed from those of natives leading to potential ambiguity. Although findings showed convergence between learners and natives in considering the listener's perspective in topic-shift contexts, learners had problems calculating discourse prominence. Spanish L2 English learners produced more pronouns than natives at topic-maintaining and reintroduction but contrary to

⁷⁰ Section 2.8 reviews several psycholinguistic studies on the constraints that motivate speaker-based choices of referring expressions.

Hendriks, Koster, & Hoeks, (2014) study of Dutch-speaking older adults, whose overuse of pronouns was due to difficulties to remember the names of characters, L2 learners in Contemori and Dussias's experiment did take into account discourse information (accessibility) and assumptions about the listener's knowledge. The authors explain the difficulties of learners in maintaining reference as a result of the added cognitive demands of computing saliency and integrating lexical, discourse and syntactic information. Thus, learners would adopt the choice of pronouns as the default option.

The study by Contemori et al., (2019) was also focused on the processing of pronominal forms by native speakers of Mexican Spanish and Spanish intermediate learners of English. The experiments comprised both anaphora and cataphora in intrasentential and intersentential contexts in Spanish, and learners were tested to resolve ambiguities by integrating syntactic, discourse and pragmatic information. The purpose of the research was to reconcile the apparently contradictory evidence of convergence and divergence between learners' and natives' interpretations of subject pronouns, in particular (a) whether L2 speakers can acquire native-like competence on anaphora, and (b) how discourse complexity may have impacted previous research (p. 975).

Contemori et al.'s results for native speakers of Mexican Spanish have marginal relevance for the present research but their discussion provides important questions to consider. For one thing, their participants showed a preference for the subject/topic interpretation of antecedents of explicit pronouns. This contradicts most research on both peninsular and Mexican Spanish showing a native speakers' preference for interpreting overt pronouns as referring to non-topic antecedents (e.g., Chamorro, 2018). The authors consider three factors that may affect the findings and resolve the contradiction. First, methodologies and contexts of anaphora resolution vary across the studies. For instance, Chamorro (2018) used a main clause followed by a subordinate clause. Secondly, the participants in Contemori et al.'s study lived in a city on the U.S.-Mexican border, and this could have affected the variety of Mexican Spanish. Last but not least, the sentences in the experiments mostly displayed explicit pronouns, that is, the input was biased. In this regard, a very recent study Contemori (2021) tests cumulative priming effects, i.e., how the immediate input affects interpretation of referring expression. What is important to note here is that the comparison of results (dis)confirming hypotheses has to be extremely fine-grained, especially for the purposes of comparison.

Regarding L2 speakers, Contemori et al., (2019) demonstrated that intermediate learners can show native-like use of the first-mention bias, further extending previous research on advanced learners (Contemori & Dussias, 2015). In their experiments, both L2 learners and native speakers

of English interpreted the default form (i.e., overt pronouns) as a signal of topic continuity. However, this convergence was dependent on the high salience of one of the potential antecedents. With similarly salient antecedents, the learners' choice of referent differed significantly from that of natives in both intra sentential and intersentential anaphora, suggesting cross-linguistic interference. But the experiments did not test for an L1-L2 language pair with similar set of REs or interpretation biases so the authors do not draw conclusions about language transfer. Their results are compatible with the assumptions of the Interface Hypothesis (Sorace, 2011).⁷¹ According to the IH, structures involving syntax and another domain, pragmatics in the case of referring expression, produce increased cognitive demands and produce problems of acquisition even for highly proficient learners. It can be expected that more proficient speakers that the participants in the experiment will perform in a more native-like way regarding anaphora resolution in complex contexts although the IH does not account for the way in which complexity modulates performance. Contemori et al., (2019, p. 996) propose an explanation of their results following Cunnings' (2017) memory interference model. The observed differences in anaphora resolution between learners and native speakers may be due to retrieval interference in L2 processing. When two referents compete as antecedents, and in general if salience is not high (e.g., two referents with the same gender), processing becomes particularly demanding causing non-native interpretations in L2 learners. This effect is significant in online experiments (Cunnings et al., 2017) but they may also be experienced offline. For this reason, in a more recent study Contemori & Dussias (2020) tested ambiguous and non-ambiguous cases of anaphora resolution using an online methodology.

Contemori & Dussias (2020) also studies the processing of anaphora by Spanish advanced L2 English learners in order to determine the extent of convergence with native speakers' choice of referential expressions. As mentioned above, numerous studies of anaphora resolution in learners of null-subject languages have found residual optionality even in highly proficient subjects. This is consistent with the hypothesis that predicts more difficulties for learners going from the unmarked version of a parameter (null-subject) to the marked version (non-null-subject). On the other hand, the findings of research on anaphora resolution in learners of non-null subject languages are less conclusive. So the cited study focused on the comprehension of pronouns in Spanish learners of English. The online methodology employed was a visual word

⁷¹ Vid. 3.1 above.

paradigm task. The native speakers identified referents rapidly using (a) the first mention, and (b) gender information of both gender ambiguous and unambiguous pronouns. As to the learners, their results did not show significant differences with the native speakers in the use of the first mention or the pronoun gender cues to resolve anaphora. The only difference found was that in the condition when the pronoun gender was informative, the learners looked at the target picture significantly less than the native speakers.

The authors note that while pronouns are marked for semantic gender in both Spanish and English, the first mention bias is exclusive of English so L2 speakers need to learn this interpretation. These results confirm for highly-proficient learners what Cunnings et al., (2017) found in intermediate Greek L2 learners of English. This differs from the findings in Roberts et al.'s (2008) online experiment with a group of learners of Dutch (a non-null-subject language) whose L1 was Turkish (a null-subject language), and another group of learners whose L1 was German (a non-null-subject language). But unlike Contemori & Dussias (2020), Roberts et al., (2008) tested anaphora resolution of pronouns whose antecedents were found in previous sentences in with two equally salient referents, and did find a processing difficulty in the L2 subjects. In this respect, the results in Contemori et al., (2019) also identified a connection between complexity of the discourse and difficulties in anaphora resolution. A related issue predicted by Sorace (2011) is that L2 speakers learning a null-subject language find it easier to acquire the use of zero pronouns in topic-continuity contexts than the use of overt pronouns in topic-shift contexts. By analogy, L2 speakers learning a non-null subject language will be able to acquire a native use of overt pronouns in topic-continuity discourse, as indeed Contemori & Dussias's (2020) results demonstrate.

Finally, Contemori (2021) extends the study of anaphora resolution in Spanish L2 learners of English to include the effects of immediate and cumulative priming. So far there has been research on the effects of multiple factors affecting the production and processing of REs in L2 summarized in Figure 21, but to date this is the first enquiry into the effects of the immediate input in pronoun resolution. The investigation is based on evidence demonstrating that experience and statistical learning plays an important role in sentence comprehension (Wells et al., 2009). Contemori (2021) tested the adaptation of both native speakers and learners of English manipulating the preceding discourse context in anaphora resolution. The factor manipulated was the first-mention/subject bias, i.e., the preference of comprehenders to link pronouns to subjects (rather than objects) in the previous discourse. This can be seen as a principle (rather than a rule) that can be overridden in the appropriate circumstances. Thus, prosodic information or gender marking can favor the interpretation of object antecedents.

There is also evidence of individual differences in the strength of the application of the first-mention (Arnold, Strangmann, Hwang, Zerkle, & Nappa, 2018).

The aim of the investigation was to test the capacity of learning and adaptation of intermediate learners and native speakers by priming dispreferred interpretations of ambiguous pronouns. The author defines comprehension priming at the structural level as “processing a structure that in turns eases the comprehension of a subsequent structure of the same type.” (Contemori, 2021, p. 575). The experiment tested priming at the discourse level by presenting participants with a number of sentences, such as (62), in which the pronoun referred unambiguously to the second-mention/object and (63), where the pronoun such as *he* is interpreted ambiguously.

(62) Emily liked *Brian* because *he* was a good person.

(63) John met Paul while he was in high school.

Contemori checked how participants reacted to immediate priming, i.e., how they interpreted sentences like (63) right after sentences like (62) and also adaptation, that is, how interpretation is affected cumulatively throughout the task after multiple encounters with the primed structure. The results of the offline task demonstrated a significant priming effect both in native speakers and learners in adopting an object interpretation of antecedents and in adapting to the primed interpretation along the task. These results further corroborate previous evidence of convergence between intermediate proficiency L2 English learners and native speakers in the interpretation of unambiguous anaphora (Contemori & Dussias, 2019; Cunnings et al., 2017). These results are at variance with other studies in comprehension priming which showed bigger priming effects in lower proficiency L2 learners compared to natives (Nitschke et al., 2010, 2014). Once again the disparity of results due to the different levels of proficiency of learners can be explained in terms of L1 interference effects in lower-level learners. Nevertheless, it is important to note that in Contemori’s experiment, L2 participants converged with the control group in anaphora resolution despite the differences in previous exposure to the structures. The key factor then is not experience but rather “the degree to which a structure is a stable representation in the underlying system” (Contemori, 2021, p. 583). Online research of priming effects is still needed although it is likely to have consequences for L2 learning and teaching of complex structures. The different factors that affect L2 performance are shown in Figure 26.

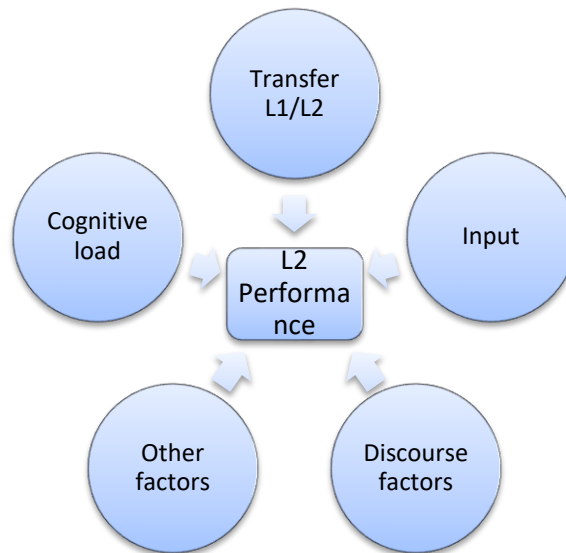


Figure 26. Interaction of multiple factors in L2 performance (adapted from Georgopoulos, 2017, p. 233).

Turning to experimental studies on the production of REs in other L1-null-subject languages-L2 English, Prentza (2014) studied intermediate and advanced L1 Greek-L2 English L2ers testing the acceptability of null and overt pronominal subjects in English subordinate clauses and compare to an English native control group. She administered two set of tasks: one judgement (a Paced Grammaticality Judgement Task (PGJT) and two production tasks (a Sentence Completion Task (SCT) and a Cloze Test (CT)). Results are in concordance with Pladevall Ballester (2013) L2ers did not acquire the uninterpretable features associated with the obligatory nature of overt pronouns of English subjects. Consequently, L2ers transfer from their L1. Thus, the Interpretability Hypothesis was confirmed in the results. This study share some of the limitations found in Pladevall Ballester (2013): i) 1st, 2nd and 3rd person singular were considered in this study; ii) not distinction between the different information status contexts; iii) lack of consistency in sentence type and coordinators. In addition, animated and inanimate subjects are considered. All these limitations are considered in the study in this dissertation.

Cunnings et al. (2017) tested intermediate L1 Greek-L2 English L2ers to investigate the acquisition of overt pronouns in PAS scenarios and compare them to a control native group, using a visual word paradigm task. Note that Greek is a pro-drop language where a null pronoun refers to a subject-antecedent (Reference maintenance) whereas an overt pronoun commonly refers to an object antecedent (topic-shift). However, in English the overt pronoun biases towards either antecedent. Crucially, results showed that L2ers are able to acquire the properties of overt pronouns in reference maintenance contexts in English, not transferring

these constraints from their L1 yet their processing was slower. Additionally, these results contrast with studies reviewed above because there is not transfer from L1.

Mitkovska & Bužarovska (2018) is also a study that confirms the Interpretability Hypothesis, testing the production and interpretation of ungrammatical null referential subjects by young L1 Macedonian-L2 English learners at four different proficiency levels (A1-B2). To carry this investigation, the task used in this investigation was a grammaticality judgement/correction task (GJCT) and an analysis of L2ers' production based on the Macedonian English Learner Corpus (MELC). Results are in line with Pladevall Ballester (2013) and Prentza (2014) claiming that L2ers transferred from their L1. Although, rates are going to vary depending on the proficiency level, the higher is the proficiency level the more accurate L2ers are. Additionally, the acceptance of ungrammatical null subjects is going to depend on the type of method. Importantly, this study lacks some crucial aspects when studying the interpretation and production of REs: i) the three persons of singular are mixed and analyzed; ii) not distinction between the different information status contexts; iii) animated and inanimate subjects are considered; iv) in reference maintenance and coordination contexts the production of null pronouns were not considered; v) in the offline task, different connector were considered. All these limitations are considered in the study in this dissertation.

Santoro (2020) tested the ability to process and interpret overt pronouns L1 Chinese-L2 English advanced L2ers plus a control group of English native speakers. To do so, a Self-Paced Reading Task (SPRT) was administered to investigate PAS ambiguous scenarios. Results showed that L2ers behave native like despite they took longer to provide a response. Importantly, these results are in line with previous studies discussed above (Contemori & Dussias, 2020; Cunnings et al., 2017). The author stated that Chinese is a completely different language from English, "as anaphora resolution is a pragmatic phenomenon, where in English, anaphora resolution is a strictly morpho-syntactic phenomenon" (Santoro, 2020, p. 18). An interesting question raised from this study will be whether this particular scenario makes possible the acquisition, as shown above (Contemori & Dussias, 2020; Cunnings et al., 2017). In addition, Contemori et al. (2019) pointed out that due to the complexity of certain discourse contexts, L2ers are going to face the impossibility to attain native-like behaviour. Thus, it is important to evidence those scenarios where L2ers attain native-like behaviour, especially to investigate anaphora resolution in discourse, as we do in this dissertation.

3.4.2 Corpus-based studies on L2 English anaphoric reference

The corpus-based studies in L2 English are particularly limited. Most of the corpus-based studies in L2 test the spoken production of pro-drop languages (Hendriks, 2003 for Chinese; Kang, 2004, and Crosthwaite, 2011 for Korean; Ryan, 2015 for Chinese, and Quesada & Lozano, 2020 for Spanish), while Leclercq & Lennart (2013) investigated a nonpro-drop language as it is French. Importantly, the corpus-based studies investigate the acquisition of REs in discourse. The following corpus-based studies are relevant for this dissertation.

Hendriks (2003) tested the spoken production of L1 Chinese-L2 English L2ers and a control group of English native speakers using a double task of telling a narrative based on two picture sequences with differences in terms of the number and importance of protagonists. The two factors tested were grammatical knowledge in coreferential and non-coreferential contexts (somewhat, our topic continuity and topic shift) and discourse competence. Hendriks puts together a clear picture of the complexity of the factors involved in discourse anaphora acquisition and provides evidence against the generalization that L2ers are over-explicit (Crosthwaite, 2011; Hendriks, 2003; Leclercq & Lennart, 2013; Ryan, 2015). Overexplicitness seems contradictory with a presumably universal pragmatic principle that adjusts explicitness to accessibility and activation, with fuller forms for less accessible/activated referents and less full forms for more accessible/activated referents (Givón, 1983; Gundel & Tarone, 1983). If the principle is in fact universal, adult speakers will need little input to hypothesize that it works in the L2 but the studies cited indicate the reverse. One possible explanation is that during acquisition a principle of hyper-clarity (being maximally intelligible) seems to interfere with the principle of economy (avoid redundancy) (Ryan, 2015; Williams, 1988). It should be noted that overexplicitness characterizes the interlanguage of intermediate and advanced learners but not that of beginners. So it is more accurate to say that beginners tend to be underexplicit and more proficient learners tend to be overexplicit. Now the formulation that these preferences are explained by appealing to the complementary pragmatic principles of economy and clarity requires striking a balance between the two preferences and justifying their motivation (Williams, 1988). Hendriks (2003, p. 294) suggests a motivation and an explanation of the observed patterns. Since adult learners become increasingly aware of their “short-comings” in L2, i.e., that their use of REs is too implicit, the experienced miscommunication makes them overexplicit. Then intermediate and advanced learners can be said to be making a deliberate choice for pragmatic reasons, even if this choice is not convergent with that of native speakers. But why is the beginners’ interlanguage underexplicit, and in some ways closer to that of natives? Hendriks (*ibid.*) follows Véronique et al.’s (2000) postulation that acquisition follows a

process which is more lexis-based in its initial stages and becomes more grammar-based in later stages. This would in principle produce anaphoric chains with a regular choice of full NPs but this is obviously the exception so there is another process of maturation from linked but less coherent discourse to more cohesive topical chains because of a developing capacity to create optimal conditions for the use of pronouns.

Given the previous considerations, Hendricks's research aims to answer two crucial questions: (i) is overexplicitness language independent? (ii) which are the elements in L1/L2 which affect overexplicitness? The study sampled Chinese learners of French, German and English. The typological differences between Chinese (null-subject language) and French, German and English (non-null subject languages) have already been mentioned but Hendriks also considered the differences in the pronominal system of the three non-null subject languages considered and their difficulty for Chinese learners. The short answer to question (i) is no. The patterns of anaphora used by the Chinese intermediate and advanced learners differed in the three languages, which disconfirms the transfer hypothesis, and (a) broadly converged with those of native speakers in French, (b) tended to be more explicit than native speakers of English, and (c) were clearly overexplicit compared to native speakers of German. The two factors tested were grammatical knowledge and discourse competence. The former was confirmed, that is, overexplicitness in German was related to the problems of acquisition of the complex pronominal system, as compared to the near-native use of French pronouns. The role of discourse competence in the use of anaphora was more difficult to establish because the double task of telling a narrative on the basis of two picture sequences with differences in terms of the number and importance of the protagonists. The problem with the one with more and less prominent protagonists is that the learners failed to create a coherent story out of the more fragmented story elements and tended to "describe" rather than "narrate" so the results of this task were valid in the case of the story where the learners did produce long topical chains of pronouns. Overall their uses of anaphora followed the more activation/accessibility of referents the less explicit linguistic material. So a discourse factor in overexplicitness was not confirmed.

Hendriks's evidence (i) supports Véronique et al.'s claim that lexical devices are acquired before grammatical devices, and (ii) indicates overexplicitness is variable depending on the native language-target language pairings. An important question remains as to why it is easier for learners to construct a coherent narrative in some languages than in others.

Kang (2004) examined the spoken production of intermediate L1 Korean-L2 English learners. The participants were 12 native English speakers and 12 Korean college students majoring in English, have all undergone extensive English education. The task used for this study involves narrating the frog story prompt by Mayer (1969). Kang's analysis, focused on the referential expressions (REs) produced for each character in the story (the boy, the dog, and the frog). Kang's findings of the analysis of the narratives from native English speakers and L1 Korean-L2 English revealed significant differences in their choices of REs in their spoken narratives: i) while native English speakers commonly preferred pronouns once referents were introduced, L1 Korean-L2 English showed a notable preference for NPs. These findings were in line with expectations, considering the linguistic characteristics of each language. Unlike English, Koreans lack definite and indefinite articles and avoids using pronouns in spoken discourse. Instead, Korean speakers often rely on demonstratives or repetition of names to mark given information; ii) there are significant differences on the selection of pronouns for the secondary character (the dog), with L1 Korean-L2 English learners using significantly fewer pronouns compared to native (English; iii) in contrast the choice of REs for the main protagonists (the boy and the frog) showed no significant difference in the use of zeros and pronouns, although with differences in native-likeness observed in the learners' production. This finding aligns with our dissertation as we found the protagonist effect when referring to secondary characters. Kang concludes her study by suggesting the influence of character attributes and highlights the deficits among second language learners who do not behave natively because natives and L2ers differ on the selection of RES, which is pertinent to our dissertation. However, Kang's results show some limitations to assert her findings fully. Some of her limitations are: i) discourse configuration is not addressed in her study; ii) not all the proficiency levels are tested. These limitations will be addressed in this dissertation

Crosthwaite (2011) also tested the spoken production of L1 Korean-L2 English L2ers and English native speakers. The participants were 10 non-native English speaker (NNS) participants and 5 native English speaker (NS) participants. The task used was picture sequences from a comic series. The study defined two different contexts: coreferential topic continuity, contexts where topics remain constant, and non-coreferential reference topic continuity, similar to instances where topics shift. Within these contexts, Crosthwaite examined the choices made by English native speakers and non-native speakers finding significant differences between the proficiency groups. Results showed that among English native speakers, the selection of NPs and overt pronouns were similar in contexts of coreferential topic continuity, with a very low percentage of selection of zeros in this particular context. In contrast, non-native speakers showed a tendency to favor NPs in coreferential contexts, with a less frequent use of overt pronouns and

null pronouns. Furthermore, the analysis emphasized the tendency of non-native speakers to overproduce REs compared to the native speakers, a phenomenon that could be recognised to sensitive awareness of reference clarity and linguistic transfer effects. However, Hendriks' study also faced with certain limitations, including the inadequate exploration of null pronouns, the neglect of potential transfer effects, and the absence of a comprehensive analysis across different proficiency levels among non-native speakers. Importantly, results showed that NPs and null pronouns are by far the preferred REs for English native speakers, while L2ers tend to produce mainly NPs followed by overt pronouns. Similar to Kang's study, Crosthwaite's results show high rates of NPs and overt pronouns produced by natives, while a higher percentage of NPs was produced by L2ers. The fact that he did not discriminate between coordination and subordination limits the production of null pronouns, which is a key factor in topic continuity context and crucial to this dissertation.

Similarly, Ryan (2015) analyzed the spoken production of L1 Chinese Mandarin–L2 English L2ers and New Zealand English native speakers. The task used to test access to the character was a film-retell task of the Charlie Chaplin film "Modern Times". The methodology involved both participants watching part one of the film together, after which the designated participant watched part two alone and then retold the events to the hearer. The study analyzed noun phrases (NPs) usage in reference to characters, examining the accessibility and continuity of topics. The findings showed that L2 learners referred more frequently to highly accessible entities than native speakers, who made more references to slightly less accessible entities. Both groups created similar contexts for high-accessibility markers, indicating that the infrequent use of pronouns and zeros by L2 learners was not due to fewer contexts for their use. Instead, L2 learners were overexplicit, particularly in references to main characters, likely to ensure clarity. This overexplicitness was consistent among all L2 participants, supporting the idea that it is a common trait among intermediate learners. The findings align most closely with the clarity-based argument but also suggest roles for cognitive load and error avoidance, though these were less consistently supported. Variability among learners was noted, with one participant showing a tendency toward underexplicitness, indicating that some learners might occasionally underuse explicit markers. Overall, the study confirms that overexplicit references are a characteristic of intermediate and advanced L2 learners' interlanguage, providing new insights into the specific contexts where this occurs. The findings support the hypothesis that the clarity principle plays a significant role in overexplicitness, potentially to compensate for

other non-target-like features of learners' speech, as a cautious strategy while mastering accessibility ranges, or simply because it proves effective. This principle extends to overexplicit referent introductions across multiple clauses or utterances, and other verbose speech acts. The study suggests that the primary motivation for overexplicitness is avoiding communicative breakdowns. As learners' overall language competency improves and breakdowns become less frequent, the balance between the principles of economy and clarity will likely reduce overexplicit references and redundant communication.

The corpus-based studies discussed above show some limitations: i) all the studies analyzed spoken production; ii) the context in which the REs occur is not specified; iii) Participants belong to a specific proficiency level, in some cases, the proficiency was not measured by any standardized tests. All these factors are key factors in the acquisition of REs. These limitations are addressed in this dissertation. The focus of the dissertation is the selection of REs in a specific syntactic context, namely coordination contexts which, favours the selection of the least marked of forms, zero anaphors, and pronouns. This syntactic context of coordination has been explored in L2 English only occasionally. The two corpus-studies below investigate the selection of REs in this particular context.

Leclercq & Lennart (2013) examined the spoken narratives of intermediate and advanced L1 French-L2 English and a native control group of English natives. The task used for the study was a film-retell story and investigated REs focusing on Accessibility Hierarchy, as outlined in 2.5. These findings revealed that English native speakers prefer high-accessibility markers to maintain reference, while to shift or reintroduce reference; they tend to use low-accessibility markers. However, L2ers preference to maintain reference is both low-accessibility and high-accessibility markers, showing a low production of null pronouns in these contexts, which means they were overexplicit.

Interestingly, these findings contradict some previous research studies (Crosthwaite, 2011; Kang, 2004), which observed a predominance of noun phrases (NPs) and overt pronouns among native English speakers for topic maintenance. However, it is essential to acknowledge that each study approaches the information status factor differently, resulting in different results. This result aligns with previous studies reviewed above on the subject of over-explicitness.

Therefore, this research is not just about the findings, but also about the implications. It shows that native English speakers use fewer explicit REs compared to previous findings, a significant departure. However, we observed that null pronouns were not fully addressed, with any specific context provided for their incidence. This is a crucial gap in our understanding. When it comes to L2ers, this study confirms previous findings of redundancy in their speech production, yet it did

not explore the influence of transfer factors in this context. In conclusion, this investigation provides significant insights into the spoken language production of L2 learners compared to native speakers. It emphasizes the nuanced nature of RE practice among L2 learners and highlights the need for a more comprehensive study that accounts for the different factors influencing the selection of REs in this particular context. This is a call to action for further research.

Quesada & Lozano (2020) tested the written production of L1 Spanish-L2 English learners across three proficiency groups, comparing them to an English control group. The data was extracted from the COREFL. To prompt the written narratives, they used twelve images from the wordless picture book "Frog, Where Are You?" by Mayer (1969). The study identified various factors influencing the selection of REs, including information status, potential antecedents, syntactic configurations, characterhood, within-task effects, and proficiency level. The study revealed significant findings when selecting RES, considering the abovementioned factors. Firstly, L2 English learners did not consistently exhibit native-like behaviour in RE usage regardless of their proficiency levels. Unlike intermediate learners, beginners and advanced learners showed similar rates of using explicit REs. Additionally, L2 learners used very few null subjects, contrary to expectations based on previous studies. Secondly, native speakers mainly used explicit pronouns to maintain topic continuity and predominantly used noun phrases (NPs) when shifting topics. In contrast, L2 learners displayed a different pattern, using significantly more explicit pronouns and fewer null pronouns than natives in contexts of topic continuity. This indicates a challenge for L2 learners in selecting appropriate REs at the interface of syntax and discourse, even at advanced proficiency levels. Thirdly, the study identified a phenomenon known as the picture-transition effect, where transitioning between pictures prompted the use of fuller REs, even when not strictly necessary. Fourthly, a distinction occurred in RE use between primary and secondary characters. While natives used explicit pronouns and NPs equally for main characters, L2 learners preferred explicit pronouns. NPs were more commonly used for secondary characters across all groups. Finally, native English speakers tended to use more explicit pronouns than NPs when there were two antecedents, but this trend reversed with three antecedents. L2 learners exhibited a similar pattern, albeit less prominently. Competing antecedents imposed cognitive load, especially for L2 learners, who faced additional challenges in selecting the correct RE in a non-native language.

To summarize, these findings indicate that multiple factors, including proficiency levels, information status, task effects, cross-linguistic influences, and the characteristics of the characters involved, influence L2 learners' selection of REs in English.

In the two studies above, however, coordination was not exhaustively explored. Additionally, the studies explored either spoken (Leclercq & Lennart, 2013) or written performance (Quesada & Lozano, 2020), while the mode of production may also play a role on the selection of REs in general and, in particular, in contexts of coordination.

Chapter 4. Spoken and written narratives

This dissertation aims to explore any differences in RE selection in spoken vs. written L2 English. Hence, it is necessary to analyze the differences and similarities of these two modes of productions and review studies where an effect of the mode of production has been explored. First, we start examining the most general properties that define both spoken and written modes of production, including time, permanence of record, memory and use of explicit vs. implicit knowledge (c.f section 4.1). Then, we examine the distinguishing features of spoken and written language from a linguistic perspective, (c.f section 4.2). Finally, we provide a summary of previous corpus-based L2 and L1 studies, which aimed to explore the effect of mode of production (spoken vs. written performance) on the acquisition of variety of linguistic aspects (Bel et al., 2010; Christensen, 2000; Martínez-Flor, 2006; Perales & Portillo, 2007; Vasylets et al., 2017) (c.f section 4.3). Importantly, no studies on L1 or L2 English RE selection seem to be available.

4.1 Properties of spoken and written communication

In everyday life, we face grammatical and lexical choices when communicating in speaking or in writing. These choices are affected by several factors, such as the context, the register, the audience, and the mode, among others. These differences are particularly noticeable when comparing spoken and written communication. Most grammar books focus on describing the form and use of grammatical constructions instead of how they are used in spoken or written discourse. Biber et al (1999, p. 6) discusses the various perspectives from which we can study grammar, emphasizing the primary distinction between theoretical and descriptive approaches. The theoretical perspective aims to uncover abstract principles tied to a specific model of linguistic competence. In contrast, the descriptive perspective offers a detailed characterization of the language as it is used. These perspectives are crucial for understanding the differences between spoken and written language. In spoken communication, the immediacy and direct interaction with the listener allows for a more flexible and spontaneous use of grammar and vocabulary. The context and instant feedback from the speaker play an important role, facilitating real-time adaptation and correction. In contrast, written communication tends to be more planned and structured. The absence of immediate feedback and the need for clarity and precision require writers to be more careful with their grammatical and lexical choices.

Crystal (1995) offers a distinction between the two modes of communication, stating that the distinction between spoken and written work is fundamentally different communicative contexts, leading to notable differences in language structure. The grammar and vocabulary used in writing differ significantly from spoken language. Moreover, the contrasts in writing do not always align with speech. Similarly, tones in spoken intonation vary greatly depending on whether it is uttered plainly or whispered, a distinction not easily captured in writing. Table 3 summarises the complex relationship between spoken and written mode through seven distinct points of contrast, as articulated by Crystal (1995).

Distinctions	Spoken	Written
time/space	time bound	space bound
spoken features/ written features	intonation, loudness, tempo, rhythm and tones	lines, capitalization, spatial organization, punctuation
words and constructions	coordination, grammatical informality	subordination, elaborate syntax
errors	cannot be drawn	can be drawn

Table 3. Summary of speech and writing distinctions (source, Crystal 1995, p. 6).

From the table above, we can identify several differences between spoken and written discourse based on seven points of comparison by Crystal. First, regarding the time and space distinction, speaking is immediate and dynamic, occurring in real-time interactions where both speaker and listener are present, and communication is directed towards specific addressees. In contrast, writing is fixed, static, and enduring, typically crafted in isolation from the reader and lacking immediate feedback due to physical separation. Second, in terms of spoken and written features, in speaking, the spontaneity and rapid pace often discourage extensive pre-planning, resulting in more relaxed structures, occasional repetition, and the use of filler expressions. Intonation and pauses help break down longer statements, although the distinction between individual sentences can sometimes become less clear. By contrast, writing allows for meticulous analysis and precise organization, featuring complex sentence structures and clear divisions into sentences and paragraphs facilitated by punctuation and formatting conventions.

Additionally, during face-to-face interactions, speech benefits from non-verbal cues such as facial expressions and gestures, which aid in conveying meaning and providing immediate

feedback. The spoken lexicon includes context-specific terms that directly reference the current situation. In contrast, writing lacks visual contact and relies less on contextual clues, making immediate feedback less accessible for clarification. Third, in terms of language use, speech often incorporates informal words and constructions, with complex coordinate sentences and occasional colloquialisms. In contrast, writing tends towards formal constructions with intricate syntax, particularly evident in legal documents. Certain vocabulary items, such as names of chemical compounds, are primarily encountered in written form and rarely spoken aloud. Finally, speech allows for real-time revisions but irreversible errors once spoken, while writing facilitates error correction and refinement in subsequent drafts. Interruptions are audible in speech but not apparent in the final written product, underscoring the differing editing processes and final presentation expectations between the two modes of communication.

According to research in SLA, the written and spoken modes of production differ in various ways. Previous studies by Grabowski (2007), Kuiken and Vedder (2011, 2012), Vasylets et al. (2017), and Williams (2012) have highlighted some key differences between both modes of production. Two main factors that set them apart are time and the permanence of the record. Thus, when we deliver a spoken or written message, our planning is related to cognitive and selection processes (Grabowski, 1996; Herrmann & Grabowski, 1995). This implies that most of the time, in our daily communication, we are immersed in selecting between what is stored in our memory and the information we need to communicate effectively. In spoken language, communication occurs in real time with time constraints during message formulation, which involves planning and encoding. Speakers often feel pressure to deliver information promptly as their audience waits. Additionally, the articulation process in speaking is typically faster compared to writing. Conversely, writing allows for offline conditions, enabling the writer to monitor and edit the message, which cannot be done in spoken language.

Regarding the permanence of the record, spoken language is not permanent, while written language is. This distinction has implications for memory and cognition. Speaking requires a higher cognitive load as previous discourse must be retained in working memory while speaking progresses. In contrast, written language allows for reconsidering previous discourse at any time, reducing the demand for working memory. Interestingly, the lasting nature of written language often demands greater linguistic precision, while spoken language is generally perceived as allowing minor errors in grammar or pronunciation compared to the standards applied to written language (Crystal, 1995, p. 6; Schoonen et al., 2009, pp. 79-80; see also

Williams, 2012, p. 326). Due to the extended time available, these differences imply that writing may provide more opportunities for using explicit knowledge during message planning, encoding, monitoring, and editing. However, it also requires higher linguistic accuracy due to its lasting record. From a cognitive perspective, writing imposes lower cognitive demands than speaking, as access to long-term memory is facilitated. Consequently, learners may have more time and resources to test their hypotheses in writing compared to speaking, as concluded by Williams (2012, p. 328).

The body of research supporting the role of writing in facilitating knowledge creation continues to grow, particularly in understanding how learners engage with explicit and implicit knowledge. Collaborative tasks have demonstrated that learners can collectively construct new or restructured knowledge, often resulting in increased proficiency and accuracy in language use (Nassaji & Tian, 2010; Storch, 1999, 2001; Storch & Wigglesworth, 2007; Swain & Lapkin, 2002; Wigglesworth & Storch). Thus, SLA research is concerned with how knowledge is most effectively acquired and determining whether writing or speaking more accurately demonstrates knowledge. Considering the distinction between explicit and implicit knowledge, it is possible that speaking better reflects implicit knowledge while writing better reflects explicit knowledge. This hypothesis needs to be explored. Williams (2012, p. 325) argues that the first step in this co-construction process involves reflection, where writers can draw upon their explicit knowledge to inform their writing decisions. Explicit knowledge refers to consciously accessible language rules and structures that learners can articulate and apply. However, collaborative writing proves more effective in creating new knowledge than individual efforts, as it involves combining knowledge from multiple sources and engaging in interactive strategies known to enhance language learning outcomes. Numerous studies directly comparing individual and collaborative writing have consistently found superior outcomes in terms of language accuracy for collaborative writing contexts (Kuiken & Vedder, 2005; Nassaji & Tian, 2010; Storch & Wigglesworth, 2007). This collaborative process also pushes learners towards reprocessing and repackaging implicit knowledge—the less consciously accessible, automatic language knowledge stored in long-term memory. Implicit knowledge includes chunks of language that learners use instinctively without necessarily being able to explain them. Through production during collaborative tasks, learners engage in what Swain (2006, p. 98) terms "languaging," using language production to mediate complex cognitive ideas and to analyze implicit knowledge. This interaction between explicit and implicit knowledge is central to understanding how writing promotes language development, especially in collaborative settings, by bridging the gap between theoretical understanding and practical application. In a broader context, the debate continues regarding the interface between explicit and implicit knowledge in second language

acquisition. Explicit knowledge typically gained through formal learning and instruction, can be transformed into implicit knowledge through the processes involved in using the language, such as speaking or writing. These transformations occur as learners practice and apply what they have learned in real communication scenarios (Ellis, 2003, p. 342). Writing, particularly in collaborative contexts, appears pivotal in facilitating this transformation, encouraging learners to draw upon both their explicit and implicit knowledge to refine their language skills effectively.

The two studies mentioned above (Grabowski, 2007; Williams, 2012) deal with these constraints: time and permanence of records. Grabowski (2007) conducted an investigation based on a series of experiments on how language production developments described by speaking and writing consistently influence knowledge results. The participants were students and teachers from different universities in Germany. In his study, Grabowski focused on the possible differences between these two forms of communication in terms of the demand on working memory, paying particular attention to three parameters: discourse protocol, time per unit, and pacing. Discourse protocol refers to the message already given and stored in working memory. Time per unit relates to the period in which cognitive resources are available from long-term memory. Finally, pacing has to do with the flow of communication. Grabowski's results indicate that significant differences in their comparison between written and spoken discourse suggest that writing outperforms speaking in some aspects of communication effectiveness. This implies that written communication is more precise or better understood than spoken communication. This significantly increases the cognitive load in the speaking mode, as the information produced in spoken communication is stored in our memory. The time to deliver the message is shorter than in written communication while keeping the flow of communication in spoken mode has limited access to the available knowledge; in contrast, the less cognitive load in the written mode allows finer access to the available knowledge.

Williams (2012) focused on whether written production facilitates any advantages over spoken production for L2 development based on two specific features: time and the permanence of the record.

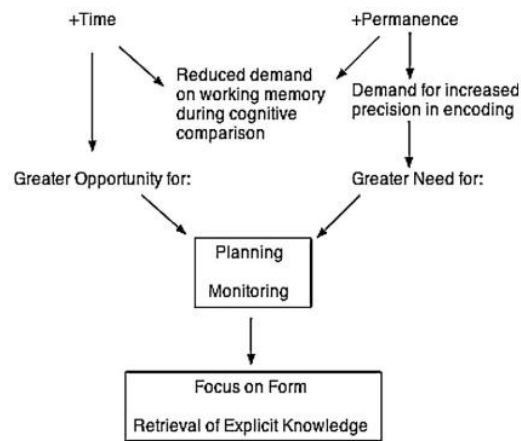


Figure 27. Inherent features of written production and their effects (source Williams, 2012, p. 323).

Figure 27 shows how writing benefits from time and permanence, resulting in a focus on the form and the recovery of explicit knowledge. As a result, the writing process allows more time to plan and monitor the information, and at the same time, the permanent feature of writing permits the delivery of a more precise message. Thus, Williams claims that writing may benefit from more significant opportunities and resources while delivering the message because time conditions allow so. Writing is also felt to demand higher degrees of accuracy because of its permanence of record. Second, at a cognitive level, writing may benefit from lower cognitive demands than speaking. Higher demands on working memory, added to higher time pressure in speaking, may increase the cognitive effort in speakers.

In contrast, writing benefits from access to long-term memory. Williams (2012, p. 328) concludes that the cognitive window in writing is open somewhat wider and for a more extended period so learners can test their hypotheses, and this is not always possible in speaking. Both studies highlight the cognitive benefits of written over spoken communication but differ in their focus and findings: Grabowski emphasized the higher cognitive load in speaking due to the need to store and deliver information rapidly, whereas writing benefits from lower cognitive load, allowing finer access to knowledge. Williams also noted that writing imposes lower cognitive demands but highlighted the extended cognitive window it provides for hypothesis testing and planning. This advantage is often impossible in real-time spoken communication due to higher working memory demands and time pressure.

4.2 Linguistic properties of spoken and written production

This section aims to provide insights into the actual linguistic properties of spoken and written discourse in L1. By examining these patterns, we aim to establish a foundational understanding that will later allow us to contrast these findings with L2ers' discourse. This comparison will help

us identify specific linguistic features and complexities unique to L2 communication, providing deeper insights into the differences and similarities between native and non-native language use. Since the Greek era, the relationship between speaking and writing language has been debated among many disciplines, such as anthropology, psychology, educators or linguists. It is undeniable that there is a considerable body of work on the relationship between spoken and written narratives but fewer on the syntactico-grammatical features of these two modes of communication in L1 English. Thus, it is necessary to know more about the differences between spoken and written language's peculiarities to understand how language works.

The critical point of this section is to examine those features and be able to recognize them when they occur. Halliday (2007, vol. 9, p. 77) explains the distinguishing features of spoken and written language from a linguistic perspective. According to Halliday, spoken language is characterized by complex sentence structures with low lexical density, wherein sentences feature numerous clauses but fewer high-content words per clause. In contrast, written language is defined by more superficial sentence structures with high lexical density, where clauses contain more high-content words but fewer clauses overall. Thus, due to its interactive and real-time nature, spoken language requires complex syntactic structures. Speakers dynamically employ subordination and clause embedding to convey meaning, prioritizing fluency and immediate comprehension over lexical density. Consequently, individual clauses in spoken discourse may contain fewer content words. In contrast, written language is marked by deliberate construction and refinement. Writers have the opportunity for meticulous revision, resulting in more superficial sentence structures that pack more informational content into each clause. This higher lexical density ensures that each clause contributes significantly to the sentence's overall meaning. Additionally, the reduced number of clauses in written sentences underscores a preference for clarity and conciseness, facilitating efficient information transmission without the constraints of real-time communication.

In conclusion, Halliday's explanation shows how the structural nuances of spoken and written language provide with distinct communicative functions. Spoken language thrives on complexity and interactive engagement, accommodating the dynamics of immediate discourse. In contrast, written language prioritizes clarity and efficiency, employing simplified structures with dense informational content to convey messages effectively through textual mediums. It is important to recognize that spoken and written languages are not inherently superior to one another; they are merely different forms of linguistic expression, each adapted to fit various contexts and

purposes. Recognizing and understanding these linguistic differences helps interpret the essential features of each language mode. We will discern some differences between spoken and written grammar focusing on the syntactic-grammatical aspects of our dissertation, such as coordination and anaphoric reference.

This dissertation examines a particular discourse-syntactic context, i.e. topic continuity syntactic coordination, and how the selection of REs is affected by mode of production in this specific discourse-syntactic context. As we saw in the previous section, the written and spoken modes of production differ in various ways due to different constraints, such as time pressure. This fact will be seen in the complexity of sentences that the speaker and writer choose to communicate. Many linguists have traditionally observed that some of the differences between spoken and written discourse is that written texts tend to be syntactically more complex. They typically feature a greater use of subordinate structures compared to spoken language, which often relies more heavily on coordinated structures for clarity and immediacy (O'Donnell, 1974). Beaman (1984) conducted a study on the syntactic complexity in spoken and written discourse. The analysis draws upon 20 spoken narratives and 20 written narratives centered on the 'pear film,' a short movie created as part of a 1975 project led by Wallace Chafe and colleagues at the University of California, Berkeley, and widely used in a variety of SLA studies. The film aimed to prompt natural, unscripted discourse from various speakers on the same subject. Participants, all university women, were asked to describe what they saw after viewing the film, either spokenly or in written form, under comparable conditions. Each narrative was provided individually by speakers or writers who were not informed in advance about the specific task, ensuring the data captured spontaneous and informal narrative discourse. Her findings provide an overview of sentence types in the spoken and written narratives based on taxonomy of structures. Interestingly, complex coordinate sentences were the most common structure in both spoken (25%) and written (38%) narratives. Similarly, the percentage of subordinate sentences was relatively low in both spoken (13%) and written (12%) narratives, challenging the notion that subordination alone signifies greater syntactic complexity. Additionally, Beaman reveals that written stories use more two-clause coordinated sentences (21% more), while spoken narratives often chain multiple clauses, sometimes up to thirteen in one sentence, reflecting their sequential nature and frequent use of "and" as a filler to avoid pauses, leading to a fragmented quality and generalized use of "and" as a connector. Chafe conducted a project which examined the language use of 20 professors and graduate students from UC Berkeley and SUNY Albany. The study aimed to compare four forms of language: conversations, lectures, letters, and academic papers, as they naturally occur among academics. Chafe's research on sentence constructions indicates that in spoken language, individuals typically use

straightforward sequences of coordinated clauses, avoiding more complex interclausal relationships commonly seen in writing. This is because Chafe explains that complex syntax demands more cognitive processing effort than speakers can usually manage.

We can see that the distinction between spoken and written discourse in terms of syntactic complexity is a complex one, as evidenced by the studies of Beaman (1984) and Chafe & Tannen (1987). While traditional views suggest that written texts are typically more syntactically complex due to greater use of subordinate structures, Beaman's analysis challenges this notion by showing that both spoken and written narratives often rely on coordinated structures for clarity and immediacy. Her findings reveal that while written narratives do feature more two-clause coordinated sentences, spoken narratives exhibit a preference for chaining multiple clauses with frequent use of coordinating conjunctions like "and," reflecting their sequential and spontaneous nature. Chafe's research further underlines these differences by highlighting that in spoken language, individuals tend to employ straightforward sequences of coordinated clauses, avoiding the more complex interclausal relationships typical of written texts. This difference is attributed to the cognitive processing demands of complex syntax, which may exceed what speakers can manage in real-time speech. Thus, while written discourse may appear syntactically more complex on the surface, both spoken and written language adapt to their respective communicative contexts with distinct strategies that balance syntactic structure with communicative efficiency.

In exploring the differences between spoken and written language, the focus is often on sentence complexity as a key distinguishing feature, as shown above. However, alongside sentence structure, another critical factor that shapes these differences is how speakers and writers establish and maintain reference throughout their discourse. Establishing reference requires a good balance between lexical and grammatical choices in spoken and written discourse. This has been claimed to be problematic, especially with the use of third-person singular pronouns in L2ers' narratives (cf. Lozano, 2009, 2016). However, we are interested in how English natives maintain reference in their narratives in both modes of communication. Biber et al., (1999) highlights the distinct grammatical features of various text types, or registers, including conversation, fiction, newspaper language, and academic prose. Newspaper, academic prose and fiction texts are written, edited, and objective, featuring complete and complex sentences. In contrast, conversations are spontaneous, spoken, and personal, with brief, incomplete sentences, contractions, and context-dependent references.).

Among the various ways of achieving anaphoric reference analyzed in their corpus, they reflect on the general use of nouns vs. pronouns, where there are notable differences in the use of anaphoric expressions across different registers. Additionally, these differences do not consider the use of null pronouns, as we can see in Figure 28:

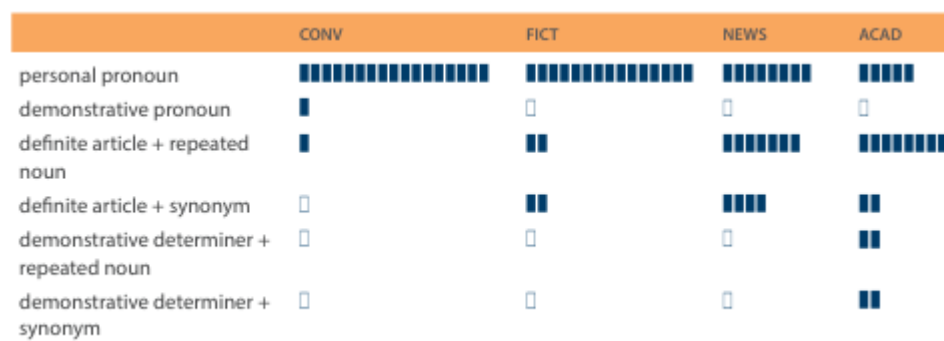


Figure 28. Use of different types of anaphoric expressions (source from Biber et al. 2021, p.239).

The figure above shows how anaphoric references vary between the different registers. In conversation and fiction, pronouns are frequently used; where in academic prose uses a higher number of nouns. By contrast news texts use a combination of these anaphoric expressions to create a more varied and informative text, requiring readers to deduce co-references. Overall, while conversations rely heavily on pronouns and context for clarity, academic prose and news use more precise noun phrases and demonstratives to convey additional information and ensure accuracy. However, they do not discern between first, second or third-person singular or plural pronouns. The high frequency of pronouns in spoken discourse may be due to the high presence of longer chains of coordination in spoken discourse (Beaman, 1984). Thus, the distance between the anaphoric expression and the antecedent is going to influence the selection of REs, as can be seen in example (64).

(64) Nobody likes, you know, snow snowmen and things like that. Okay? So we built this snowman round this rock, and this car came back cos he carnies he just came in to hit it, and he burst into and broke his bumper, this massive dent in his bumper and drove round. Cos they did it to me before I made another one in the park earlier. And they just drove in, knocked it over and ran out. So I put in a rock this time and it was so funny though. (Conversation) (From Biber et al. 2007, p. 331).

Biber (2021, p. 241) also looks at the forms of anaphoric reference in relation to distance, where their corpus findings show that, across registers, this distance varies with the type of anaphoric expression used. Personal pronouns are less explicit and typically have a shorter anaphoric distance, while full noun phrases, being more explicit, are used with larger anaphoric distances.

Repeated nouns are more explicit than synonyms, allowing for a greater span from the previous mention. Demonstrative pronouns have short anaphoric distances due to their immediate context reference, while noun phrases with demonstrative determiners have larger distances due to their specificity. Written texts exhibit clearer differentiation in anaphoric devices because writers have more time to plan and use language resources deliberately.

4.3 SLA studies comparing spoken and written language production

A vast amount of studies in SLA have focused on the effect of aspects affecting linguistic performance, like task type, considering the nature, the complexity or the conditions under which the task has to be performed (Ellis, 2003; Robinson & Gillabert, 2007). However, the effect of the mode of production, another critical factor in L2 performance, has yet to be investigated in SLA. In this section, we present a comprehensive review of studies on mode of production as an effect on the production of L2. Firstly, we will provide with an overview of those studies whose main focus is how the mode of production affects various linguistic aspects, namely lexical complexity, pragmatic competence, and grammatical complexity, lexical complexity and accuracy. Secondly, we will give an overview of those studies which deal with the effect of mode of production focusing on different aspects of anaphora resolution.

This first subsection reviews the studies that have examined the effects of mode on various linguistic aspects, which have sometimes shown an effect on language performance and acquisition. Importantly, these studies comprise different task types and types of L1-L2 participants. Additionally these studies cover a variety of research aspects: lexical complexity (Bulté & Housen, 2009) for L1 Dutch - L2 French; Yu (2009) for various L1s-L2 English); pragmatic competence (Martínez-Flor, 2006 for L1 Spanish-L2 English); grammatical complexity and accuracy (Weissberg, 2000 for L1 Spanish-L2 English; Ferrari and Nuzzo, 2009 for different L1s-L2 Italian) and grammatical complexity, lexical complexity, and accuracy (Ellis, 1987; Kormos & Trebits, 2009 for L1 Hungarian-L2 English and Baba, Takemoto & Yokochi, 2013 for L1 Japanese-L2 English).

Ellis (1987) studied the accuracy of the use of past tenses within a single discourse mode, specifically narrative discourse under certain conditions: planned writing, planned speech and

unplanned speech. The participants in the study were intermediate-level English learners from various L1 backgrounds. To do so, the participants were asked to perform a task divided into two parts: the first consisted of a written and spoken picture description. Once they completed this task, they needed to perform another narrative task, but this time just orally, where they needed to describe a set of pictures. Furthermore, time was assigned to carry out these tasks: one hour for writing and two minutes for planning for spoken tasks. Results showed an effect of mode in terms of accuracy across all tasks. First, accuracy varied across conditions and tasks. Second, the regular past was more accurate in planned writing than in unplanned speech.

Weissberg (2000) conducted a study investigating syntax development of the spoken and written production of L1 Spanish-L2 English. The participants who took part in this study were five adults who were attending a pre-university intense English program. To do so, he used different informal and formal spoken and written tasks that were analyzed for accuracy and motivation. These tasks were carried out for three months. The results show a superiority effect of the written mode, where participants relied on new syntactic forms in the written narratives before they used them in the spoken narratives. Thus, accuracy is first achieved in the written form.

Martínez-Flor (2006), conducted a study involving 81 participants enrolled in a computer science degree program, aged between 19 and 25, who had been studying English for 7 to 10 years. The aim of their investigation was to compare how learners perform when making suggestions in two distinct tasks: an oral task involving phone messages and a written task involving emails. To do so, the specific speech act of suggestion was measured by two theoretical frameworks (i.e. speech act theory and politeness theory), focusing on twelve linguistic realisations as the target items. The results show differences in the learner's spoken and written task performance. While the amount of suggestions in both tasks is similar, participants use more linguistic strategies in their written task than in the spoken task, which demonstrates that there is an effect of mode in the production of suggestions.

Bulté & Housen (2009) investigated the effect of mode in spoken and written production in 15 participants (15-17 years old), L1 Dutch-L2 French, who were assessed on their lexical proficiency through both writing and speaking tasks. The oral task involved retelling a wordless picture story, specifically *The Frog, Where Are You*, which required participants to describe the events and details of the story using their own words. Participants were asked to write a complaint letter and argue for or against a statement for the written tasks. This was a longitudinal study as it involved 3 test times with one-year intervals. The results reveal a notable improvement in lexical proficiency across both spoken and written tasks. Nevertheless, this

progress did not necessarily involve parallel progress in proficiency between spoken and written discourses.

Ferrari & Nuzzo (2009) conducted a study comparing the grammatical complexity and accuracy of the spoken and written production from various L1 backgrounds and L1 Italian and a control group of Italian natives. Although the participants had different proficiency levels, the study did not specify these. The task used in this study was the spoken retelling and written narrative of the short movie *The Mysterious Movie*. To measure the grammatical complexity, they used general (number of words per clause, number of dependent clauses per AS-unit or T-unit) and specific measures (type of dependent clauses and cohesive devices). Results show significant differences between the native group and the learner groups. First, in terms of grammatical complexity, there is an effect of mode in the native group where they produced longer and more complex clauses in their written production than in the spoken. However, no effect of mode is found in learners' production. Second, both groups use various connectors in the written texts. Finally, regarding accuracy, the mode of production does not affect the natives, but it does affect the learners, who are more accurate in spoken production than in written texts.

Kormos & Trebits (2009) investigated various linguistic aspects (i.e. fluency, accuracy, lexical and syntactic complexity) of language aptitude of the spoken and written production of L1 Hungarians-L2 intermediate English learners. They also tested how cognitive factors affect communicative task performance. To do so, the participants were given four narrative tasks (two cartoon descriptions and two picture narrations). First, they performed the tasks spokenly, and a month later, they performed the same tasks in written form. Results revealed significant differences between the spoken and written modes in various degrees. First, it was found that lexical complexity manifests distinctly in the written mode, characterized by the richness and diversity of vocabulary employed. In contrast, in the spoken mode, such complexity is notably absent. However, when considering lexical complexity overall, no significant difference is observed between the written and spoken modes. This suggests that while written language demonstrates higher lexical diversity, the overall level of lexical complexity remains comparable across both modes of communication. These findings underscore the nuanced relationship between task demands and linguistic features in different communicative contexts. Thus, the mode affects accuracy and lexical complexity but not syntactic complexity.

Baba, Takemoto, and Yokochi (2013) compared the fluency, lexical and grammatical complexity of the spoken and written production of undergraduate students L1 Japanese-L2 English in describing a six-panel cartoon in spoken and written form. The three linguistic features were measured for text length, MTLD textual lexical diversity, content word frequency, and average sentence length. The results show that written texts are shorter than spoken texts. However, written texts show greater lexical complexity than spoken texts. Participants also tend to use more coordination in their spoken texts than in their written texts. The results revealed that the mode affected the participants' performance.

Vasylets et al. (2017) investigated how mode (spoken vs. written) and task complexity affect L2 performance of L1 Spanish-L2 English in an experimental study. Lexical, syntactic and propositional complexity was measured by the simple and complex versions of the Fire Chief Task (Gilabert, 2007). The procedure in this study was as follows. Half of the participants took the spoken task individually, while the other half took the written task in a group session. Both groups of participants were given a pre-task planning time (up to 1 minute). After reading the instructions, participants performed simple and complex versions of the task. Finally, they rated the cognitive load for performing the task. Notably, there was no time limit. The results show that mode affects the participants' performance, using more complex syntax and lexical diversity in the written task than in the spoken task.

The collective findings from these studies highlight the various ways in which spoken and written modes have an effect on second language learners' linguistic performance. Writing generally promotes greater lexical diversity and syntactic complexity, allowing for more planning and editing, which results in more complex and accurate language use (Kormos & Trebits, 2009; Baba et al., 2013; Vasylets et al., 2017). In contrast, speaking, characterized by spontaneity, often leads to simpler constructions and fewer errors but also fosters immediate communication (Ellis, 1987 and Weissberg, 2000). Task complexity and proficiency levels further influence these mode-specific differences, with written tasks significantly increasing lexical complexity and accuracy across various contexts (Bulté & Housen, 2009; Ferrari & Nuzzo, 2009). Additionally, learners tend to use more linguistic strategies in written tasks than in spoken tasks, indicating an effect of mode on the production of suggestions (Martínez-Flor, 2006). Writing facilitates higher lexical and syntactic sophistication, while speaking emphasizes real-time processing and interaction.

The rest of this section will explore studies which investigate the mode effect on the selection of REs in various L1, namely Christensen (2000) for L1 Chinese, Bel et al., (2010) for L1 Catalán and Ngo et al., (2019) for L1 Vietnamese.

Christensen (2000) tested anaphoric reference, in particular, the marking of third-person, noun phrase repetition, and zero marking of ten undergraduate or graduate L1 Chinese native participants, in a spoken and a written narrative task, using the silent video clip by Chafe *Pear* (1975). He asked the participants to watch the film *Pear*, and after watching it, the participants were interviewed by a Chinese speaker who first asked them some basic questions and then told them to talk about the film. After that, they were asked to write about the film. Results show that written narratives are more detailed and complex, using longer sentences and subordination, while spoken narratives are shorter and simpler, relying more on coordination and frequent use of connectors. Additionally, zero anaphora was widely used in both modes of discourse but to different degrees, while in written narratives, zero anaphora is the preferred anaphoric reference followed by NPs; in spoken narratives, zero anaphor and overt pronouns are equally used, followed by NPs.

In Bel et al. (2010) examine pronominal anaphora by analyzing null and overt subject pronouns in Catalan across narrative texts, comparing spoken and written texts. They investigated three main aspects: (1) pronoun preferences for different antecedents, (2) their roles in discourse, and (3) the influence of text modality (spoken vs. written). The analysis involved 30 spoken and 30 written narratives from 30 participants, categorized into three age groups (9–10, 12–13, and 15–16 years old). The procedure in this study was as follows. First, participants were shown a three-minute silent film about interpersonal conflicts at school. Then, they were asked to tell a similar story that has happened to them, both spokenly and in writing. Finally, they were asked to discuss the topic, again spokenly and in writing. In contrast, with previous studies reviewed above, they did not find any statistically significant difference between spoken and written texts about the aspects tested. Thus, results show that null pronouns are clearly linked to reference maintenance both in spoken and written discourse. Second, overt pronouns are used to maintain reference and in topic reintroduction. Finally, regarding the distribution of REs of antecedent choices, their results show a clear preference for null for antecedents in the subject position. In contrast, overt subjects refer to either a subject or a non-subject antecedent in written performance.

Ngo et al. (2019) examined the relation between grammatical factors and referential choices of the spoken and written production of L1 Vietnamese in a spoken retelling task and a written narrative, using the silent video clip by Chafe *Pear* (1975). Grammatical factors were measured by coding third-person referents in adjacent clauses (e.g. subject, object, possessive, etc.), and

the selection of REs was coded in the current clause, excluding those occurring in coordination contexts. Results show that written narratives are shorter than spoken narratives regarding several words and clauses. Thus, spoken texts are more complex, while written texts are more concise. Notably, the results show no mode effect on the selection of referential forms.

The following table provides a comprehensive summary of studies that have investigated the effect of mode of production on second language (L2) performance. These investigations explore how spoken and written modes influence various aspects of language production, including grammatical complexity, lexical richness, and accuracy. By synthesizing findings from diverse linguistic contexts and methodological approaches, this table offers valuable insights into the subtle relationship between mode of communication and L2 proficiency.

	Superiority of written mode	Superiority of spoken mode	No effect of mode
Grammatical complexity	Weissberg 2000, Martínez-Flor (2006) Ferrari and Nuzzo (2009) Baba, Takemoto, and Yokochi (2013) Vasylets et al. (2017)		Kormos and Trebits (2009) Baba, Takemoto, and Yokochi (2013)
Lexical complexity	Bulte´ and Housen (2009) Kormos and Trebits (2009) Vasylets et al. (2017)		
Accuracy	Kormos and Trebits (2009)	Ferrari and Nuzzo (2009)	

Table 4. Studies which have investigated language performance in spoken and written mode (adapted from Kuiken and Vedder, 2012, p.370).

Table 4 is divided in two main research focuses: i) the comparison between these two modes in terms of performance and ii) the effect of mode of production in the L2 performance. The studies reviewed highlight diverse influences of mode of production (spoken vs. written) on grammatical complexity in second language (L2) learning. Ferrari and Nuzzo (2009) found that

native speakers displayed greater grammatical complexity in written outputs than L2 learners, indicating proficiency and language background impact syntactic development, particularly in written contexts.

Regarding syntactic complexity, there is a consensus that written production generally demonstrates greater syntactic complexity compared to spoken production. Weissberg (2000) observed a syntactic advantage in written narratives, suggesting the initial adoption of complex syntactic structures in writing before their use in spoken discourse. This aligns with theoretical expectations and empirical findings describing how written language allows for more complex sentence structures and syntactic embedding compared to spoken language contexts' typically more straightforward syntax (c.f. 4.1). Several studies highlight the influence of the mode of production (spoken vs. written) on lexical complexity in second language (L2) performance. Bulté & Housen (2009) noted improved lexical proficiency across both spoken and written tasks, indicating that learners can develop their lexical resources effectively in both modalities. However, the topic of mode of production and its impact on lexical complexity in L2 performance is complex, as evidenced by the contrasting findings of Ngo et al. (2019). They found spoken narratives exhibited more complex lexical structures than written narratives among L1 Vietnamese native speakers. This discrepancy suggests that the relationship between mode of production and lexical complexity may vary depending on task type, learner proficiency, and linguistic background. This complexity underscores the need for further research to develop an understanding of how learners use and develop lexical resources across different communicative contexts.

Regarding accuracy, Ferrari & Nuzzo (2009) observed no significant mode effect on accuracy among native speakers but, similarly, noted that L2 learners were more accurate in spoken production. This finding challenges the notion of uniformly higher accuracy in written language and underscores the variability influenced by learner proficiency and task conditions. Finally, in terms of anaphoric reference and pronominal expression, Christensen (2000) found that L1 Chinese written narratives are more compact and complex, employing more subordination, while spoken narratives tend to rely more on coordination and more straightforward structures. In this study, zero anaphora was widely used in both modes but was the preferred anaphoric reference in written narratives, followed by noun phrases (NPs). However, in spoken narratives, zero anaphora and overt pronouns were equally used, followed by NPs. However, Bel et al. (2010) found no significant difference between spoken and written texts regarding the use of

pronominal expressions in L1 Catalán. They observed that null pronouns were linked to reference maintenance in both modes, and overt pronouns were used to maintain reference and topic reintroduction. Ngo et al. (2019) found that L1 Vietnamese written narratives were shorter and more concise, while spoken narratives were more complex. However, similar to Bel et al., in L1 Catalán they found no significant mode effect on the selection of referential forms.

Notice, no studies on L1 English RE selection are available. Importantly, most of the reviewed studies their participants belong to a specific proficiency group, it means that they focus on learners who all share a similar level of proficiency in English. Thus, their investigations do not involve comparing individuals across different levels of proficiency (Martínez-Flor, 2006; Knormos & Trebits, 2009; Baba, Takemoto & Yokochi, 2013). Additionally, only three studies deal with anaphoric pronouns in various L1 but not English (Christensen, 2000; Bel et al., 2010; and Ngo et al., 2019).

The selection of REs in spoken vs. written language in SLA is a crucial area of study, revealing distinct patterns that significantly influence accuracy and syntactic complexity. The complexity of syntax in spoken and written discourse, a key area of investigation, is crucial for our understanding of language acquisition. Written texts, for instance, tend to feature more elaborate syntactic structures, such as subordination, which reflects learners' explicit knowledge and deliberate composition. This complexity allows for more explicit expressions and more precise differentiation between referents, highlighting the importance of our research in this field. Moreover, the choice between zeros and explicit forms (such as pronouns) varies between spoken and written modes

My current research focuses on the selection of REs, particularly zeros, noun phrases (NPs), and pronouns, with an emphasis on how these choices may be influenced by the mode of production—whether spoken or written—in L1 Spanish-L2 English vs. English natives. This investigation seeks to explain how cognitive processes interact with the demands of different modes of communication, clarifying how speakers negotiate linguistic complexity across spoken and written discourse. Thus, this study seeks to further investigate the impact of the mode of production on language use across proficiency levels in both L1 Spanish-L2 English and L1 English, building on the research conducted by Díaz-Negrillo and Espínola Rosillo (2024).

Chapter 5. Research questions

This chapter introduces the central questions explored in this dissertation, outlining the RQs and their corresponding hypotheses. They draw from the theoretical background on reference examined in Chapter 2, which is informed by the literature review on L2 acquisition of REs presented in Chapter 3. Additionally, Chapter 4 examines the differences between spoken and written modes of production. Together, these chapters provide the foundation for formulating and investigating the following research questions and hypotheses, guiding our study into the relationship between mode of production and the selection of RE. Finally, these hypotheses will be thoroughly discussed in Chapter 8. It is anticipated that in spoken discourse, L2ers will be more overexplicit than native speakers. The use of fuller forms is attributed to the time constraint and additional cognitive load in spoken interactions, where anaphoric references must be marked to prevent communication breakdown, given that spoken discourse does not allow for retracing in the event of misunderstanding. This hypothesis is applicable across contexts where REs are constrained. By contrast, for native speakers, no overspecification is expected in spoken discourse. Consequently, an increased use of fuller forms in spoken language is not anticipated. However, our findings suggest that native speakers' spoken narratives often feature more coordination and a higher frequency of zero pronouns than their written narratives.

5.1 RQ1. Discourse configuration and the selection of REs in topic continuity

As stated in previous literature (Givón, 2001; see also Lozano, 2009; Quesada & Lozano, 2021), the configuration of the discourse, in terms of whether, for example, the topic is continuous or not, plays an essential role on the selection of REs. For instance, fuller REs are often used in contexts where there is discontinuity of the topic, while less full forms are used in contexts of topic continuity.

According to this, **RQ1** looks at possible mode effects on the preferred discourse configuration of the narratives across L2 English vs. L1 English discourse. The aim of this RQ is to explore the nature of discourse configuration across the various proficiency groups and, crucially across both modes of production. And the possibilities of selecting the same type of REs are consistent across both modes of production. This research question consists of two parts:

RQ1a: Is there a mode effect on the discourse configuration of the narratives across L1 Spanish-L2 English vs. L1 English discourse?

H1a: We expect that the preferred discourse configuration by L2ers and native speakers is topic continuity in line with L1 literature (cf. Dubois, 1987; Givón, 1983; Givón, 2001; see also Leclercq & Lennart, 2013). We hypothesize that there is no effect of the mode of production on the choices of discourse configuration since the ability to maintain reference is acquired from a very early stage (Serratrice & Allen, 2015), and it is a common factor in every language.

RQ1b: Is there a mode effect on the selection of REs in topic continuity contexts of the narratives across L1 Spanish-L2 English vs. L1 English discourse?

H1b: Previous studies have shown that the information status influences the selection of REs. Native speakers use minimal REs, like null and overt pronouns, to maintain the topic, while L2ers are expected to be somewhat sensitive to this distinction, though not in the same way as native speakers, even at advanced proficiency levels (Crosthwaite, 2001; Díaz-Negrillo & Espínola Rosillo, 2024; Leclercq & Lennart, 2013). We hypothesize that there is an effect of mode on the selection of REs in topic continuity contexts across all proficiency levels, where L2ers are expected to be more overexplicit than natives in contexts that require maintaining the topic, especially in the spoken discourse.

5.2 RQ2. Discourse-syntactic context: coordination

Anaphoric pronouns are typically used in English for maintaining maximal reference continuity. Zero anaphors are associated with a higher degree of discourse continuity, but they are restricted in English, a non-null language subject, to specific contexts. Givón (2001, pp. 418ff) explains that in English zero anaphors are licensed in equi-topic, equi-subject contexts, and within sentences, particularly in coordinate and participle clauses. The use of zero anaphors in English has also been claimed to maximize the sequentiality of events in spoken discourse while, instead, the use of overt pronouns may create a sense of discreteness (Oh, 2006, p. 831-832). This thesis focuses on topic-continuity contexts, so it seems necessary to look at least at one of the contexts where discourse and syntax allows the use of zero anaphors, i.e. coordination.

RQ2 looks at possible mode effects on contexts of topic continuity syntactic coordination which, as discussed above, favours the selection of the least marked of forms, zero anaphors. While the use of zeros by L2 learners has been covered in some studies (Leclercq & Lennart, 2013; Quesada & Lozano, 2020), its use in relation to the syntactic contexts which license it has not

been closely looked at. The aim of this RQ is to explore the nature of coordination and if the possibilities for using zero anaphors is consistent across both modes and across proficiency levels. This research question has three parts:

RQ2a: Is there a mode effect on the incidence of topic continuity syntactic coordination across L1 Spanish-L2 English vs. L1 English discourse?

H2a: Coordination facilitates discourse cohesion (Oh, 2006, p. 831-832), which may be applicable to L1 Spanish and L1 English. According to this, coordination is predicted to be combined with topic continuity in L1 and L2 English, regardless of the mode of production, as a discourse-syntactic device fostering discourse cohesion. So, we hypothesize that there is no mode effect on the incidence of topic continuity syntactic coordination.

RQ2b: Is there a mode effect on the different properties of syntactic coordination in topic continuity, i.e. chains of coordination, coordinators and intervening subordination, across L1 Spanish-L2 English vs. L1 English discourse?

H2b: in this RQ which looks at the different properties of syntactic coordination in topic continuity, we expect an effect of the mode of production on chains of coordination across all proficiency levels, longer chains being more abundant in spoken discourse in line with (Beaman, 1984 p. 58; Miller & Weinert, 1998 p. 22). Longer chains of coordination in spoken discourse can be attributed to the fast flow of speech which fosters the presentation of events in a close-knit fashion one fast after each other (Oh, 2006, p. 832). It can also be attributed to the economy of expression in spoken discourse (c.f 4.1), which favours ellipsis of syntactic devices, including the use of zero as REs. Finally, speakers construct sentences spontaneously without the same level of planning or editing typical of written language (Kormos & Trebits, 2009; Baba et al., 2013; Vasylets et al., 2017).

In relation to coordinators, we expect a preference for “and” coordinator both in spoken and written narratives across all proficiency levels in line with Beaman (1984, p. 61). Finally, we do not expect a mode effect on intervening subordination in topic continuity syntactic coordination contexts of the narratives across the different proficiency groups in their spoken and written narratives.

RQ2c: Is there a mode effect on the selection of REs in learners' and natives' narrative choices in topic continuity syntactic coordination and in contexts of topic continuity syntactic coordination distant coreference?

H2c: First, as to the performance of L1 English in topic continuity syntactic context, we expect no effect of mode of production on RE selection, which is according to what has been found in L1 literature on RE selection and also for other native languages (Bel et al., 2010 for L1 Catalan acquisition; Perales & Portillo, 2007 for Spanish; Ngo et al., 2019, for Vietnamese; Díaz-Negrillo & Espínola Rosillo, 2024 for English). We predict a marked preference for zero anaphors in the native speakers and in the learners, which is also according to the literature (Givón, 2001 p. 423) and also to what is found in control groups in L2 English research literature (Leclercq & Lennart, 2013; Quesada & Lozano, 2020; Díaz-Negrillo & Espínola Rosillo, 2024). However, we expect deficits in the learners compared to native speakers, as reported in studies exploring either written or spoken production (Quesada & Lozano, 2020, pp. 15-16; Leclercq & Lennart, 2013, p. 14, respectively), and also in this thesis' pilot study (Díaz-Negrillo & Espínola Rosillo, 2024). Finally, mode effects are predicted in L2 English with deficits more markedly occurring in the spoken mode of production. In the written mode the learner has more time to proceed with the narratives in contrast to the spoken mode, where the participant is under the time pressure constraint but also in the greater cognitive load that this medium imposes on the non-native user (see Grabowski, 2007; Kuiken & Vedder, 2012; Vasylets, Gilabert & Manchón, 2017).

Second, the specific context of intervening subordination has not been systematically explored yet. However, intervening subordination implies greater distance between the antecedent and REs, so the number of fuller forms is expected to increase for all groups (see Chapter 3). Regarding mode effects, the same results as in the previous context are expected, namely, no effects for L1 speakers and effects for L2 learners with greater deficits in their spoken production for the same reasons as mentioned above.

5.3 RQ3. Other factors constraining the selection of REs

The selection of REs has been widely studied by different approaches (c.f. 3.4), and the factors constraining the selection of REs have been the focus of investigation of recent research both in L1 and L2 literature (c.f. Quesada, 2013; Lubbers Quesada, 2015 for an overview). However, we have not found yet any study that investigates whether there is an effect of mode when these constrains are analyzed across L1 Spanish-L2 English vs. English native speakers. In this dissertation, we investigate possible mode effects on RE selection in relation to factors that have

been examined previously and have shown to be relevant on the selection of REs, namely, i) distance of the antecedent (Ariel, 1988; Arnold, 1998; 2005; Gudmestad, House, & Geeslin, 2013; Kibrik, 1996, 2001; Lozano, 2016; Torregrossa, Bongartz, & Tsimpli, 2015); ii) number of potential antecedents (Lozano, 2016; Torregosa, 2019; Quesada & Lozano, 2020); iii) protagonist hood (Kang, 2004; Montrul & Rodríguez Louro, 2006); and iv) scene transitions (Marslen-Wilson et al., 1982; Vonk et al., 1992; Van Vliet, 2008). Taking this into consideration, we propose the following research question.

RQ3: Is there a mode effect of the REs on the different factors (i.e. distance of the antecedent, number of antecedents, type of character and scenes) constraining the selection of REs across L2 English learners vs. L1 English discourse?

The aim is to explore whether the mode of production has an effect on the different factors constraining the selection of REs across proficiency levels. And the possibilities of selecting the same type of REs are consistent across both modes of production. This research question has 4 parts:

RQ3a: Is there a mode effect on the distance of the antecedent across L1 Spanish-L2 English vs. L1 English discourse?

H3a: Distance has been proved to be one relevant factor constraining the REs as mentioned in the corresponding L1 literature (Ariel, 1990; Givón, 1983; Kibrik et al, 2016). We expect no mode effect for native speakers, while an effect is anticipated for L2ers due to the cognitive load, in line with L2 literature (with better performance in written tasks than spoken ones) (see, Baba, Takemoto, and Yokochi, 2013; Bulte´ and Housen, 2009; Kormos and Trebits, 2009; Vasylets et al., 2017; and Weissberg, 2000). We expect that the distance of the antecedent in the spoken discourse will be in the immediately preceding clause, where it will be further back in the clauses in the written mode.

RQ3b: Is there a mode effect on the number of potential antecedents across L1 Spanish-L2 English vs. L1 English discourse? Is there a mode effect on RE selection when constrained by the number of potential antecedents across L1 Spanish-L2 English vs. L1 English discourse?

The number of potential antecedents is another factor affecting the selection of REs, as explained in Chapter 3.

H3b: First, we hypothesize no mode effect on the number of potential antecedents in L1 while an effect is anticipated for L2ers due to the cognitive load, in line with L2 literature (Ngo et al., 2019; Bel et al., 2010). Second, we expect that the number of potential antecedents will constrain the selection of REs in L1 Spanish-L2 English and English native as mentioned in L1 and L2 literature (Arnold & Griffin, 2007; Contemori, 2015; Lozano, 2016; Ryan, 2015). Importantly, in terms of the choice of REs, we anticipate that the number of antecedents will have an effect on the selection of REs similarly across mode of production or across proficiency levels. The higher the number of potential antecedents, the fuller forms is expected to be in the spoken mode across proficiency levels, especially in L2ers' spoken narratives, as they tend to be overexplicit due to the learners' prioritizing clarity over economy (Ryan, 2015, p.283).

RQ3c: Is there a mode effect on the selection of REs when constrained by the type of character mentioned in the story across L1 Spanish-L2 English vs. L1 English discourse?

H3c: There is evidence in the L1 English and L2 English literature (Chafe, 1994; Clancy, 1980; Kang, 2004; Leclercq and Lennart, 2013; Ryan, 2015) that the type of character influences the selection of RE. In fact, they found that L2 learners tend to use more explicit REs (such as NPs) for main characters compared to native speakers, indicating a tendency towards overexplicitness in L2 learners (Quesada, 2021). However, the task used differs from the one used in this study. These studies focused on written narratives and they do not investigate spoken narratives. We expect an effect of mode on the RE selected by learners. Specifically, we anticipate that L2 learners use more explicit REs for the main character compared to native speakers in their spoken narratives, where in the written mode their tendency will be similar to the natives'. We do not expect any effect of mode in the natives' narratives.

RQ3d: Is there a mode effect on the selection of REs when constrained by the change of scene across L1 Spanish-L2 English vs. L1 English discourse?

H3d: The accessibility theory (c.f 2.5) explores the concept of unity. This factor of the scene is related to thematic units. This factor relates to a linguistic structure within discourse that

contains a central theme or topic to achieve thematic coherence. Participants have to narrate a video that is divided into 7 scenes. We expect the video scenes to be reflected in the participants' narratives. Scene changes are examples of discontinuity in the narrative structure and terms of REs; this is reflected on the selection of fuller REs by both natives and learners.

We do not expect a mode effect on the selection of REs in L1 Spanish-L2 English learners and native speakers, as seen in L1 literature (Ariel, 1990, p. 57; Puh & Puh, 2014, p. 38-39; Van Vliet, 2008, p. 45-46), and L2 literature (Quesada, 2021, p. 162-163; Collewaert, 2019, p. 265-266) where fuller forms are expected when there is a new scene, as indicators of a thematic change.

This research studies the effect of the mode of production and, therefore, aims to investigate whether the REs selected during scene changes are comparable in both oral and written modes.

Chapter 6. Method

This chapter describes the research method of the present study. The first section deals with the characteristics of the COREFL corpus, which served as the source for the data of our investigation (see 6.1 **The corpus: the COREFL**). The second section describes the participants, the task, and the selection of texts for this study (see 6.2). The third section provides a description of the software used to annotate and analyze the data (see 6.3). Finally, the last section offers a detailed description of the categories analysed for our investigation (see 6.4).

6.1 The corpus: the COREFL

The data used in this investigation comes from The Corpus of English as a Foreign Language (COREFL). COREFL began as a written corpus in 2012. Lozano, Díaz-Negrillo, and Callies (2020) explain that the first phase of COREFL collected the production of L1 Spanish-L2 English learners in secondary education. Postgraduate students from the Teacher Training MA programme at the University of Granada conducted this initial data collection stage during their placements in different secondary schools. The data were collected on-site in two sessions. In the first session, the L2 participants completed a learning background form and a placement test. In the second session, the L2 learners had to retell a picture-based story in written form. The written texts, which the students produced manually during class time, were later typed up and saved as text files. In the second phase of corpus creation, which is currently ongoing, the pilot corpus was extended and integrated into a larger framework of other learner corpora, currently also including CEDEL2 and JEFLLCorp. The beta version of COREFL was further developed in terms of design principles, modality, number and variety of tasks, variety of participants, and the compilation of native speaker control corpora, currently, English, Spanish, and German L1 corpora.

COREFL's primary goal is to gather a corpus of narratives that has the following properties. Each of them is explained in further detail below:

- i. It adheres to principles of best practice in learner corpus design and compilation
- ii. It contains native-speaker control corpora
- iii. It is bi-modal
- iv. It contains a variety of narrative tasks
- v. It is bi-directional

- vi. It samples a range of EFL learner populations

In relation to i) above, Lozano, Díaz-Negrillo & Callies (2020) argue that the COREFL follows the established principles of corpus design and compilation already used in the Corpus Escrito del Español Como L2 (CEDEL2) (Lozano, 2009; Lozano and Mendikotxea, 2013). These principles are based on general design principles proposed for large native speaker reference corpora (Sinclair 2005), and specific design principles proposed for learner corpora (c.f Granger et al., 2009; Tono, 2004, for further details).

In relation to ii) above, COREFL contains two *control native corpora*, i.e., a mother tongue corpus and a target language corpus. The availability of these two control corpora allows investigations, first, on the effects of L1 influence, when the mother tongue corpus is used and, second, on language development, when the corpus of the target language is used. This second possible comparison is at the core of Contrastive Interlanguage Analysis, (CIA) and is often present in LCR investigations. Crucially, the two control corpora are fully comparable among themselves and with all the other L2 corpora collected within the ANACOR and ANACOREX projects, because all the variables (task- and participant-related) are highly controlled for during their design. In this dissertation, we use the target corpus of the L1 Spanish-L2 English component, i.e. L1 English corpus, first, to identify the selection of REs in the target language, and then to compare the L1 Spanish-L2 English productions with the the L1 English productions, and hence determine whether native-like RE selection is shown in the learners' data.

In relation to iii) above, by *bimodal*, Lozano, Díaz-Negrillo & Callies (2020) explain that the current version of COREFL includes spoken and written data in all the components produced by the very same participants and for each of the tasks in the corpus. This development is part of the second phase of corpus creation. In this second phase, the written data along with the participant's demographical information and proficiency level were collected online, while the spoken data was collected on-site or online, at least 15 days after the first stage, to avoid bias in the language produced. The objective of this property of the COREFL, i.e. bimodality, is to investigate any effects of mode and processing constraints on the production of L2 narratives (for LCR studies that consider such constraints, see, e.g. Tracy-Ventura and Myles, 2015). In this dissertation, we examine the possible effects of mode of production on the selection of REs. In practice, this means that this dissertation will compare, first, the written and spoken productions by all the participants by language level, so as to look at any mode effects in L2 English and in L1 English, and second, it will also compare the spoken productions by L2 learners with that of L1 participants, the written productions by each of the groups, so as to tap into developmental differences across the various proficiency groups in each of the modes.

In relation to iv) above, *tasks*, the COREFL comprises four narrative tasks, which represent a variety of task types and hence allows for investigation into task effects. The four tasks are *Talk about a famous person*, *Talk about a film you've seen recently*, *The Frog Story*, and the Chaplin task. Each task is identified with a variety of aspects which are linguistically relevant. The tasks vary in terms of degrees of task control: the first and the second tasks are more open-ended than the other two, which are story-retelling tasks prompted with pictures and a video clip, respectively. They also vary in terms of the type for discourse configurations expected in the productions, which is a crucial aspect in RE selection: while topic-continuity configurations are expected from the first one, topic-change and topic continuity configurations are expected from the other three. Finally, while animate and non-animate characters are present in the Frog story task, only animate characters are present in the other three. The figure below summarises the different task types in the COREFL, together with previous studies that have used these tasks and the relevance of these tasks type in the study of REs.

TASK NAME	TASK TYPE	PREVIOUS STUDIES	LINGUISTIC RELEVANCE
<i>Talk about a famous person</i>	Open-ended	Lozano (2016) Martín-Villena & Lozano (2020)	A range of animate different-gender characters. It triggers topic continuity.
<i>Frog, where are you?</i> (Mayer, 1969)	picture-based	Kang (2004)	Non-animate characters. It triggers topic continuity and topic shift.
<i>Chaplin</i> (from <i>The Kid</i> , 1921)	video-based	Blackwell & Quesada (2012) Ryan (2015) Quesada (2021)	The range of animate different-gender characters. It triggers topic continuity and topic shift.

Figure 29. COREFL: description of the tasks.

(Source of data: http://corefl.learnercorpora.com/user_guide/corpus_design)

In addition to task type, three other task variables are controlled for in COREFL: Both written and spoken data were collected without a time limit, allowing global participation. Written data

were collected online, allowing global participation with forms provided in participants' native languages to ensure comprehension. Spoken data collected used three methods: high-quality recordings in a quiet room, classroom recordings with a laptop, and, due to the Covid-19 pandemic, recordings via Google Meet. Additionally, a few participants self-recorded their spoken task.

In relation to v) above, by *bidirectional* Lozano, Díaz-Negrillo & Callies (2020) mean that contrasts are also possible L2 components across the different corpora within the ANACOR and the ANACOREX projects. The objective of these comparisons is to tap into aspects related to language typology. For example, it is possible to contrast L1 English-L2 Spanish (from CEDEL2) and L2 Spanish-L2 English (from COREFL), with a view to reveal how each language could influence each other depending on the language pair.

In relation to vi) above, the COREFL includes narratives from L2ers of English from all proficiency levels (beginner, intermediate and advanced), which allows researchers to study a particular phenomenon developmentally, again, allowing for another type of comparison which stands at the core of CIA. To classify learners' productions into levels of proficiency, COREFL uses three proficiency-level measurements:

- Objective measurement: this allows for the classification of learners in six levels proposed by the Common European Framework of Reference for Languages (CEFR), through a standardised placement test⁷²: A1 (lower beginner), A2 (upper beginner), B1 (lower intermediate), B2 (upper intermediate), C1 (lower advanced), and C2 (upper advanced). See Figure 29 below for more detailed information.
- Subjective measurement: learners self-evaluate their proficiency level in English for speaking, listening, reading and writing according to a six-point ordinal scale, during the completion of the learner profile form. Their self-score for each skill is then transformed into a numeric scale from 1-6 in the corpus database, and a new variable is created called 'Proficiency self-assessment', resulting from the average of the four skills.
- Language certificate measurement: learners can also indicate any English certificate they may hold (e.g., Certificate Advance English C1), as part of the questions in the learner profile form.

⁷² Oxford University Press. (2003). Quick Placement Text. Oxford University Press. The test raw scores range from 0 to 60.

Oxford		
CEFR level	Proficiency level	Quick Placement Test¹ scores (And corresponding %)
A1	Lower beginner	0-17 (0%-28.3%)
A2	Upper beginner	18-29 (30.0%-48.3%)
B1	Lower intermediate	30-39 (50.0%-65.5%)
B2	Upper intermediate	40-47 (66.7%-78.3%)
C1	Lower advanced	48-54 (80.0%-90.0%)
C2	Upper advanced	55-60 (91.7%-100%)

Figure 30. Corpus design: Proficiency level.

(Source of data: http://corefl.learnercorpora.com/user_guide/corpus_design)

In relation to levels of proficiency, this dissertation covers three proficiency levels: beginner (A1-A2), intermediate (B1-B2) and advanced (C1-C2), which makes it a quasi-longitudinal corpus that allows developmental research and compared them to a control group of English natives.

At this stage, the COREFL beta version data are being collected online via a dedicated webpage collected via Google Forms⁷³ (i.e., version 1⁷⁴) of learners with seven different L1 backgrounds, Spanish, German, Czech, French, Turkish, Greek and Italian. Comparable corpora are also compiled based on data produced by native English, Spanish, German, Greek, Czech and Turkish speakers. As for the steps in data collection (c.f. A. Call for participations (questionnaires and emails) Appendix in Appendices section), and as briefly discussed above (c.f. 6.1), the procedure consists of two different stages. The first stage collected the written data, the participant's demographic information, and the proficiency level online. This stage goes as follows: the instructions⁷⁵ (see Appendix B. COREFL participation form in Spanish and English) are displayed and participants have to accept the consent form. Then, participants answer some questions

⁷³ <http://www.learnercorpora.com/>

⁷⁴ COREFL version 1 is available online at: <http://corefl.learnercorpora.com> (Sept 2021).

⁷⁵ The Google forms are written in the learners' mother tongue to ensure that the learners understand the procedure and the tasks (form samples are provided in Figure 85 and Figure 86 in the Appendices section).

about their language background. And finally, they complete the written task. Note that only L2ers take the placement test. In the second stage of data collection, the oral data is collected on-site or online, at least 15 days after the first stage, so as to avoid bias in the language produced. The researcher was never present during task completion.

The most recently updated version of COREFL contains a total of 530.392 words (native English speakers: 156,994; English L2ers: 373,398), giving a total of 2,447 texts (native English speakers: 637; English L2ers: 1,810). There is a lot more data which is not yet registered online and which increase by the day, so in this dissertation we will refer to the data that is registered online. Table 5 shows the number of words and documents for the different groups of L2ers according to their L1s. As we can see, the L2 English group used in this dissertation (L1 Spanish-L2 English) is the most numerous:

L2 COMPONENTS		
	WORDS	TEXTS
SPANISH	248,600	1,361
GERMAN	124,798	449

Table 5. Number of words and texts in the COREFL L2 English components (version 1).

Also, the table below shows the number of words and texts in the L1 control group (L1 English):

ENGLISH NATIVES		
	WORDS	TEXTS
ENGLISH	42,093	637

Table 6. Number of words and documents in the COREFL L1 English control group (version 1).

In Table 7 we see the number of words and texts by the language group and the mode of production (spoken vs. written).

	CORPUS COMPONENTS BY MODE	
	WORDS	TEXTS
SPANISH LEARNERS - SPOKEN	61,207	177
SPANISH LEARNERS - WRITTEN	187,393	1,184
GERMAN LEARNERS - SPOKEN	54,734	174
GERMAN LEARNERS- WRITTEN	70,064	275
ENGLISH NATIVES - SPOKEN	9,799	25
ENGLISH NATIVES - WRITTEN	32,294	150

Table 7. Words and texts by L1 of L2 Learners and Production Mode (COREFL).

The tables above show that COREFL contains a considerable number of texts per language level and mode of production. Importantly, not all the participants produce two texts (spoken text and written text) on the same task, and this is why the number of words and texts is often lower in the spoken components. Still, all the participants who produce the spoken text have previously completed the written task.

6.2 Participants and task

This dissertation analyzes a large body of texts from L1 Spanish-L2 English vs. L1 English, both spoken and written from each participant. A number of criteria were taken into account when selecting participants from the L2 and the L1 corpora. These criteria were the proficiency level of L2ers, the age of all participants, the years studying English and university degree. In relation to the first criterion, proficiency level of the L2ers, the spoken and written texts analyzed from the L1 Spanish-L2 English component were initially intended to represent the six different CEFR proficiency levels (from A1 to C2). The objective was to have a clear-cut division between the different proficiency levels to compare the different proficiency levels (1 and 2) within the same proficiency group (A, B, C). However, we finally grouped them into three main proficiency levels⁷⁶: beginner (A1 and A2), intermediate (B1 and B2), and advanced (C1 and C2). This was because of the limitations imposed by the COVID-19 pandemic and the inherent difficulty in compiling texts from certain proficiency levels, particularly A1 and C2 levels. Additionally, texts from A1 and C2 levels are less commonly found in university contexts, where the average proficiency level tends to range from B2 to C1. In any case, note that an objective criterion was used to classify the participants into proficiency levels, namely, score in the placement test.

⁷⁶ We have annotated and analysed 4.178 grammatical subjects.

Accordingly, the learners in the beginner group scored between 20% and 48 %, the intermediate learners scored between 50% and 77%, and the advanced learners scored between 82% and 100%.

In relation to age, the participants' ages range between 18 and 24, and all are studying for an English degree. Most of the participants are in their second and third year. The final sample consists of 71⁷⁷ learners of English who were divided into 3 groups according to their L2 proficiency level, and of 16 English native speakers, who are comparable to learners due to shared characteristics such as being university students, their age, and that the English natives were learning Spanish as a foreign language. A summary of the participants' characteristics can be found in Table 8. More information about each of the groups is given below and the Appendices offer full details about the participants' biodata (c.f Appendix F. L1 Spanish-L2 English Participants biodata and data information and G. English native speakers' biodata and data information).

GROUP	N	MEAN AGE	MEAN PLACEMENT	
			TEST SCORE (%)	MEAN PLACEMENT TEXT SCORE
BEGINNER (A1-A2)	15	24	38%	23/60
INTERMEDIATE (B1-B2)	34	18	65%	39/60
ADVANCED (C1-C2)	22	23	88%	53/60
NATIVES	16	19	N/A	N/A

Table 8. Summary of the participants' biodata and proficiency-related features.

The biodata of the participants of the beginner group can be seen in Table 11. The beginner group is comprised of 15 L1 Spanish-L2 English speakers, all of them from Spain. The mean age of the participants in this group is 24. The beginner group scored between 20%-45% on the placement test. There are 11 females and four males in the group. Full details for each participant in each group are available online⁷⁸.

⁷⁷ The average number of 14 participants in each learner group (and 16 in the control group) is comparable with the participant pools of other similar studies, e.g. 10 learners per proficiency group are examined in recent PhD dissertations on anaphoric subjects (Georgopoulos, 2017, Quesada, 2021); whereas less than 10 are examined in other dissertations (Collewaert, 2019). Note, additionally, that none of the aforementioned studies examines the mode effect.

⁷⁸ For further details about learners and natives' metadata visit: <http://corefl.learnercorpora.com/>

ID	SEX	PROFICIENCY	
		SCORE %	AGE
A1_19_12_14_AIMF ⁷⁹	FEMALE	20	19
A1_22_12_14_RLE	FEMALE	23.3	22
A2_20_14_14_SFC	FEMALE	26.7	20
A2_50_6_14_MJRC	FEMALE	36.7	50
A2_22_13_14_COL	MALE	38.3	22
A2_26_3_14_SM	MALE	38.3	26
A2_18_3_14_PAMM	FEMALE	38.3	18
A2_17_11_14_MPS	FEMALE	40	17
A2_21_10_14_RAG	MALE	41.7	21
A2_18_13_14_MDJ	FEMALE	43.3	18
A2_22_9_14_SRM	FEMALE	45	22
A2_18_15_14_IMF	FEMALE	45	18
A2_23_4_14_BC	MALE	45	23
A2_61_6_14_YY	FEMALE	45	61
A2_18_10_14_MFR	FEMALE	48.3	18

Table 9. Biodata and proficiency score in the beginner group (A1-A2).

The biodata of the intermediate group can be found in Table 10. The intermediate group is comprised of 34 native speakers of Spanish all of them from Spain. The mean age of the participants of this group is 18 years. The intermediate group scored between 50% and 77% on the placement test. There are 26 females and 8 males in the group.

ID	SEX	PROFICIENCY	
		SCORE %	AGE
B1_19_7_14_EMGV	FEMALE	50	19
B1_18_9_14_LLC	FEMALE	51.7	18
B1_18_12_14_ASS	FEMALE	55	18
B1_22_14_14_GG	FEMALE	56.7	22
B1_17_10_14_NCA	FEMALE	56.7	17
B1_19_13_14_JMR	MALE	56.7	19
B1_19_12_14_AFL	MALE	58.3	19
B1_19_11_14_NLLB	FEMALE	60	19
B1_18_12_14_MGM	FEMALE	60	18
B1_18_12_14_IJQ	FEMALE	60	18
B1_18_11_14_MRC	FEMALE	60	18
B1_18_15_14_RVB	FEMALE	61.7	18

⁷⁹ Each participant has a unique code made up of L1, medium (written or spoken), proficiency, age, length of instruction in English, task number and initials. For example, the file code A1_19_12_14_AIMF, represents a learner, who has an A1 level (=lower beginner), who is 19 years old, who has been learning English for 12 years, who did the Chaplin task (task #14) and whose initials are AIMF.

B1_18_15_14_CAM	FEMALE	61.7	18
B1_20_11_14_FER	MALE	63.3	20
B1_18_8_14_AR	FEMALE	63.3	18
B1_18_10_14_JAVG	MALE	63.3	18
B1_18_12_14_CRM	FEMALE	65	18
B2_18_11_14_AIVR	FEMALE	66.7	18
B2_18_10_14_LCF	FEMALE	66.7	18
B2_19_15_14_ADHR	FEMALE	66.7	19
B2_23_17_14_RGM	FEMALE	66.7	23
B2_21_15_14_MMM	FEMALE	68.3	21
B2_19_13_14_MAA	MALE	68.3	19
B2_18_14_14_LAM	FEMALE	70	18
B2_23_17_14_IFM	FEMALE	70	23
B2_18_15_14_JCL	FEMALE	70	18
B2_24_19_14_MABG	MALE	71.7	24
B2_22_16_14_AMC	FEMALE	73.3	22
B2_18_12_14_LHA	FEMALE	73.3	18
B2_18_9_14_AHG	FEMALE	73.3	18
B2_18_13_14_SJM	MALE	75	18
B2_22_16_14_MBC	FEMALE	75	22
B2_21_13_14_JGG	MALE	76.7	21
B2_19_16_14_AMO	FEMALE	76.7	19

Table 10. Intermediate group (B1-B2).

The biodata of the advanced group can be in Table 11. The advanced group is comprised of 22 native speakers of Spanish, all of them from the peninsula Spain. The mean age of the participants in this group is 23 years. The advanced group scored between 82% and 100% on the placement test. There are 16 females and 6 males in the group.

ID	SEX	PROFICIENCY	
		SCORE %	AGE
C1_19_13_14_IMPA	FEMALE	80	19
C1_18_13_14_RLR	MALE	81.7	18
C1_19_10_14_DM	FEMALE	81.7	19
C1_18_12_14_PMJ	FEMALE	83.3	18
C1_SP_18_13_14_AGL	FEMALE	83.3	18
C1_24_16_14_DPD	FEMALE	83.3	24
C1_21_15_14_PGM	MALE	85	21
C1_19_13_14_IGT	FEMALE	85	19
C1_23_18_14_JHS	MALE	85	23
C1_21_13_14_ARP	FEMALE	85	21
C1_22_12_14_MVP	MALE	85	22
C1_19_13_14_MHM	FEMALE	86.7	19
C1_21_8_14_LAR	FEMALE	86.7	21
C1_18_12_14_LBT	FEMALE	88.3	18
C1_19_9_14_VMFV	FEMALE	90	19
C2_23_18_14_TOTTI	FEMALE	93.3	23
C2_21_11_14_CGT	MALE	96.7	21
C2_57_49_14_MAMC	MALE	96.7	57

C2_19_13_14_PSR	FEMALE	96.7	19
C2_19_15_14_LPI	FEMALE	100	19
C2_24_18_14_EB	FEMALE	100	24
C2_20_16_14_ALC	FEMALE	100	20

Table 11. Advanced group (C1-C2).

The biodata of the native group is shown in Table 12. The native group is comprised of 16 native speakers of English from the USA. The mean age of the participants of this group is 18 years. There are 12 females and 4 males in the group. The number of native speakers of English is considerably lower than the L2ers due to the restrictions of mobility because of COVID-19 pandemic.

ID	SEX	AGE
EN_SP_19_14_SC	FEMALE	19
EN_SP_19_14_PG	MALE	19
EN_SP_20_14_CP	FEMALE	20
EN_SP_20_14_EES	FEMALE	20
EN_SP_20_14_PM	MALE	20
EN_SP_20_14_SM	FEMALE	20
EN_SP_20_14_TK	FEMALE	20
EN_SP_20_14_AB	FEMALE	20
EN_SP_21_14_AF	FEMALE	21
EN_SP_21_14_GLN	FEMALE	21
EN_SP_21_14_TS	MALE	21
EN_SP_21_14_AL	FEMALE	21
EN_SP_21_14_CO	MALE	21
EN_SP_21_14_TL	FEMALE	21
EN_SP_23_14_KMR	FEMALE	23
EN_SP_25_14_JF	FEMALE	25

Table 12. Native group.

The task used in the texts selected for this dissertation is a narrative (a story retelling task) based on Charles Chaplin's film *The Kid* (1921) (cf. Appendix C. Screenshot's of Charles Chaplin's video). This task was included in the second phase of development of CEDEL2 and COREFL corpora. Note that the video clip comprises several attempts to solve an issue. The problem is an abandoned baby Charlie finds in the street. In the video clip, Charlie tries to resolve the situation in different ways. All the attempts prove unsuccessful until the end of the video clip, when he decides to keep the baby, and the problem is finally solved. Thus, the narrative involves changes in location and references to the main character (Charles Chaplin) and four minor characters of

varying genders (the baby, the lady, the old man, and the policeman). Importantly, this task was chosen to investigate the acquisition of REs for several reasons: i) Charles Chaplin's videos have been widely used in SLA research and especially in studies based on REs in oral production (e.g. Blackwell & Quesada, 2012; Ryan, 2015), and in studies the comparison between written and oral production (Voghera, 2020); ii) it includes six different characters and covers more than one gender (male, female and neuter), so references to a variety of third person REs can be elicited in this task; iii) it prompts topic-continuity and topic-shift contexts and has previously used to explore these two discourse configurations (e.g. Quesada, 2020; Martín-Villena & Lozano, 2020).

6.3 Data analysis: corpus annotation and statistical analysis

This section describes the tool and procedures used for the analysis of the corpus data used this dissertation. The software used to annotate and analyze the data was the UAM Corpus Tool⁸⁰ (O'Donnell, 2007). This software is a free annotation tool that allows researchers to create annotation schemes (i.e., tagsets) with numerous layers where features and sub-specifications of features can be added, where texts can be annotated manually, and the resulting data can be analyzed statistically (χ^2) based on tag frequencies. The degrees of statistical significance that will be considered in this study and hence reported in results section are, as reported in the documentation of the tool, medium significance (95%) and high significance (98%). Note that the p-value of a medium significance will be reported as $p < 0.05$ and the p-value of a high significance will be reported as $p < 0.02$ (cf. Appendix D. Software UAM Corpus tool interface).

The annotation schemes largely inspired the model of the annotation scheme in this study in Lozano (2009, 2016). Following Lozano & Díaz-Negrillo (2019), an Interlanguage Annotation (ILA)⁸⁰ tagset was designed and implemented in the data. By definition, ILA is a type of annotation designed to analyzed specific features of learners' interlanguage, and for our purposes, considering various factors that constran the selection of REs. ILA has been used by previous corpus-based L2 studies (e.g., Gudmestad et al., 2013; Lozano 2009; Collewaert, 2019; Quesada, 2020; Martin-Villena, 2023, among others). Moreover, given the nature and set of factors that have been found to influence the distribution of anaphoric subjects, only a fine-grained annotation scheme would be appropriate.

The annotation scheme was designed in two steps. First, three different tagsets were created. The first tagset grouped the texts by their authors' proficiency levels (beginners, intermediates, advanced and natives). A second tagset was designed to classify the participants' texts according

⁸⁰ Visit <http://www.corpustool.com/download.html> to download the tool.

to their mode of production (spoken and written), where we have analysed 174 texts (87 spoken and 87 written) with an overall 47,601 words in total. Finally, the third tagset was a linguistically informed tagset containing the linguistic categories for the analysis of the REs in every text. As mentioned earlier, this linguistically informed tagset was based on Lozano (2016). Some features in Lozano's tagset were maintained, while other features outside Lozano (2016) were added. The three tagsets are explained in detail in the following section (c.f.6.4).

Secondly, the texts from the 4 groups of participants were added to the project created on the software for their manual annotation. During the annotation, all the texts were annotated according to their authors' proficiency level (first tagset) and their mode of production (second tagset). Then in every text, every third-person singular subject in the texts' main clauses was linguistically annotated (third tagset), where we have tagged a total of 4,178 3rd person grammatical subjects in the spoken and written texts (2,440 and 1,738, respectively). The reason for annotating only third-person singular subjects is that these have been reported to be the most problematic grammatical person in the study of anaphora resolution (Lozano, 2009). The subjects in the subordinate clauses are not tagged because of the important focus of this study on coordination. Still, as will be explained in the next section, subordinate clauses are considered in this study as intervening clauses in the chains of coordinate clauses. Table 13 below shows the distribution of the texts and REs into the various batches considered in the study and during the annotation process.

PROFICIENCY LEVEL	MEDIUM	TEXTS	GRAMMATICAL SUBJECTS
Beginner	Spoken	15	272
	Written	15	207
Intermediate	Spoken	17	911
	Written	17	724
Advanced	Spoken	15	679
	Written	15	499
Native speakers	Spoken	16	583
	Written	16	303
		87	4.178

Table 13. Distribution of the texts and REs.

Finally, the results were obtained using the same annotation tool, the UAM Corpus Tool, which allows researchers to search for all the annotated features and conduct statistical analysis. Individual features can be searched for, or they can be combined with other features. The

software also allows for comparison of the various batches considered in the classification of the texts for a particular linguistic feature or combination of features. This enabled us to conduct comparisons between and across the four proficiency groups and also between the two medium categories in which all the texts were initially classified (first and second tagset, respectively).

6.4 The tagsets

This section lists all the features and tags used in the corpus-based studies of this dissertation. Specifically, this section is divided in two main sections: the first section, show the text tagsets (see 6.4.1) followed by the linguistic tagset where all third-person REs in the subject position were assigned with different tags (see 6.4.2).

6.4.1. The text tagsets

This subsection is divided in two tagsets: first, we show the tagging for the different proficiency groups we have used in our dissertation and the control group of English natives (see 6.4.1.1). Then, we show the tagset for the different mode of production we have used in our study (see 6.4.1.2)

6.4.1.1 Proficiency level

This section shows the three proficiency levels (beginner, intermediate and advanced) we have chosen for our study, together with the control group of English natives.

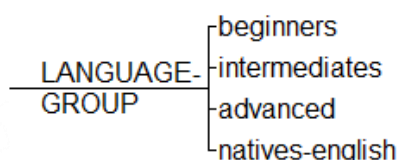


Figure 31. Proficiency level.

6.4.1.2 Mode

This section shows the two modes of production we have chosen for our dissertation: spoken vs. written.

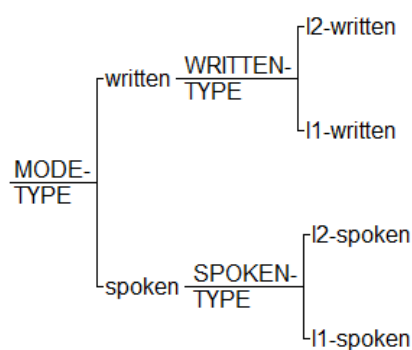


Figure 32. Mode of production.

6.4.2. The linguistic tagset

Given the size and the complexity of the linguistic tagset, in this section, we will examine its categories one by one (c.f Appendix E) in the Appendices section for the entire annotation scheme). The relevant literature sources will be cited for each feature, and authentic examples from the corpus will be provided. The first section deals with the features of the anaphoric (c.f 6.4.2), and the second deals with the features of the antecedent (c.f 6.4.3). Finally, the third and the fourth sections will deal with the features referring to the factor protagonist hood (c.f 6.4.4) and scenes (c.f 6.4.5).

6.4.2.1 Anaphor features

The anaphoric subject expression was tagged for the following features: form, discourse configuration and anaphor clause position. Each feature will be separately examined in the following sections. In all the examples, the relevant anaphoric subject forms are in bold.

6.4.2.2 Referring expressions (REs)

This dissertation focuses on null pronouns, overt pronouns, and noun phrases (NPs) as REs. We have looked at common finite and non-finite with or without modification and also name (Charles Chaplin), as illustrated in Figure 33. Note that, as explained in the literature review in Chapter 3, most previous experimental studies on anaphoric subjects in SLA typically consider only null and overt pronouns. Some corpus-based studies (Blackwell & Quesada, 2012;

Gudmestad et al., 2013; Lozano, 2009, 2016; Georgopoulos, 2017; Quesada, 2021) have shown that NPs also play an important role in AR. Examples (65) and (66) show the selection of null pronouns by a native and L2er in coordination in spoken and written discourse, where examples (67) and (68) show a preference for overt pronouns in main clauses. Examples (69) and (70) show the selection of NP with modification, “this” and “the old man” to refer to Charles Chaplin. Examples (71) and (72) show NP without modification, while examples (73) and (74) show NP indefinite. Finally, NP name are shown in examples (75) and (76).

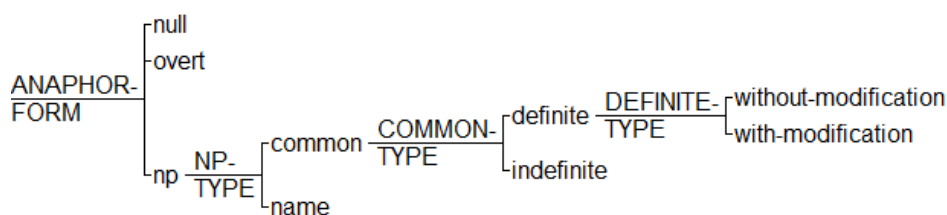


Figure 33. Form of the REs.

Null

(65) He_i is walking through a construction zone /and Ø_i kinda looks like somebody that just doesn't have a clue. (EN_SP_19_14_SC)^{81 82}

(66) He_i takes the baby_j and Ø_i goes away. (ES_WR_C1_21_8_14_LAR⁸³)

Overt

(67) At first, **he**_i thinks someone might have dropped him_j by accident.

(ES_WR_C1_19_13_14_MHM)

(68) **She**_i sees Charles_j again and Ø_i gives him_k to him_j. (ES_WR_B1_18_10_14_JAGV)

⁸¹ In each example, the anaphoric subject of the clause under study is in bold.

⁸² In COREFL (version 1), transcriptions are provided only when the spoken texts are in English. The code “/” marks a pause and may coincide with a clause boundary. For a more detailed description of the codes see http://corefl.learnercorpora.com/user_guide/conventions

⁸³ Each participant has a unique code made up of the participant's L1, the text's medium (written or spoken), the participant's proficiency level, age, length of instruction in English, the task number and the participant's initials. For example, the file code ES_WR_C1_21_8_14_LAR, represents a texts by a Spanish native, who produced a written task, with a C1 level (=upper advanced), who is 21 years old, who has been learning English fo 8 years, who did the Chaplin task (task #14) and whose initials are LAR.

NP_common_definite_with modification

(69) **this man_i** who got a cigarette right before, decided to pick up the baby_j.
(ES_WR_B1_19_12_14_AFL)

(70) **This old man_i** sees/ at the stroller of the lady before/ and he_i put it_j in the stroller.
(ES_SP_C1_19_13_14_IGT)

NP_common_definitie_without modification

(71) so **the women_i** will be angry / of uh with the / Charlie Chaplin_j.
(ES_SP_A2_26_14_SM)

(72) so **the man_i** / will put again the baby_j in car. (ES_SP_A2_26_14_SM)

NP_common_indefinite

(73) **a police officer_i** sees him_j he_j gives it_k to another man_i instead.
(EN_WR_20_14_EES)

(74) **a policeman_i** discovers what Charles_j aims to do. (ES_WR_C1_18_13_14_AGL).

NP name

(75) **Charlie_i** is walking through the alley. (EN_SP_20_14_TK)

(76) ok so **Chaplin** is walking down / kind of a sketchy alley. (ES_SP_C1_19_13_14_IGT)

6.4.2.3 Anaphor discourse configuration

This subsection shows the discourse configuration of the RE and comprises the categories new intro, topic continuity (continuous vs discontinuous), topic shift, and topic re introduction. Importantly, discursive-syntactic distinctions are made in the sub-classification since these two facets are inextricably linked: syntactic function and topicality. In other words, this part of the tagset is not purely about discourse configuration, but rather, it is about discourse configuration, syntactic disruption and, at the same time, distance.

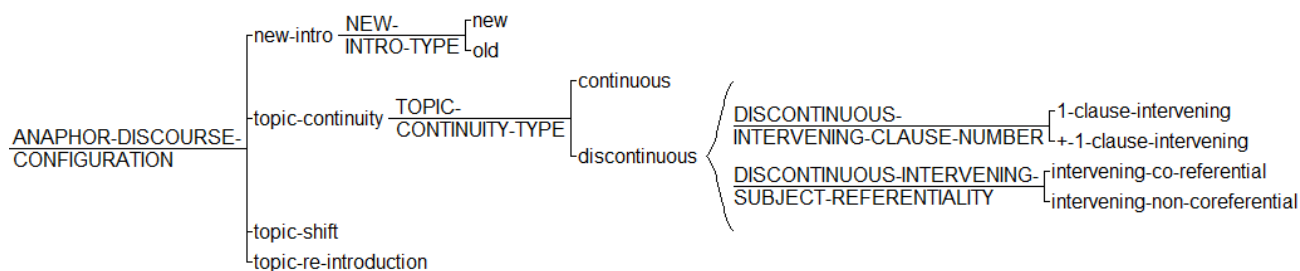


Figure 34. Discourse configuration of the RE.

As shown in Figure 34, four contexts were considered here. First, a new intro context is considered when a character has not been analyzed in the previous discourse. This context is divided into two subcategories (new intro-new vs. new intro-old). New intro-new is for cases when a character referred to by the RE under analysis is introduced in the narrative in subject position for the first time, as shown in examples in bold (77) and (78)

(77) When Chaplin_i runs away from the angry mother_j, he_i puts the baby_k back when he_i found him; nevertheless, **a policeman_i** unexpectedly appears and_i he has to take the baby_k with him_i. (ES_SP_C1_19_13_14_MHM)

(78) Then he_i looks to the left and in the corner there is a baby_j. He_i decides to take it_j and meanwhile **a woman_k** appears from behind with a baby cart, he_i runs after her_k and leaves the baby_j in the cart. (ES_WR_B1_17_10_14_NCA)

If a new character has been introduced in non-subject position before the RE under analysis, the first time this character stands in subject position (i.e. RE under analysis), the RE is marked as new intro – old, as shown in examples (79) and (80). In this case we choose with antecedents. If a character is firstly mentioned in subject position then we tag it as new intro – new – without antecedents.

(79) he_i notices a woman_j with a stroller already carrying a baby_k, so he_i thinks it_k is hers and leaves_i the baby_k in her stroller. **The woman_j** comes out and yells_j at Chaplin_i. (EN_WR_21_14_GLN)

(80) After that, he_i tried to hand the baby_j to a woman_k with other child_i but **she_k** got angry and she_k gave the baby_j back to him_i. (ES_WR_B2_18_1014_LCF)

Second, topic continuity is for cases when the RE in question has been introduced in the subject of the preceding main clause. It is divided into continuous vs. discontinuous. The purpose of dividing this discourse configuration into these two categories is to examine whether the presence of subjects in intervening subordinate clauses between the RE in question and its

coreferent antecedent in the preceding main clause affect the form of REs. Topic continuity-continuous is for cases when there is no intervening subordinate clauses between the RE in question and its coreferent antecedent in the preceding main clause, as shown in examples (81) and (82).

(81) (...) and so **the man_i** walks down on to a main street and **sees_i** an empty stroller belonging to the lady_j. (EN_SP_20_14_TK)

(82) **Chaplin_i** leaves his hiding place and **walks_i** next to the baby carriage exactly when the woman_j appears. (ES_WR_B2_23_17_14_IFM)

On the other hand, topic continuity-discontinuous is for cases when there is subordination between the RE under analysis and its co-referent antecedent in the preceding main clause. The tagset further specifies: 1) the number of intervening clauses further classified into 1 clause intervening and +1 clause intervening, as shown in examples (83) to (86). This latter distinction allows us to explore the factor of distance in this specific context (Beaman, 1984; Ryan, 2015) and second, whether the RE under analysis is coreferential or not with the subject of the subordinate clause. This distinction is expressed in the categories intervening-coreferential and intervening non-coreferential, respectively, as illustrated in the examples (87) to (90). If there is more than one intervening subordinate clause between the RE in question and its co-referent antecedent, we describe the referentiality of the intervening subject of the subordinate clause immediately preceding the RE under analysis.

1 clause intervening

(83) Then, **the woman_i** sees the first man_j walking around and **thinks_i** that he_j has put the baby_k inside the baby cart again. (ES_WR_B2_23_17_14_RGM)

(84) The woman_i from before sees the baby_j in the pram and **catches_i** Charles Chaplin_k walking past and **she_i** decides to run after him_k. (EN_WR_21_14_TL)

+ 1 clause intervening

(85) This time **he_i** tries to cheat a man_j by giving him_j the baby_k again and **bring_i** it_k with him_j. (ES_WR_B1_18_12_14_ASS)

(86) /uh **Charles**_i told the man_j/carry the baby_k for a moment uh so uh when/the other man_j carried the baby_k/ **Charles**_i uh uh start to run uh start to running.
(ES_SP_B1_18_12_14_CRM)

Intervening coreferential

(87) **Charles**_i comes out of the place in which he_i had hidden and **finds**_i the policeman_j.
(ES_WR_C1_18_13_14_AGL)

(88) **she**_i starts to to argue / and uh **she**_i even tries to hit him_j.
(ES_SP_B1_22_14_14_GG)

Intervening non-coreferential

(89) Charlie_i walks out onto the street and the lady_j sees Charlie_i and **assumes**_j that he_i put the baby_k in her stroller again and **she**_j starts beating him_i with an umbrella/.
(EN_SP_20_14_TK)

(90) the woman_i suddenly sees Chaplin_j again hhh and **thinks**_i / that he_j did it did it again / so she_i gives the baby_k to Chaplin_j. (ES_SP_C1_21_13_14_ARP)

Third, in topic shift scenarios, which are for cases when the character has appeared in subject position within the four preceding clauses prior, it is marked as a topic-shift as in examples (91) and (92).

(91) hh **Charles**_i puts the baby_j on the pushchair but the lady_k notices and she_k get mad/hh then **Charles**_i take him_j again. (ES_SP_B2_21_15_14_MMM)

(92) Some minutes later **Chaplin**_i was walking over there and the woman_j give him_i the baby_k again. **Chaplin**_i sat and read a letter. (ES_WR_B1_18_12_14_CRM)

Finally, re-introduction is for cases when a character has already been analyzed in subject position in a main clause, and he/she reappears in the narrative after 4 clauses, the selection of this option requires the selection of without antecedents. A re-introduction context occurs in the RE in bold in (93) and (94).

(93) **he**_i let a ancient man_j who decide to give him_j the baby_k and run away_i / hhh the ancient man_j didn't know what he_j can= could do / so / like she_j saw the same pram as before and put_j the baby_k hhh **Charles Chaplin**_i uh thought uh leave him_k the baby_k.
(ES_SP_B2_19_15_14_ADHR)

(94) A police_i has seen this scene and **this man**_j gives the baby_k to another man_i who leaves him_k in the same cart that the man_j had left the baby_k. Finally, the woman_i searches the first man_j. **This man**_j have seen a letter which is carrying the baby (...)
(ES_WR_B2_18_11_14_AIVR)

6.4.2.4 Anaphor clause position

This subsection of the tagset is particularly designed to explore the selection of RE in contexts of topic continuity coordination, where tend to favor the use of the simplest forms, such as null pronouns as shown in Figure 35. This syntactic context has scarcely been studied in L2 English (Leclercq & Lennart, 2013; Quesada & Lozano, 2020).

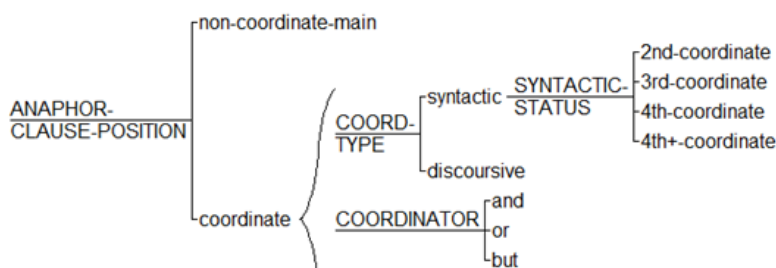


Figure 35. RE clause position.

First, a distinction is made regarding the type of clause where the RE under analysis is found, namely in a non-coordinate-main clause or in a coordinate clause. The tag non-coordinate-main is for cases where the RE stands in an independent main clause either in contexts outside coordination, as in example (95), or in contexts where the RE stands in the first coordinate clause in a chain of coordinate clauses, (96). The latter case is analyzed in this category because we are particularly interested in the possibility of selecting a null subject in coordinate clauses and null subjects are not licensed in the first clause in chains of coordinate clauses, but in the subsequent clauses in topic continuity contexts.

(95) However, **he**_i still tries to get rid of the poor creature_j by giving it_j to an old man_k and \emptyset running away_i. (ES_WR_C1_19_13_14_MHM)

(96) Charles Chaplin_i is walking down the street when suddenly some rubble/fall off the roof/ he_i takes out what seems to be a cigarette box and **starts**_i smoking. (ES_SP_C2_19_15_14_LPI)

Second, a distinction is made between syntactic and discursive coordination. This distinction was made so the cases of discursive coordination could be systematically disregarded in our account of topic continuity coordinated contexts (but, importantly, revised if necessary). Crucially, the difference between syntactic and discursive coordination will determine the choice of the RE: null subjects are not licensed in cases of discursive topic-continuity coordination (start of a new sentence), while zero is a possible form and one which is often selected, in subject position in syntactic topic-continuity coordination (Quesada & Lozano, 2020, pp. 15-16; Leclercq & Lennart, 2013, p. 14). We considered syntactic coordination cases in which a sequence of at least two coordinated clauses joined by a coordinator (“and”, “but”, “or”) or are juxtaposed, as in examples (97) and (98). Discursive coordination is for those cases where a coordinator stands at the beginning of a new sentence and where coordination is established between two chunks of discourse but not between clauses. In cases like the latter, in written language the coordinator stands in sentence-initial position after a full stop as in example (101). In spoken language, where discursive coordination is more frequent in our data, the coordinator usually co-occurs along with pauses and/or often along with an adverbial expression like “and then” “and eventually”, “and after that”, as in examples (99) and (100). The latter, along with intonation cues, was taken as an indication of the discursive discontinuity existing between two sentences and which in written language is expressed by means of a full stop.

(97) He_i runs into a man_j and gives_i him_j the baby_k with the excuse that he_i needed to tie his shoes. (ES_WR_B2_23_17_14_IFM)

(98) A woman_i with a baby carriage comes by and appears_i to be looking for someone. (EN_WR_20_14_CP)

(99) looks around_i and doesn't see_i anybody /that looks to be his parents / her parents/ uh and so he_i picks up the baby_j. (EN_SP_21_14_GLN)

(100) a old man_i that it's the main character of this uh story / "n" uh well he_i was walking. (ES_SP_B1_1911_14_NLLB)

(101) he_i takes off his gloves, pulls out_i a match and with the sole of the shoe turns_i it on, and then throws_i it in a barrel along with the gloves. And he_i looks to the left and in the corner there is a baby_j. (ES_WR_B1_17_10_14_NCA)

The third distinction is related to the type of coordinator used by the participants in coordination. Examples extracted from the corpus for the different coordinators used are given below:

And

(102) Charlie_i holds the baby_j **and** finds_i a mother_k walking by with a baby carriage. (EN_WR_20_14_TK)

(1) Firstly, he_i didn't want the responsibility of caring him_j **and** he_i tried to get rid of that baby_j. (ES_WR_C2_23_18_14_TOTTI)

But

(103) / the old man_i try to / follow him_j / **but** he_i can't / so he_i continue to walking on the street. (ES_WR_C2_23_18_14_TOTTI)

(104) Afterwards he_i tried to place the baby_j back where it was originally found, **but** was_i seen by a police officer_k. (EN_WR_20_14_PM)

Or (No examples found)

6.4.3 The antecedent

The tags used to annotate the antecedents are shown in Figure 36. First, we look at the number of potential antecedents before the REs). Our analysis, which builds upon the theories of reference discussed in Chapter 2, typically explain the number of antecedents under the labels of potential interference (Givón, 1983), competition (Ariel, 2004), or prospective anaphor (Kibrik et al., 2016). In addition to these theories, we also considered the distance between antecedents. We measured this distance by the number of clauses, considering potential

antecedents within the four previous clauses, as suggested by the literature as the maximum distance between an anaphor and its antecedent (e.g., Geeslin & Gudmestad, 2011; Gudmestad et al., 2013; Lozano, 2016; Mitkov, 2002). Five possibilities are marked: the presence of one, two, three, or more than three antecedents. Note that we only considered those antecedents that are already activated in the mind, without considering how many times they are mentioned (cf. Clancy, 1980). This aligns with previous research on the effect of the potential antecedents. Examples (105)-(110) show instances of REs (marked in bold) with one active antecedent (105) and (106), two active antecedents (107) and (108), three active antecedents (109) and (110), and we did not find any examples for three or more active antecedents, all within four clauses of their REs.

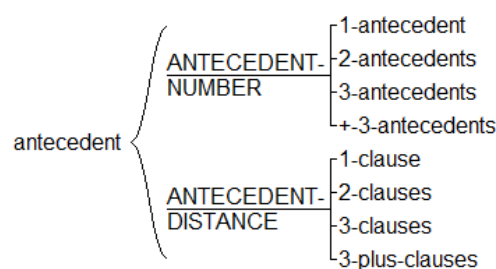


Figure 36. Antecedent's number and distance.

1 potential antecedent

(105) **The tramp_i** takes off his worn off gloves, of which most fingers are missing, and carefully **selects_i** a cigarette stub from an assortment of Cigarette. (ES_WR_57_49_14_MAMC)

(106) **He_i** does not take this into account and **proceeds_i** to light up a cigar. (ES_WR_C1_18_13_14_GLN)

2 potential antecedents

(107) **he_i** decided to keep **him_i** and **he_i** stands up. (ES_WR_B2_22_16_14_MBC)

(108) **she_i** beats **him_i** up and **screams_i** at **him_i** violently. (ES_WR_C1_19_13_14_MHM)

3 potential antecedents

(109) **he_i** gives **the baby_i** to **him_i** and **run off_i**. (ES_C1_SP_19_10_14_DM)

(110) **He_i** put the baby_j inside her stroller and when she_k wasn't looking. The woman_k got mad and **he_i** took the baby_j again. (EN_WR_20_14_SM)

+ 3 potential antecedents (NO EXAMPLES FOUND)

In relation to the second feature related to the antecedent, distance, the examples below (111-118) show instances of REs (marked in bold) with one-clause distance antecedents, (111) and (112), two-clause distance antecedents, (113) and (114), 3-clause distance antecedents, (115) and (116), or 3 plus-clause distance antecedents, (117) and (118).

1 clause distance

(111) **he_i** takes off his gloves and **decides_i** to throw them in the bin next to him. (ES_WR_B2_23_17_14_IFM)

(112) **The unknown_i** sees a perambulator outside a shop, **puts_i** the baby_j inside and leaves_i. (ES_WR_C2_57_49_14_MAMC)

2 clause distance

(113) **he_i** will try to look for hi uh his mother/ but **he_i** can't he can't uh found her/. (ES_SP_A2_26_13_14_SM)

(114) **He_i** gives the baby_j to this man_k / who looks like kind of homeless hhh / and in that moment uh/ in that moment uh **he_i** starts to run. (ES_SP_B1_22_14_14_GG)

3 clause distance

(115) **The man_i**, continue up looking somebody to give the baby_j, and **he_i** cheats an old Man_k. (ES_WR_B1_19_11_14_NLLB)

(116) **he_i** starts looking around to see if someone left him_j or her_k /hhh and uh **he_i** sees a Woman_i with a stroller. (ES_SP_C1_22_12_14_MVP)

+3 clause distance

(117) **He**_i first saw a woman_j who also was taking care of a baby, it looked like it was hers but **this man**_i put the other baby_k in the same baby car without the woman's_j permission. (ES_WR_B1_19_12_14_AFL)

(118) **he**_i finds a man_j /uh who is really old and /who's uh / who is uh who finds it difficult to walk/ and somehow uh and **Charles**_i uh/ tells him_j. (ES_SP_C1_18_13_14_AGL)

6.4.4 Protagonisthood

Figure 37 shows all the characters (marked in bold) that were tagged. All these characters appear in (119). Some referents in a text are more prominent than others in the narrative and this feature may constrain the choice of RE (Kibrik, 2011; Kang, 2004; Montrul & Rodríguez Louro, 2006). For the task chosen for this dissertation, the Charles Chaplin task (cf. Appendix C. Screenshot's of Charles Chaplin's video), the characters were divided into primary characters, namely, Charles Chaplin, and secondary characters, namely, the baby, the lady, the old man, and the policeman.

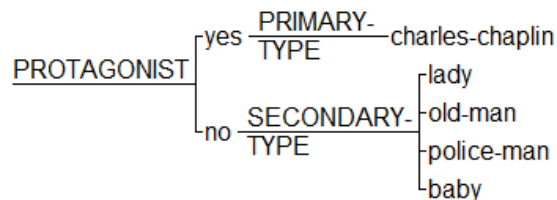


Figure 37. Characters in the story.

(119) **Charlie Chaplin**_i is walking in an alley when he_i finds **a child**_j crying in the street. There isn't anyone else around so he_i tries to find the parent_k or caretaker of the child_j to return it. He_i tries to give it_j to **a woman**_i who has another child_m and a large carriage for children but she_i clearly isn't the mother_l because she_i refuses to take it_j. Then when going to return the child_j back to where he_i found it, **a police officer**_n arrives and it looks like Charlie_i is abandoning the child_j in the street so he_i keeps it_j again. Charlie_i gives the child_j to **a random man**_n in the street, who then puts_n it_j into the carriage of the woman_i from earlier. (ES_WR_C2_19_13_14_PSR)

6.4.5 Scenes

Figure 38 shows the tags used to investigate how mode of production affects scene transitions on the selection of RE. The factor of scene transition has previously been discussed by different approaches (Ariel, 1990; Chafe, 1976; Quesada & Lozano, 2020; Van Dijk, 1981; Vonk et al, 1992). Of particular interest in our investigation is the study of Clancy (1980). She observed that changing scenes often lead to a transition from implicit to explicit REs, regardless of the presence of other referents. She concluded that a change in scenes is a factor constraining referential strategies. This transition from implicit to explicit expressions can be understood, according to Clancy (1980, p. 172), as either a strategy focused on the speaker's cognitive processes or a strategy aimed at helping the listener identify the structural changes in the narrative.

The video clip chosen for this investigation, *The kid* (1921) by Charlie Chaplin, is divided into seven scenes, each featuring: i) An effort to solve the problem often comprises a series of closely linked events; ii) Introductor of new characters, particularly early on, or interact with existing characters later in the sequence. The problem's resolution is presented successively, with each scene of the clip marking a significant development. After each scene, the status of the problem's resolution is revealed: it may remain unresolved, appear to be temporarily resolved before encountering further obstacles, or ultimately be resolved in the final scene. For instance, Charlie initially encounters the baby while walking along an alleyway, marking the introduction of the problem and his initial attempt to address it. Subsequent scenes depict Charlie's endeavours, such as placing the baby in a pram and encountering conflicts with others

(old man and the lady). Despite these efforts, the problem persists until the final scene, where Charlie ultimately decides to keep the baby, leading to its resolution.

The "new-scene" tag indicates that the RE occurs in a distinct scene from the preceding one, as exemplified in (120). This means, a change in the setting, where new characters are introduced in the scene and effort to solve the problem is made. Conversely, the "same-scene" tag indicates that the RE occurs within the same scene as the preceding one, as exemplified in (121). This occurs in the same setting with the same characters. The video clip centres on resolving a problem involving an abandoned baby discovered by Charlie. As the clip progresses, Charlie attempts to address the issue through various methods, each proving unsuccessful until the final resolution.

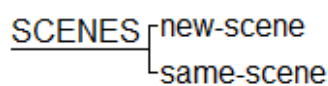


Figure 38. scenes.

New scene

(120) Charles Chaplin_i is about to leave him_j back where he_i had found the baby_j but the come across a police officer_k so he_i can not abandon the child_j. He_i pretends that he_i has to tie his shoelaces to leave the baby_j with a man_i and run away_i. This man_i, also walking down the street, sees_i the same baby buggy that Chaplin_i saw earlier and he_i leaves the baby_j there. After a moment, when the woman_m realizes it, she_m sees Charles Chaplin_i just passing down that street so she_m begins to beat him_i to take the baby_j away. (ES_WR_C2_16_14_ACL)

Same scene

(121) All of a sudden, Chaplin_i finds a little baby_j on the ground and he_i picks him_j up. He wonders why the baby_j is there alone and sees_i a lady_k walking by with another baby_i. He_i runs to place the abandoned baby_j next to the lady's kid. However, she_k realises it and he_i has to keep the baby_j for himself. (ES_WR_B2_24_19_14_MABG)

In summary, the purpose of this section was to provide a detailed description of the methodological aspects which are relevant in the study presented in this dissertation. The Appendices are to be referred to for additional details. The results of the study are presented in the next Chapter 7.

Chapter 7. Results: Mode effects on the selection of REs in Topic continuity contexts

This chapter presents the results of this investigation. Significantly, we look at possible mode effects (written vs. spoken) on the selection of REs in our participants' texts (learners and natives). All learner groups are first contrasted with the native group, then across the learner groups and simultaneously across mode of production, both spoken and written, to provide a contrastive analysis and exhaustive account of each group's behaviour regarding the different syntactic and discursive factors considered in this dissertation.

The first section shows the results of our RQ1, which deals with one of the multiple factors that affect the selection of REs in discourse: the discourse configuration (c.f section 6.4.2.3 for further details). We examine whether the mode of production affects the discourse configuration in the participants' narratives. The second section shows the results of our RQ2, which focuses on syntactic factors constraining RE selection in topic continuity contexts. This research question is divided into three parts: RQ2a examines whether mode of production affects the incidence of syntactic coordination in topic continuity in the participants' texts. RQ2b, looks at possible mode effects on the different properties of coordination in topic continuity and we test four syntactic properties of syntactic coordination: chains of coordination (number of coordinated clauses in topic continuity contexts), coordinators (and, or, but and no coordinator), the presence of intervening subordination, and the number of intervening subordinate clauses occurring between the equi-topic subjects in the parallel coordinate clauses (continuous vs discontinuous). Importantly, in this configuration where there is intervening subordination, we examine whether the subjects in the intervening subordinate clause(s) are non-coreferential or coreferential with the subjects in the parallel coordinated clauses. RQ2c examines whether there is a mode effect on the selection of REs in learners' and natives' narrative choices in topic continuity syntactic coordination and in contexts of topic continuity syntactic coordination distant coreference. Finally, the last section of the results deals with our last RQ3, where we examine the effect of mode on RE selection when dealing with discursive factors also affecting the selection of REs in topic continuity contexts. This last RQ is divided into four parts, where we test how mode of production affects the selection of REs considering four constraining factors: RQ3a looks at whether there is a mode effect on the overall distribution of the antecedent across L1 Spanish-L2 English. RQ3b examines whether there is a mode effect on the selection of REs when constrained by the number of potential antecedents (1 antecedent vs.

2 antecedents vs. 3 antecedents) across L1 Spanish-L2 English. RQ3c investigates whether there is a mode effect on the selection of REs when constrained by the type of character mentioned in the story (Charles Chaplin, the lady, the old man) across L1 Spanish-L2 English. Finally, RQ3d looks at whether there is a mode effect on the selection of REs when constrained by the change of scene across L1 Spanish-L2 English.

7.1 Justification

Previous literature reviewed in Chapter 3 has shown that the acquisition of REs has been widely studied from a syntactic approach (Gundel & Tarone, 1983; Gundel et al., 1984; Pladevall Ballester, 2013), a combined approach: grammar and discourse (Hendriks, 2003; Muñoz, 1995) and a discourse-oriented approach (Belletti et al., 2007; Contemori & Dussias, 2015; Cunnings et al., 2017; Roberts et al., 2008). Additionally, topic continuity contexts have been the focus of very few L2 English studies (see, however, Crosthwaite, 2011 for L1 Korean; Quesada & Lozano, 2020 for L1 Spanish), which reported that this specific context is particularly problematic for L2 English learners who tend to select fuller forms than those selected by English natives in contexts where less complete forms are expected. Furthermore, the selection of REs in topic continuity and coordination contexts has also been explored in L2 English, although not exhaustively (see Leclercq & Lennart, 2013 for spoken narrative; Quesada & Lozano, 2020 for written narrative). Both studies reported very low use of zeros by L2ers, while their native control group used more zeros in a context where zeros are expected. Notably, a large number of experimental studies on SLA literature on RE acquisition adopted a syntactic perspective (see, e.g., Mitkovska & Bužarovska, 2018 for L1 Macedonian; Pladevall Ballester, 2013 for L1 Spanish; Prentza, 2014 for L1 Greek) and they did not pay attention to discourse. On the contrary, corpus-based studies considered discourse but did not investigate coordination contrastively and developmentally. Due to the scarce research on written vs. spoken RE selection and the lack of studies in L1 Spanish-L2 English, this study aims to investigate the effect of mode of production (spoken vs. written) on the selection of REs in L1 Spanish-L2 English across proficiency levels vs. English native speakers in topic continuity contexts, departing from a corpus-based method and considering some syntactic and discursive factors constraining the selection of REs.

The outline of the results includes different sections. Starting with figures, findings related to spoken language will be presented first, followed by those concerning written language. Regarding statistics, it will be organized into two subsections. Firstly, results will be analyzed across mode of production to observe any possible effect. Then, developmental accounts will be

addressed, with spoken language findings presented first, followed by those from the written narratives. This outline will provide a clear structure for the presentation and discussion of the findings of the investigation.

7.2 Discourse configuration of the narratives and REs selection

This section presents the results regarding the effect of mode considering the discourse configuration and REs selected in L1 Spanish-L2 English and comparable L1 speakers. The section is divided into two main subsections, one for each of the different parts in RQ1: the first one examines the possible effect of the mode of production on the discourse configuration selected in our participants' texts (RQ1a); the second part shows whether there is a mode effect on the selection of REs in topic continuity (RQ1b).

7.2.1 Discourse configuration of the narratives

This section presents the results for RQ1a in Chapter 5 (c.f 5.1 RQ1), which looks at possible mode effects (written vs. spoken) on the discourse configuration selected in our participants' texts and the possibilities of selecting the same type of REs are consistent across both modes of production in topic continuity contexts. In Chapter 3 (c.f 3.1), we explained that one of the relevant factors constraining the selection of REs is the discourse configuration (Ariel, 1990; Givón, 2001; see also Lozano, 2009; Quesada & Lozano, 2020). We expect the preferred discourse configuration of L2 English and L1 English to be topic continuity, in line with previous claims in the literature (see Dubois, 1987; Givón, 1983; Givón, 2001; Leclercq & Lennart, 2013). We hypothesize that the mode of production does not affect the choice of discourse configuration when the ability to maintain reference is acquired from a very early stage (Serratrice & Allen, 2015), and it is a common factor in every language. Figure 39 and Figure 40 show the results related to the possible mode effects on the discourse configuration selected in our participants' texts.

Figure 39 and Figure 40 show the overall discourse configuration across the different proficiency levels⁸⁴.

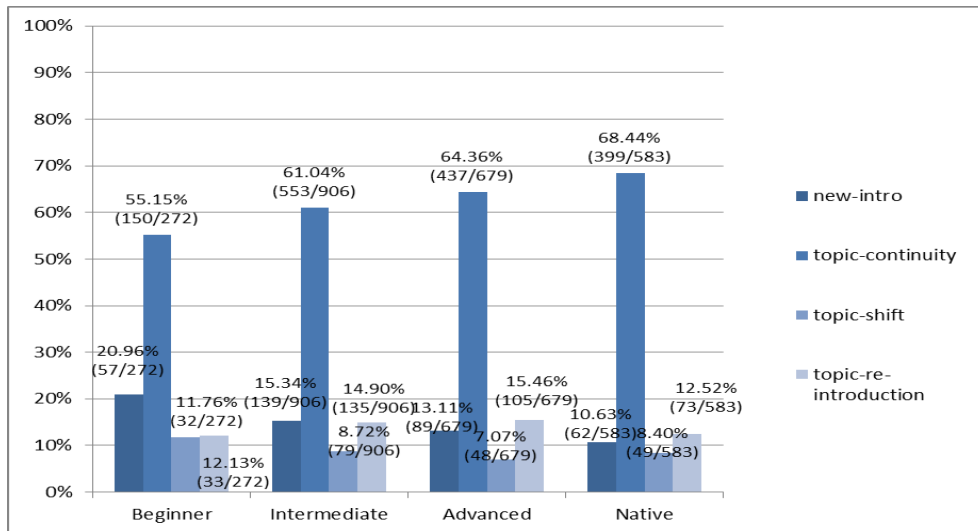


Figure 39. Discourse configuration in the spoken texts.

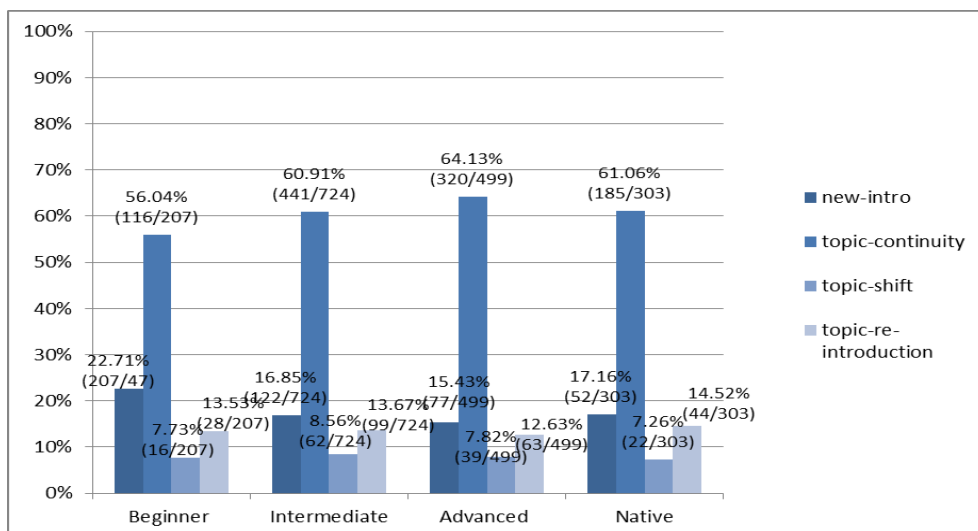


Figure 40. Discourse configuration in the written texts.

Figure 39 and Figure 40 show that over 50% of the discourse contexts in the analyzed texts are topic continuity contexts both in the spoken and written discourse. This is the case for all language groups in spoken texts (Beginner: 55.15%; Intermediates: 61.04%; Advanced: 64.31%; Natives: 67.96%) and in written texts (Beginner: 56.04%; Intermediates: 60.91%; Advanced: 64.13%; Natives: 60.65%). The distribution of the other three discourse contexts (new intro, topic shift and topic reintroduction) also seems similar in all the language groups in the spoken

⁸⁴ The figures follow the same order across the result section: first, we present the results from the spoken texts and then, those from the written texts.

and written texts, except for the beginner group where the production of new intro both in spoken (20.96%) and written texts (22.71%) is higher than the production of new intro in the other proficiency levels groups (Intermediate: 15.34%; Advanced: 13.13%; Native: 10.84% for spoken texts) and (Intermediate: 16.85%; Advanced: 15.43%; Native: 17.42% for written texts). Still, statistical analysis of the data shows a number of differences.

Across modes of production, there are statistically significant differences only within the native group ($\chi^2=7.878$, $p<0.02$ for *new intro*; $\chi^2=4.891$, $p<0.05$ for *topic continuity*).

In spoken discourse, there are statistically significant differences between the natives and the beginner and intermediate groups: the beginner ($\chi^2=16.113$, $p<0.02$ for *new intro*; $\chi^2=13.468$, $p<0.02$ for *topic continuity*) and the intermediate group ($\chi^2=6.366$, $p<0.02$ for *new intro*; $\chi^2=7.630$, $p<0.02$ and for *topic continuity*). There are also statistically significant differences between the different groups of L2ers: between the beginner group and the intermediate group ($\chi^2=4.753$, $p<0.02$ for *new intro*) and between the beginner group and the advanced group ($\chi^2=9.148$, $p<0.02$ for *new intro*; $\chi^2=6.891$, $p<0.02$ for *topic continuity* and $\chi^2=5.525$, $p<0.02$ for *topic shift*).

In the written discourse, there are not statistically significant differences between the natives and the different learner groups. We find statistically significant differences only between the beginner group and the advanced group ($\chi^2=5.347$, $p<0.05$ for *new intro*; $\chi^2=4.054$, $p<0.05$ for *topic continuity*).

Results regarding the preferred discourse context do not confirm our H1a, where no mode effect was expected because mode affects the distribution of discourse context in the natives' narratives. Overall, the preferred discourse context in the analyzed texts is topic continuity for all language groups both in spoken, as in (122), which is according to claims found in L1 spoken English literature (Dubois, 1987, p. 829; Givón, 1983, p. 8; Givón, 2001, p. 423). The statistical results show, however, that the mode of production affects the distribution of discourse contexts in the native speakers' texts, with an increase of new intro in the written texts compared to the spoken texts. By contrast, the statistical results show that the mode of production does not affect the distribution of discourse contexts in the L2ers' texts, where L1 Spanish-L2 English tend to show a similar use of the different contexts in their spoken and written narratives. The statistical results show that in the spoken mode there are differences between the native speakers and the beginner and intermediate groups (but not the advanced

group). This seems to indicate that they developmentally acquire the discourse configuration to maintain the topic by advanced level in the spoken mode. In the written discourse, no differences were found between the natives and the learners, which suggest native-like performance by the three learner groups. However, differences were found between the beginners and advanced for new intro and topic continuity, where beginners tend to select more new intro discourse and less topic continuity than advanced in their written narratives.

(122) /and so then **he**_i's wondering what to do/and uh **he**_i sees a man_j and/**gives**_i the man_j the baby_k and runs away_i/ (EN_SP_20_14_TK)

(123) After walking on a few steps, **he**_i finds a little baby_j lying on the floor, **picks**_i it_j up and **looks up**_i as if the baby_j could have fallen off a window (ES_WR_C2_57_49_14_MAMC)

7.2.2 REs in topic continuity narrative texts

Figure 41 and Figure 42 show the selection of REs in topic continuity contexts across the different proficiency levels.

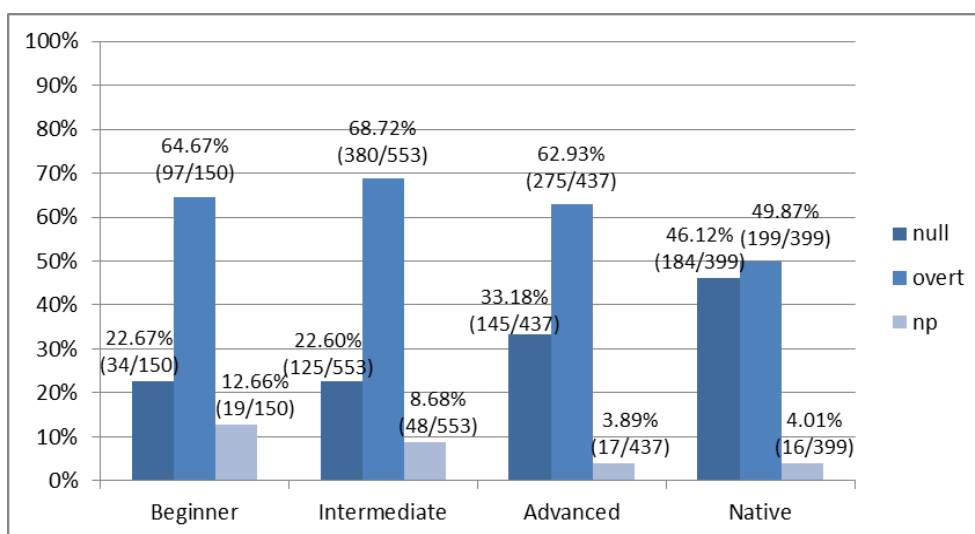


Figure 41. Selection of REs in topic continuity in the spoken texts.

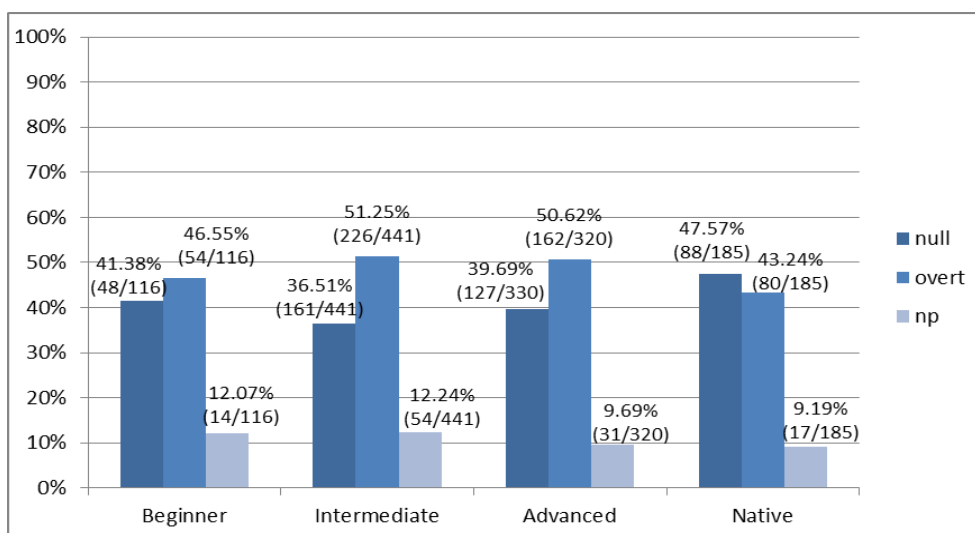


Figure 42. Selection of REs in topic continuity in the written texts.

Figure 41 and Figure 42 show that the distribution of zeros and pronouns in topic continuity presents many differences across language groups and modes of production. First, in the spoken discourse, all proficiency groups tend to prefer overt pronouns over null pronouns in their spoken texts (Beginner: 64.67%; Intermediate: 68.72%; Advanced: 68.72%; Native: 49.87%). Second, in the written discourse, L2ers tend to use less overt pronouns (Beginner: 46.55%; Intermediate: 51.25%; Advanced: 50.62%) than in their spoken discourse and there is an increase in the amount of null pronouns (Beginner: 41.38%; Intermediate: 36.51%; Advanced: 39.69%) in their written discourse. By contrast, native speakers show a slight tendency to use null pronouns over overt pronouns (47.57%, 43.24%, respectively). As for NPs, an increased number is shown across intermediate, advanced and natives' written narratives (Intermediate: 8.67%, 12.24%; Advanced: 3.89%, 9.69%; Natives: 4.01%, 9.19%, respectively).

Across modes of production, there are statistically significant differences across all proficiency groups: the beginner group ($\chi^2=10.742$, $p<0.02$ for zero; $\chi^2=8.746$, $p<0.02$ for overt pronouns); the intermediate group ($\chi^2=23.143$, $p<0.02$ for zero; $\chi^2=31.461$, $p<0.02$ for overt pronouns); the advanced group ($\chi^2=5.289$, $p<0.02$ for overt pronouns; $\chi^2=6.540$, $p<0.02$ for NPs) and the native group ($\chi^2=6.359$, $p<0.02$ for NPs).

In spoken discourse, there are statistically significant differences between the natives and the learners: beginner group ($\chi^2=25.037$, $p<0.02$ for zero; $\chi^2=9.600$, $p<0.02$ for overt pronouns; $\chi^2=13.687$, $p<0.02$ for NPs); intermediate group ($\chi^2=58.441$, $p<0.02$ for zero; $\chi^2=34.528$, $p<0.02$ for overt pronouns; $\chi^2=8.060$, $p<0.02$ for NPs); and advanced ($\chi^2=14.620$, $p<0.02$ for zero;

$\chi^2=14.477$, $p<0.02$ for overt pronouns). There are also statistically significant differences between the beginner group and the advanced group ($\chi^2=5.824$, $p<0.02$ for zero; $\chi^2=14.942$, $p<0.02$ for NPs) and between the intermediate group and the advanced group ($\chi^2=13.767$, $p<0.02$ for zero; $\chi^2=9.129$, $p<0.02$ for NPs). Thus, the statistical results show, first, that in the spoken mode there are differences between the native speakers and all the L2ers. This indicates different patterns of production, but none of the L2ers show native-like performance. Particularly, learners' production of overt pronouns is significantly higher in their spoken narratives than the L1 English.

In the written discourse, we find statistically significant differences between the natives and the intermediate group: intermediate group ($\chi^2=6.655$, $p<0.02$ for zero). No statistically significant differences were found across L2ers.

These results confirm the expectations suggested in H1b (See 5.2) and reveal interesting details as to the learners' and natives' selection of REs in their spoken and written narratives. Natives speakers use zeros and pronouns similarly in their written and spoken discourse, while the differences is that NPs are more frequent in their written discourse. By contrast, L2ers produced mainly overt pronouns both in spoken and written texts. This shows a marked preference for overt pronoun in this specific discourse-syntactic context. Importantly, however, the statistical results show, first, that an effect of mode was found across all proficiency levels. The mode of production affects the selection of REs in topic continuity in the L2ers' texts, where we can observe a higher amount of overt pronouns in the spoken texts, as in (124) and (125) compared to the written ones. As for natives' texts, we observe an increase of NPs in the written texts compared to the spoken ones, as in (126) and (127). Second, in the spoken mode, results show that there are differences between the native speakers and all learner groups. This seems to indicate that there are deficits in the learners' selection of REs of their spoken narratives. This indicates no native-like behaviour in their spoken narratives. Crucially, the L2ers group shows signs of redundancy in their spoken mode, overproducing mainly overt pronouns. Results also show statistically significant differences between the beginner and the intermediate for zeros and NPs, where beginners tend to select more overt and NPs than intermediate in their written narratives and this is also the case for the differences found between the intermediates and the advanced, where intermediates selection of overt pronouns and NPs is higher than the advanced in their written texts. Finally, in the written mode, there are statistically significant differences between natives and intermediate group for null pronouns, where natives tend to select more null pronouns in their written texts than the intermediates.

(124) He_i sees a baby_j laying on the floor `n' crying_j/ and **he**_i takes it_j and **he**_i suddenly sees a woman_k who is walking around (...)/ (ES_SP_C1_18_13_14_RLR)

(125) Chaplin_i has no option but to take the kid_j and **leave**_i. (ES_WR_C2_19_15_14_LPI)

(126) Charles Chaplin_i was walking trough the street when he_i came upon a small bundle in a corner. **Charlie**_i then felt responsible to do something with the small child_j (...) (EN_WR_2014_PM)

(127) / he_i sits down on the street and or a split second/ **he**_i is tempted to put the baby_j uh in the sewer hhh I don't know I but yeah so **he**_i is tempted for that (...) (EN_SP_19_14_SC)

7.3 Discourse-syntactic factors constraining RE selection in topic continuity narrative texts: coordination

This section presents the results regarding the effect of mode considering the syntactic factors constraining RE selection in topic continuity syntactic coordination contexts in L1 Spanish-L2 English learners and comparable L1 English speakers. The section is divided into three main subsections, one for each of the different parts in RQ2: the first one examines the possible effect of the mode of production on the incidence of topic continuity syntactic coordination across L2 English learners vs. L1 English discourse (RQ2a); the second part shows whether there is a mode effect on the properties of syntactic coordination (RQ2b); finally, the third one investigates whether there is a mode effect on REs selection in syntactic coordination in topic continuity contexts (RQ2c). The first and second sections focus on the presence and the nature of coordination in topic continuity contexts and third section focuses on RE selection and also looks at contexts of distant coreference (continuous, discontinuous, intervening co-referential, and non-intervening co-referential).

This discourse-syntactic context, i.e. coordination, has already been the subject of several investigations (c.f Chapter3) but there is limited research on spoken vs. written RE selection and no studies in L1 Spanish-L2 English. Thus, a corpus-based study on L2 learners' written vs. spoken production is necessary.

7.3.1 Coordination in narrative discourse

7.3.1.1 The presence of coordination in the narratives

This subsection addresses RQ2a (See 5.2) shows the results regarding the effect of mode on the incidence of topic continuity syntactic coordination across L2 English learners vs. L1 English discourse. We expect a preference to use topic continuity configurations along with syntactic coordination regardless the mode of production, given that coordination facilitates discourse cohesion in L1 Spanish and L1 English (Ryan, 2015 p. 832).

Figure 43 and Figure 44 show the effect of mode on the incidence of topic continuity coordination across L2 English learners vs. L1 English discourse.

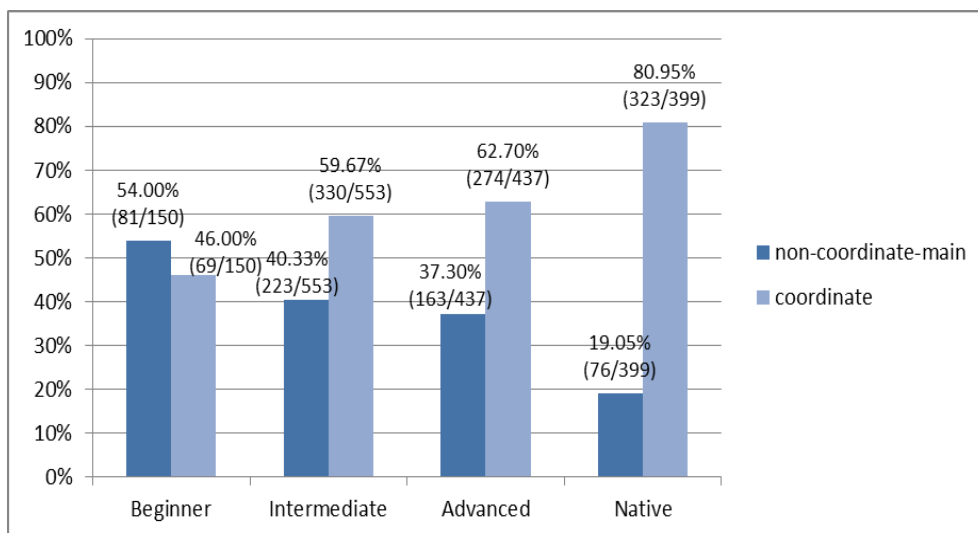


Figure 43. Syntactic configuration in topic continuity in the spoken texts.

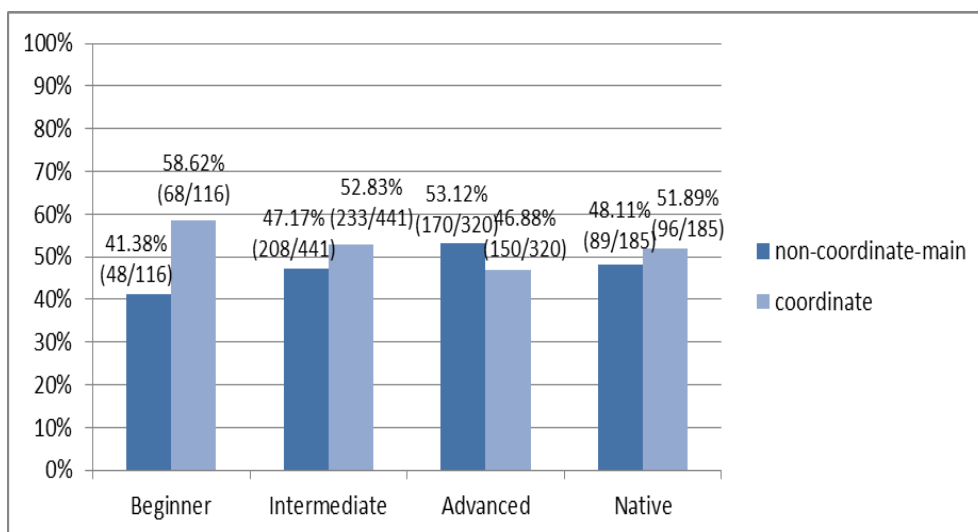


Figure 44. Syntactic configuration in topic continuity in the written texts.

Figure 43 and Figure 44 show that coordination⁸⁵ abounds in the spoken discourse for most of the proficiency levels (Intermediate: 59.67%; Advanced: 62.70%; and Native: 80.95%) except for the beginner group (46%). In the written discourse, on the other hand, we find a very similar use of main clauses and coordination in all proficiency levels (Intermediate: 47.17%, 52.83; Advanced: 53.12%; 46.88% and Native: 48.11%, 51.89 %, respectively) again except for the beginner group, where the presence of coordination slightly outweighs the presence of non-coordinate clauses (41.38% vs. 58.62%⁸⁶).

Across modes of production, there are statistically significant differences within all the proficiency levels: the beginner group ($\chi^2=4.171$, $p<0.05$); the intermediate group ($\chi^2=4.674$, $p<0.05$); the advanced group ($\chi^2=18.777$, $p<0.02$); and the native group ($\chi^2=66.259$, $p<0.02$).

In spoken discourse, there are statistically significant differences between the natives and the different groups of L2ers: the beginner group ($\chi^2=65.224$, $p<0.02$), the intermediate group ($\chi^2=48.709$, $p<0.02$); the advanced group ($\chi^2=34.034$, $p<0.02$). Across L2ers, there are also statistically significant differences between the beginner and the intermediate group ($\chi^2=8.990$, $p<0.02$) and between the beginner and the advanced group ($\chi^2=12.822$, $p<0.02$).

In written discourse, there are no statistically significant differences between the natives and the different groups of L2ers, but there are statistically significant differences between the beginner and the advanced group ($\chi^2=4.698$, $p<0.05$).

These results regarding the presence of coordination in topic continuity contexts show, first, that coordination is the syntactic configuration preferred by all proficiency levels when maintaining the reference to the same participant, although main clauses are also produced in this context. Importantly, however, the statistical results show, first, the mode of production affects the syntactic configuration in the natives' and L2ers' texts, where there are statistically significant differences for non-coordinate and coordinate clauses. As to the learners, non-coordinate clauses are higher in spoken mode in beginner group as illustrated in (128), than in the written mode as in (129), while the intermediate group shows a preference for coordinate

⁸⁵ Note that we have not discriminated between syntactic and discursive coordination.

⁸⁶ Please note that, as described in 6.4.2.4 the first clause in the chains of coordinate clauses are analyzed as "non-coordinate. This is because when it comes to coordination, we are mainly interested in the possibility of selecting null subject. Null subject selection is not an option for the 1st clause in the sequence, but it is for the rest of the clauses in the sequence

clauses in both modes of production. The advanced group shows preference for coordinate clauses in the spoken mode, as in (130) and non-coordinate clauses in the written mode, as in (131). The natives' preference for coordinate clauses is particularly significant in their spoken discourse, as illustrated in (132), where in their written discourse their high preference for coordinate clauses decreased, using a similar amount of coordinate and non-coordinate clauses. Second, results show that there are differences between the native speakers and all L2ers' groups in the spoken mode, where coordination by far is preferred by the natives in their spoken discourse. In contrast, the beginner tends to use more non-coordinate clause, while intermediate and advanced use coordination but not as marked as the natives' spoken narratives. This seems to indicate that there are deficits in the learners' syntactic configuration of their spoken narratives, particularly marked at the beginner level. Thus, no like-native behaviour is shown in the spoken discourse. Still, looking at the figures we notice a developmental trend in the advanced with an increased of coordinate clauses and decrease of non-coordinate. Finally, in the written mode, no differences were found between the natives and the learners. This indicates a native-like behaviour in their written narratives, where all proficiency groups show preference for coordinate clauses, with the exception of the advanced group, which shows a slight preference for non-coordinate clauses in their written narratives, although it does not affect the statistical results. Still, we found statistical differences between the beginners and advanced, where the beginners tend to select more coordinate clauses than the advanced in their written texts. This indicates that the learners' deficits are more marginal in their written texts.

(128) /he_i try to to know who/who is doing that/after after some time **he_i** wi=he will uh look/at a one baby_j/uh hhh in the floor/ in street/uh alone (ES_SP_A2_26_13_14_SM)

(129) **This man_i** saw the same woman_j before and he_i leave the baby_k in the buggy and **he_i** ran,(...) (ES_WR_A2_23_4_14_B)

(130) He_i doesn't know what to do with the baby_j and **he_i** sits down on the Street (...) (ES_SP_C1_18_13_14_RLR)

(131) He_i is struggling to avoid the rubble while smoking a cigar when **he_i** suddenly sees a baby_j lying on the floor. **He_i** pick it_j up. (ES_WR_C1_19_13_14_14_MHM)

(132) /uh then Charlie_i walks down the street pass the woman_j and/she_j realizes it's him_i and she_j does and hits_j him_i and makes_j him_i take the child_k back again.
(EN_SP_21_14_CO)

7.3.1.2 Chains of coordination

This subsection shows the results regarding the chains of coordination in the spoken and written narratives in L1 Spanish-L2 English and native speakers. The results address research question RQ2b (See 5.2).

Figure 45 and Figure 46 show whether mode of production affects the chains of syntactic coordination in topic continuity across the participants' narratives. In particular, they show how long the coordination chains are in the narratives, in terms of the number of coordinate clauses in the chains.

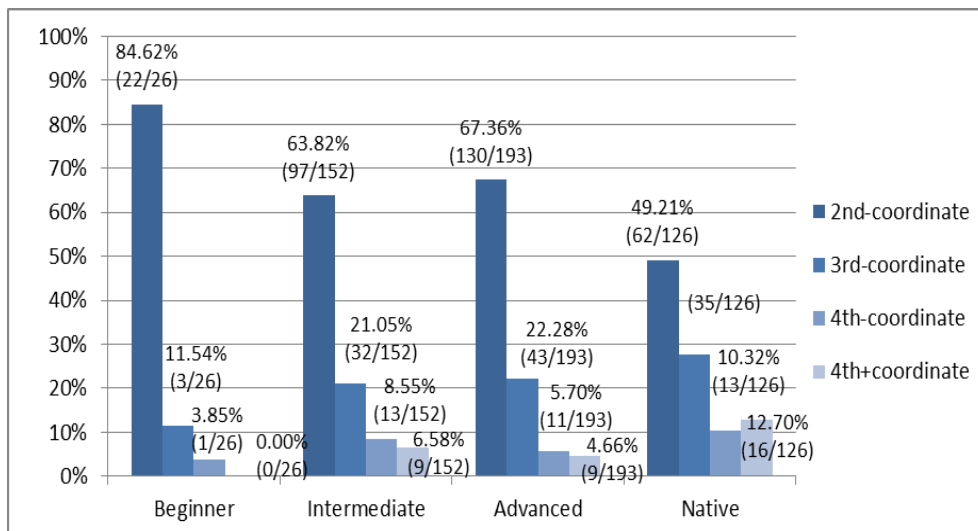


Figure 45. Chains of coordination in the spoken texts.

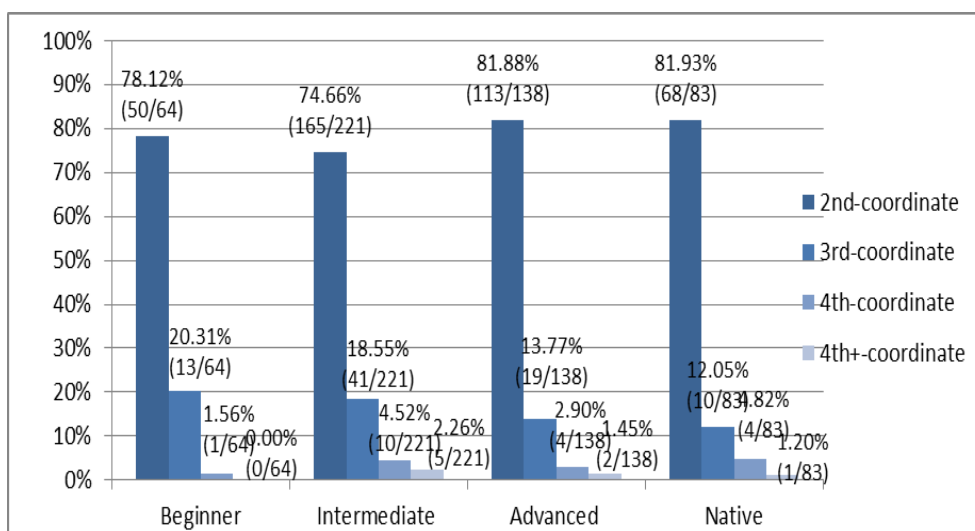


Figure 46. Chains of coordination in the written texts.

Figure 45 and Figure 46 show that the chains of coordination in topic continuity syntactic coordination contexts tend to consist of two clauses for all language groups and both text types (Beginners: 84.62% spoken 78.12% written; Intermediate: 63.82% spoken 74.66% written; Advanced: 67.36% spoken 81.88% written and Native: 49.21% spoken and 81.93% written). Longer chains seem more frequent in spoken discourse in the texts by the native speakers (12.70% for chains of more than 4 coordinate clauses).

Across modes of production, there are statistically significant differences in the native speakers the intermediate and the advanced groups: in the intermediate learners ($\chi^2=5.067$, $p<0.05$ for 2-clause chains; $\chi^2=4.347$, $p<0.05$ for +4th-clause chains); in the advanced learners ($\chi^2=8.700$, $p<0.02$ for 2-clause chains), and in the native speakers ($\chi^2=22.787$, $p<0.02$ for 2-clause chains; $\chi^2=7.328$, $p<0.02$ for 3-clause chains; $\chi^2=8.846$, $p<0.02$ for 4+-clause chains).

In spoken discourse, there are statistically significant differences between the natives and the learner groups: beginner ($\chi^2=10.930$, $p<0.02$ for 2-clause chains; intermediate ($\chi^2=6.006$, $p<0.02$ for 2-clause chains; advanced ($\chi^2=10.481$, $p<0.02$ for 2-clause chains; $\chi^2=6.814$, $p<0.02$ for 4+ clause chains). There are no statistically significant differences between the different groups of L2ers.

In written discourse, there are no statistically significant differences between the natives and L2ers or across groups of L2ers.

Results regarding the chains of coordination in topic continuity syntactic coordination show that overall, 2-clause chains of coordinate clauses are the tendency in the analyzed texts for all language groups both in spoken and written discourse. However, there are number of statistical

differences across the groups and modes of production. The results indicate first, that the mode of production affects the length of chains of coordinate clauses in topic continuity contexts in the intermediates and advanced learners for two clauses in their written texts, and in the natives for two, three and more than three clauses in their spoken texts. This means that the intermediates, advanced learners and native speakers show a higher proportion of 2-clause chains in their spoken texts than in their written texts. Still, 3-clause and 4-clause chains are not significantly higher in their intermediates and advanced learners' spoken texts, while this is the case in the native speakers' texts. In sum, longer chains of coordinate clauses are shown in spoken L1 English production, as in (133). This is only partially shown in the advanced group, as in (134). Second, in the spoken mode there are statistical differences between the native speakers and the L2ers groups, where the length of chains of coordination are longer in the native speakers' narratives than the learners' narratives. This indicates that no like-native behaviour is revealed in the spoken discourse. Still, as observed in Figure 45, the distribution of 2-clause chains and 3-clause chains in the advanced group seems similar to the natives' distribution. Finally, in the written mode, no differences were found between the natives and the learners. This indicates a native-like performance across L2ers groups for the chains of coordination.

(133) The man_i can't find Charlie_j cause Charlie_j is hiding in the alley/ and so the man_i walks down on to a main street and sees_i an empty stroller belonging to the lady_k that Charlie_j had already tried to give the baby_i to/ and he_i puts the baby_i in the stroller and the lady_k comes out and sees the baby_i. (EN_SP_20_14_TK)

(134) .. /he_i realizes that he_j is there/ and gets_i the baby_k again/ and then he_i turns around the corner/ and sees_i the man_j that has some troubles on walking/and he_i just gives that baby_k to him_j/ and he_i runs away trying to be/ (...)
(ES_SP_C2_19_13_14_PSR)

7.3.1.3 Coordinators

This subsection shows the results regarding the preferred coordinators in the spoken and written narratives in L1 Spanish-L2 English and native speakers. These results address the research question and hypothesis in RQ2b (c.f 5.2).

Figure 47 and Figure 48 show the frequency of the types of coordinators used in topic continuity syntactic coordination contexts by all proficiency levels in their spoken and written texts.

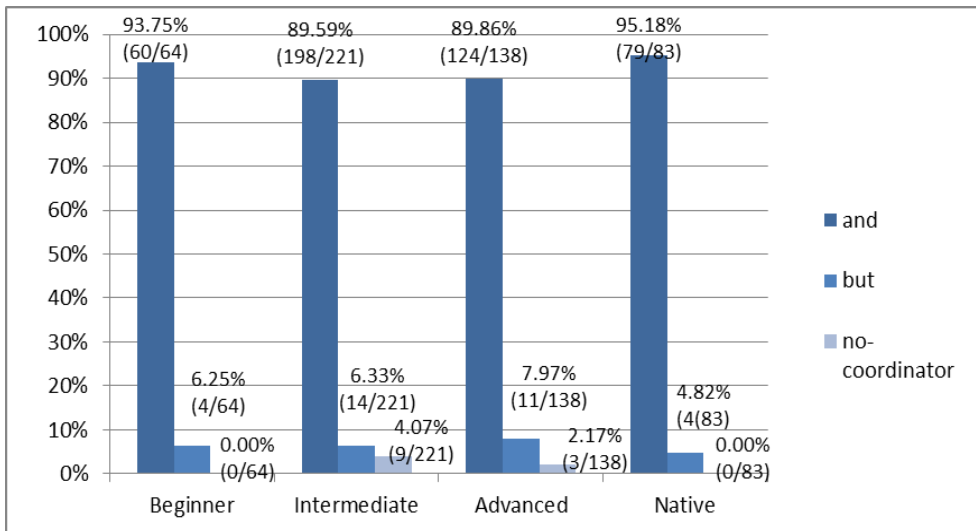


Figure 47. Coordinators in topic continuity coordination in the spoken texts.

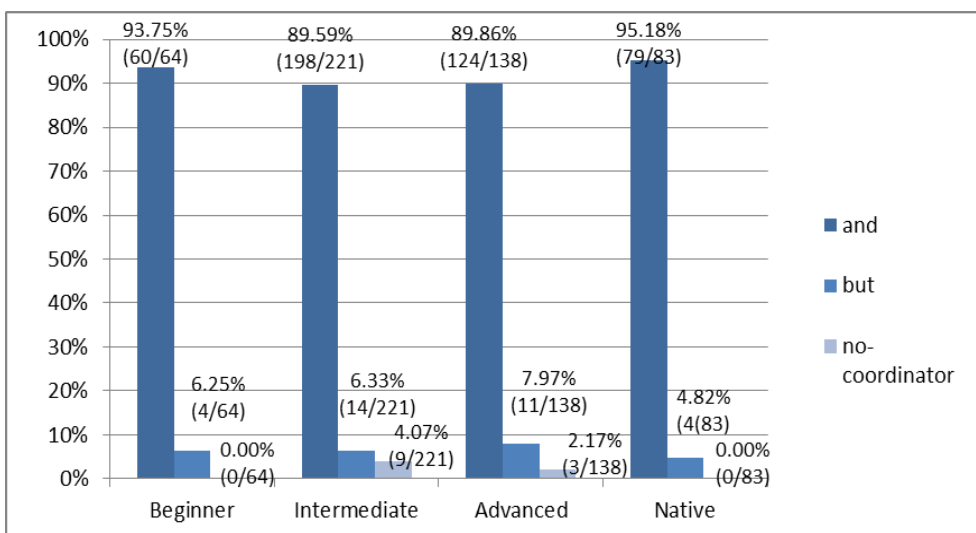


Figure 48. Coordinators in topic continuity coordination in the written texts.

Figure 47 and Figure 48 show that the most widely used coordinator is 'and' by all language groups, both in spoken and written texts⁸⁷. In the spoken discourse, we find that the second most widely used coordinator is 'but', except in the native group, where 'no coordinator' seems to be the second most widely used option. However, in the written discourse, in all proficiency groups the second most used coordinator is "but".

Across modes of production, there are statistically significant differences in the intermediate and native groups: intermediate group ($\chi^2=6.343$, $p<0.02$ for no-coordinator) and native group ($\chi^2=5.480$, $p<0.02$ for no-coordinator).

⁸⁷ No instances of coordinator 'or' have been found in the analysed texts.

In spoken discourse, there are statistically significant differences between the native speakers and each of the learner groups: beginner ($\chi^2=10.821$, $p<0.02$ for 'but'); intermediate ($\chi^2=6.548$, $p<0.02$ for 'but'; $\chi^2=9.937$, $p<0.02$ for no-coordinator); advanced learners ($\chi^2=5.138$, $p<0.05$ for 'but'; $\chi^2=7.086$, $p<0.02$ for no-coordinator). There are no statistically significant differences across the L2ers.

In written discourse, there are no statistically significant differences between the natives and the different learner groups or across the L2ers.

The statistical results show, that “and” is by far the preferred coordinator both in spoken and written discourse. However, there are number of statistical differences across the groups and modes of production. First, that the mode of production affects the selection of coordinators in the intermediate and native groups for “no coordinator”, where intermediate increase their use of “non-coordinator” in their written texts, natives increase their use of “non-coordinators” in their spoken texts. Second, in the spoken mode, there are differences on the selection of coordinators between the learners and natives’ narratives, where the natives’ preference for the coordinator “but” is lower than the learners’ and the preference for “non-coordinator” is higher than in the learners’ narratives. This is consistent with the incidence of the coordinator “and” in longer clause chains in the native speakers’ spoken texts (c.f 4.2) and, hence, the higher presence of juxtaposition, as in (135). This indicates that there is no native-like behaviour in their spoken texts across proficiency groups, although as mentioned above these results are highly constrained by the differences in the length of the chains between the learners’ and the native speakers’ texts. Finally, in the written mode, statistical analysis yields no significant differences between learners and natives, revealing a native-like behaviour in the learners’ written texts.

(135) he_i picks the baby_j up/ uh **has**_i it_j then kinda decides_i/ oo I don't know if this is a good idea **starts**_i looking around **sees**_i a stroller thinks maybe/ the mom_k accidentally somehow drop the baby_j out the stroller..(EN_SP_19_14_SC)

7.3.1.4 Intervening subordination (continuous vs. discontinuous coordination)

This section addresses RQ2b (see 5.2 above) and presents the results regarding the mode effect on intervening subordination in topic continuity syntactic coordination contexts of the narratives across the different proficiency groups in their written and spoken narratives.

Otherwise stated, in topic continuity syntactic coordination, distance may be determined by the presence of intervening subordination between the subjects in the coordinated clauses and, in such a case, by the number of intervening clauses. Thus, the results are shown as followed: first, we show the presence of intervening subordination between the subjects of the coordinate clauses. Then, we show the co-referentiality between the anaphor we are tagging and the subordinate clause (intervening co-referential; intervening non-co-referential).

Figure 49 and Figure 50 show intervening subordination across proficiency levels.

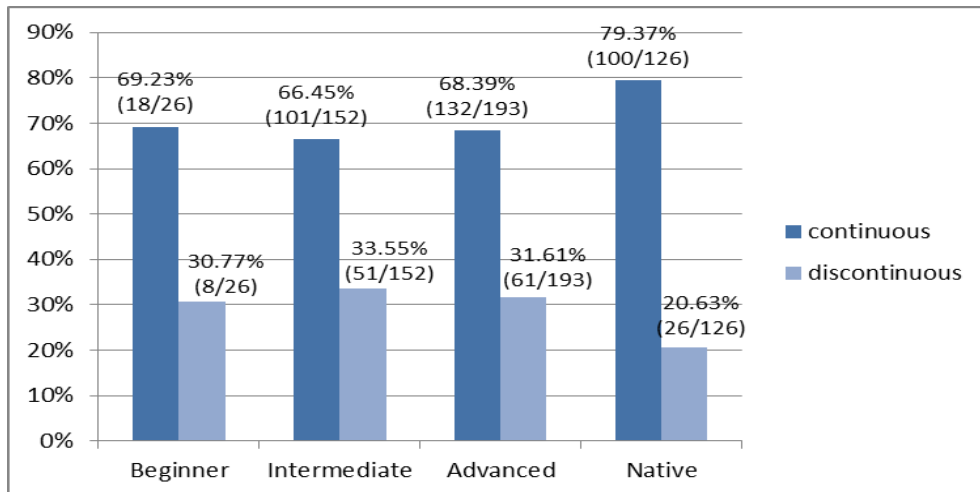


Figure 49. Intervening subordination in the spoken texts.

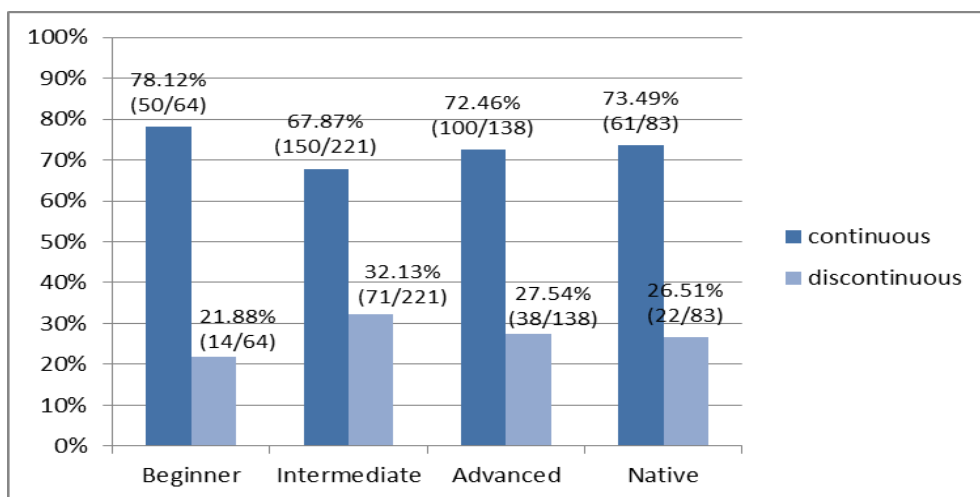


Figure 50. Intervening subordination in the written texts.

Figure 49 and Figure 50 show that no intervening subordination between coordinate clauses prevails over intervening subordination across all the proficiency groups and in both modes of production. Importantly, we have found no statistical differences between the natives and L2ers or across group of L2ers and across the modes of production.

Thus, the lack of statistical differences suggests no mode effects. Since the statistical analysis yields no statistical differences between the natives and L2ers in spoken or written mode or across proficiency levels, the suggestion is that learners show a native-like performance in their narratives in relation to the present aspect. All in all, and according to the statistical analysis conducted, it seems then that all the texts in the study are comparable as to the present aspect: lack of intervening subordination in topic continuity syntactic coordination contexts is by far preferred by all the participants and regardless the mode of production. In terms of frequencies, there is a noticeable increase in intervening subordination from intermediate learners to native speakers in their spoken texts. However, the statistics indicate that the differences are not significant, and therefore all the texts are comparable.

7.3.1.4.1 Coreferentiality in intervening subordination (co-referential vs. non-co-referential)

Figure 51 and Figure 52 show whether, in cases of intervening subordination, the grammatical subject tends to be co-referential or non-co-referential with the subjects of the coordinate clauses in question.

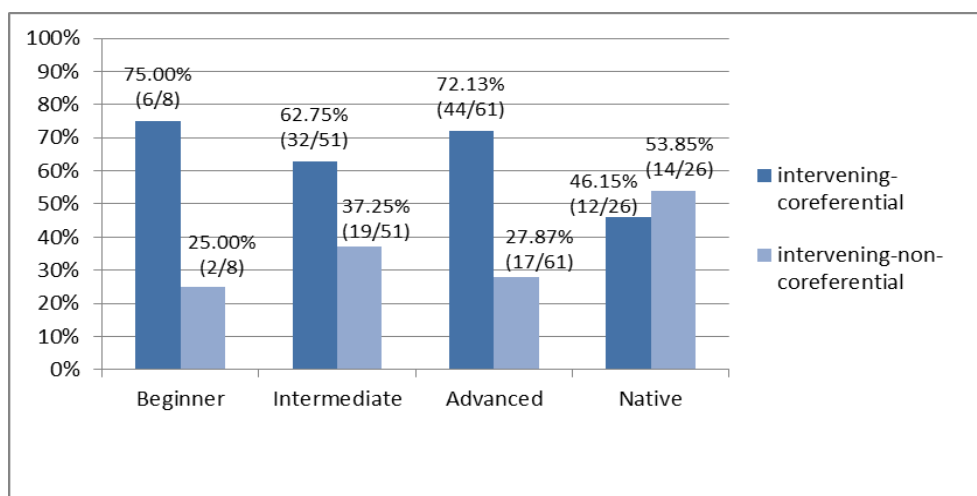


Figure 51. Coreferentiality in intervening subordination in the spoken texts.

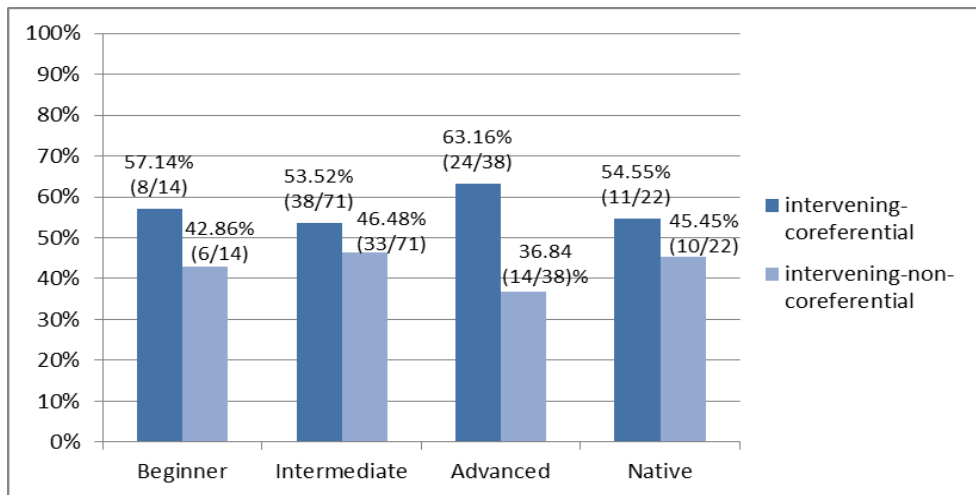


Figure 52. Coreferentiality in intervening subordination in the written texts.

Figure 51 and Figure 52 show that in spoken discourse, whenever there is intervening subordination between the coordinate clauses, the grammatical subject of learners' subordinate clauses tends to be co-referential, especially in the beginner (75%) and advanced (72.13%) groups. In contrast, the grammatical subjects of native speakers' intervening subordinate clauses are not necessarily co-referential with that of the the coordinate clauses (53.85%). However, in written discourse, whenever there is intervening subordination, the grammatical subject of all proficiency levels tends to be co-referential, especially in the advanced group.

Statistical analyzes yield no significant differences between written vs. spoken productions by any of the groups when intervening subordination. Second, the statistical analyzes yield statistically significant differences in spoken discourse, between the native speakers and advanced group: ($\chi^2=5.364$, $p<0.2$ for *coreferential and non-coreferential*). Third, no statistically differences were found in the written discourse between the natives and the learners or across learners, suggesting the learners' native-like behaviour in this respect.

These results show that the mode of production does not affect the coreferentiality with the subordinate intervening clause in L2 English but it does affect the coreferentiality with the subordinate clause in L1 English. Additionally, they show that whenever there is intervening subordination, in spoken and written L2 English the grammatical subjects of the subordinate tend to be co-referential with the subject of the coordinate clauses, as in (136). By contrast, in spoken L1 English the grammatical subjects of the subordinate clauses are not necessarily co-referential, as in (137), while written L1 English shows a slight preference for co-referentiality, between the grammatical subjects of the subordinate clause with the grammatical subject in the parallel clause, as in

(138). So, statistically significant differences between the learners and the native speakers indicate that, in the written mode, all proficiency groups tend to use co-referential subjects in the preceding parallel clause.

(136) He_i decides to take a look at him_j and take him_j. (ES_SP_C1_23_18_14_JHS).

(137) /so he_i saw and old man_j walking around/ and he_i asked him_j to hold the baby_k for a second. (EN_SP_21_14_AF)

(138) He_i returns to the spot where he_i found the child_j and tries_i to put it_j back. (EN_WR_21_14_TS)

7.3.2 RE selection in coordination contexts

This subsection shows the results regarding the effect of mode on the selection of REs continuity syntactic coordination⁸⁸ across L2 English learners vs. L1 English discourse. These results address the research question and hypothesis in RQ2c (See 5.2). First, we show the selection of REs in topic continuity syntactic coordination contexts. Then, we show the selection of REs in topic continuity continuous syntactic coordination, that is, in contexts of topic continuity coordination which lack intervening subordination the subject under analysis and the antecedent co-referent in the parallel coordinate clause. Finally, we show the selection of REs in topic continuity discontinuous syntactic coordination, that is, in contexts where there is presence of intervening subordination between the RE and the co-referent antecedent in the parallel coordinate clause. In order to cover contexts where there is intervening subordination, we look at whether the subjects in the subordinate clauses co-refer with those in the parallel main clauses and also contexts where where the intervening subject does not co-refer with the subjects in the main clause. Thus, this last subsection will be divided into i) the selection of REs in discontinuous co-referential syntactic coordination; ii) the selection of REs in discontinuous non-co-referential syntactic coordination. In terms of our hypotheses, first, we expect no effect of mode of production on RE selection in L1 English in topic continuity syntactic coordination according to research findings for other native languages, (Bel et al., 2010 for L1 Catalan acquisition; Perales & Portillo, 2007 for Spanish; Ngo et al., 2019 for Vietnamese; Christensen, 2000 for Chinese;

⁸⁸ Note that only cases of syntactic coordination are considered. This is detailed in the methodology section (see Section 6.4.2.4).

Díaz-Negrillo & Espínola Rosillo, for English). As to L2 production, and unlike for L1 English, we expect mode effects on the selection of REs more markedly so in the spoken mode of production in line with previous studies which have looked at either written or spoken performance (Quesada & Lozano, 2020; Leclercq & Lennart, 2013, respectively). Additionally, other studies compare both mode of production (Díaz-Negrillo & Espínola Rosillo, 2024). Second, in topic continuity coordination in contexts of distant coreference, we expect similar results as explained above.

7.3.2.1 REs in topic continuity syntactic coordination contexts

Figure 53 and Figure 54 show the selection of REs in topic continuity syntactic coordination contexts across proficiency levels, in both spoken and written discourse.

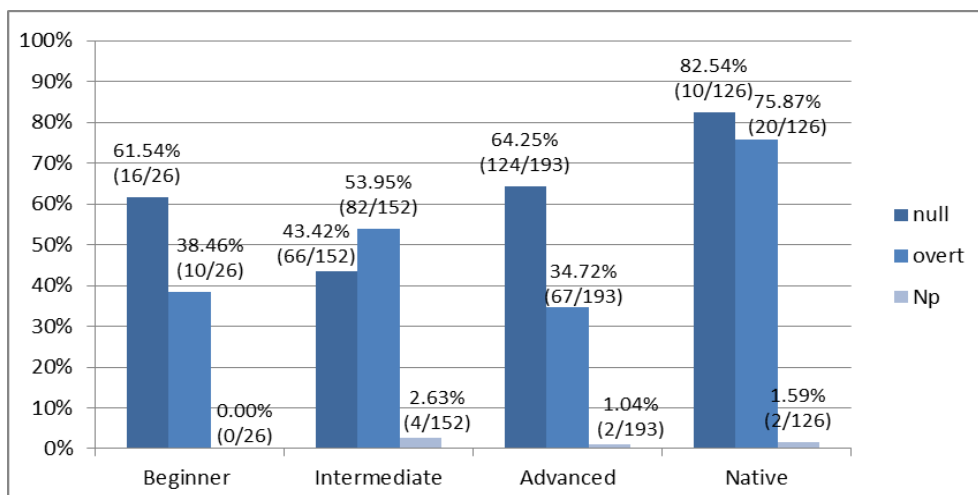


Figure 53. Selection of REs in the spoken texts.

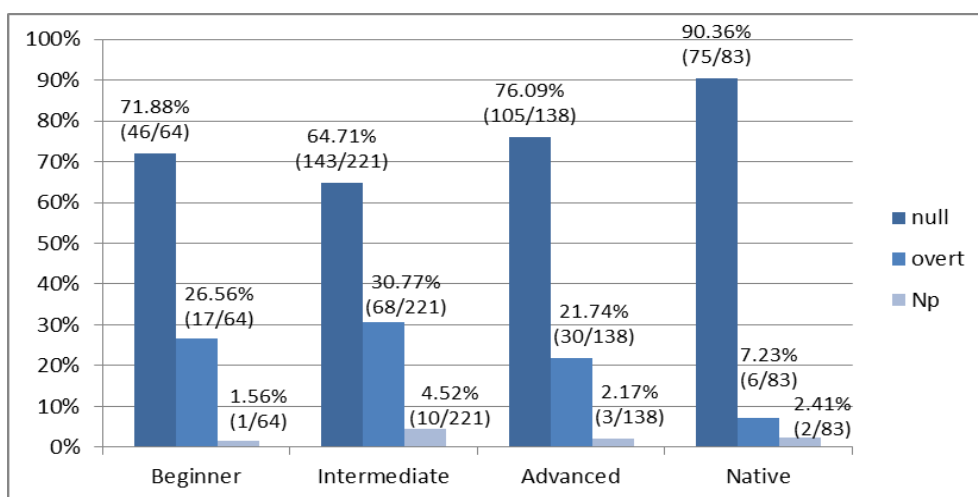


Figure 54. Selection of REs in the written texts.

Figure 53 and Figure 54 show that in topic continuity syntactic coordination, native speakers and learners tend to prefer null over overt pronouns in their spoken texts (Beginner: 61.54%;

Advanced: 64.25%; Native: 82.54%), except for the intermediate participants, who select a higher number of pronouns (53.95% vs. 43.42%) in their spoken narratives. As in natives, NP rates in the L2ers are very low and percentages represent just a few tokens. In their written texts, the L2ers' rates are similar to the natives' with a predominance of zero (beginner: 71.88%; Intermediate: 64.71%; Advanced: 76.09%; Natives: 90.36%), lower production of overt pronouns (Beginner: 26.56%; Intermediate: 30.77%; Advanced: 21.74%; Natives: 7.23%), and very few NPs (Beginner: 1.56%; Intermediate: 4.52%; Advanced: 2.17%; Natives: 2.41%).

Across modes of production, there are statistically significant differences within intermediate and advanced groups: the intermediate group ($\chi^2=16.561$, $p<0.02$ for zero; $\chi^2=20.124$, $p<0.02$ for overt pronouns); the advanced group ($\chi^2=5.289$, $p<0.05$ for zero; $\chi^2=6.540$, $p<0.02$ for overt pronouns). No statistical differences were found in the beginner or the native groups.

In spoken discourse, there are statistically significant differences between the natives and the learners: beginner group ($\chi^2=5.719$, $p<0.02$ for zero; $\chi^2=6.942$, $p<0.02$ for overt pronouns); intermediate group ($\chi^2=44.327$, $p<0.02$ for zero; $\chi^2=42.994$, $p<0.02$ for overt pronouns); and advanced ($\chi^2=12.509$, $p<0.02$ for zero; $\chi^2=13.645$, $p<0.02$ for overt pronouns). There are also statistically significant differences between the intermediate group and the advanced group ($\chi^2=14.908$, $p<0.02$ for zero; $\chi^2=12.819$, $p<0.02$ for overt pronouns). Thus, the statistical results show, first, that in the spoken mode there are differences between the native speakers and all the L2ers. This indicates different patterns of production, but none of the L2ers show native-like performance. Particularly, learners' production of overt pronouns is significantly higher in their spoken narratives than the L1 English.

In the written discourse, we find statistically significant differences between the natives and all the proficiency groups: beginner group ($\chi^2=8.432$, $p<0.02$ for zero; $\chi^2=10.234$, $p<0.02$ for overt pronouns); intermediate group ($\chi^2=19.577$, $p<0.02$ for zero; $\chi^2=18.156$, $p<0.02$ for overt pronouns); and advanced group ($\chi^2=6.989$, $p<0.02$ for zero; $\chi^2=8.002$, $p<0.02$ for overt pronouns). There are also statistically significant differences between the intermediate and advanced groups ($\chi^2=3.964$, $p<0.05$ for zero).

Overall, English natives produced mainly zero subjects both in spoken and written texts. This shows a marked preference for null pronoun in this specific discourse-syntactic context. Importantly, however, the statistical results show, first, that an effect of mode was not found in the beginner and native groups. By contrast, the mode of production affects the selection of REs

in topic continuity syntactic contexts in the intermediates' and advanced learners' texts, where we can observe a higher amount of null pronouns in the written texts compared to the spoken ones. This suggests a development across advanced learners even if there are still differences between the advanced and the natives. Second, in the spoken mode, results show that there are differences between the native speakers and all learner groups. This seems to indicate that there are deficits in the learners' selection of REs of their spoken narratives. This indicates no native-like behaviour in their spoken narratives. Still, as we can observe from Figure 53, the distribution of null increased and the use overt decrease in the advanced group, showing a developmental trend in their spoken narratives. Crucially, the intermediate group shows signs of redundancy in their spoken mode, overproducing mainly overt pronouns, as in (139), which confirm previous research. However, native speakers tend to use more overt pronouns in their spoken discourse, likely because spoken L1 often involves longer chains of coordination. Overt pronouns typically appear in the third or fourth coordinate sentence, suggesting that as coordination chains extend, the need for clarity increases, prompting the use of explicit pronouns, as in (140), which confirms previous research. Finally, in the written mode, that there are also statistically significant differences between natives and all learner groups, although there is a tendency for null across all proficiency groups, L2ers do not select null at the same extent as the native speakers. Still, we can observe a high number of overt pronouns in their written naratives compared to the selection of overt pronouns by native speakers. These results show no native-like behaviour but indicate a development trend in the advanced group.

(139) Chaplin_i/hold/ holds /and **he_i** sit down in the street
(ES_SP_B1_19_13_14_JMR).

(140) /he_i's kind of smoking in and **he_i** looks around and **he_i** sees a /a baby_j lying along
on the ground and **he_i** takes a look around to see if anybody (...) (EN_SP_25_14_JF)

7.3.2.2 REs in continuous syntactic coordination

Figure 55 and Figure 56 show the selection of REs in continuous topic continuity syntactic coordination across all language groups and both spoken and written production. The frequency of REs in continuous syntactic coordination is higher than in the next subsection (c.f 7.3.2.2) because of the high incidence of absence of intervening subordination between the subjects of the coordinate clauses in the participants' narratives in both modes of production, as seen in Chapter 7.

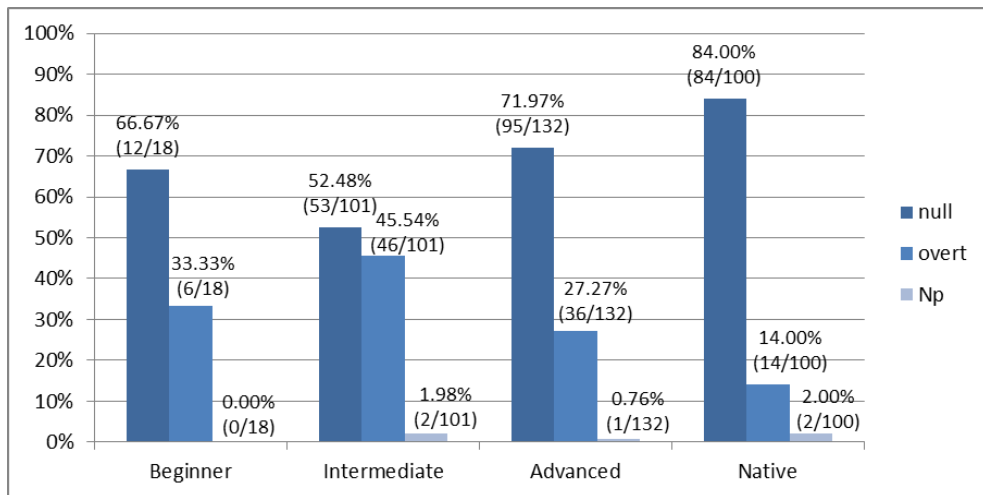


Figure 55. Selection of REs in continuous coordination in the spoken texts.

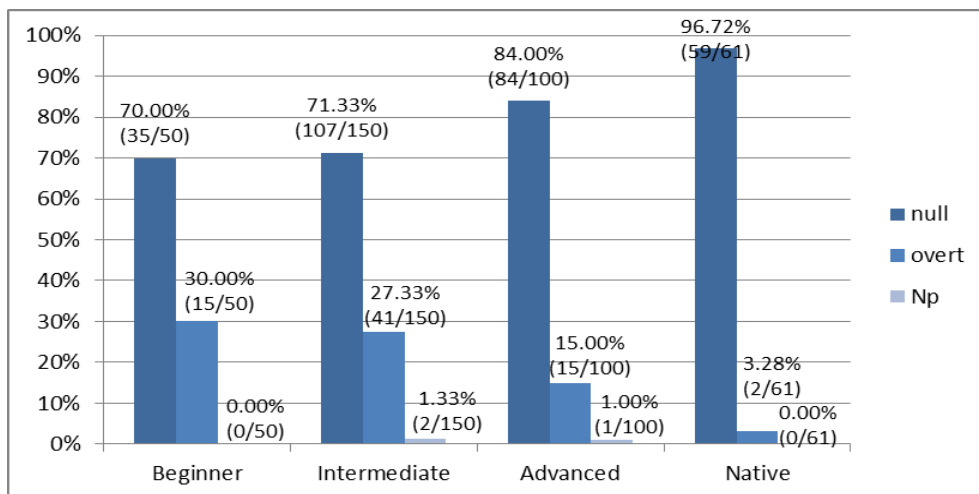


Figure 56. Selection of REs in continuous coordination in the written texts.

Figure 55 and Figure 56 show that over 50% of the REs in the analyzed texts are zero both in the spoken and written discourse. This is the case for all language groups in spoken texts (Beginner: 66.67%; Intermediates: 52.48%; Advanced: 71.97%; Natives: 84.00%) and in written texts (Beginner: 70.00%; Intermediates: 71.33%; Advanced: 84.00%; Natives: 96.72%).

The selection of the other REs (overt pronouns and NPs) also seems similar in all the language groups in the spoken and written discourse, except for the advanced and native groups where the selection of overt pronouns both in spoken (22.27%; 14.00%, respectively) and written texts (15.00%, 3.28%, respectively) is lower than the selection of overt pronouns in the other proficiency levels groups (Beginner: 33.33%; Intermediate: 45.54%; for spoken texts) and

(Beginner: 30%; intermediate: 27.33%; for written texts). As with natives, NPs rates in L2ers are very low and percentages represent just a few tokens.

Across modes of production, there are statistically significant differences within all proficiency groups, except for the beginner group: intermediate group ($\chi^2=12.836$, $p<0.02$ for zero; $\chi^2=12.343$, $p<0.02$ for overt pronouns); advanced group ($\chi^2=4.672$, $p<0.05$ for zero; $\chi^2=4.994$, $p<0.02$ for overt pronouns); and native group ($\chi^2=6.175$, $p<0.02$ for zero; $\chi^2=4.865$, $p<0.05$ for overt pronouns).

In the spoken discourse, there are statistically significant differences between the natives and all groups of L2ers: the beginner group shows statistically significant differences ($\chi^2=4.051$, $p<0.05$ for overt pronouns); the intermediate group shows statistically significant differences ($\chi^2=23.010$, $p<0.02$ for zero; $\chi^2=23.878$, $p<0.02$ for overt pronouns), and the advanced group ($\chi^2=4.672$, $p<0.05$ for zero; $\chi^2=5.928$, $p<0.02$ for overt pronouns). There are also statistically significant differences between the intermediate group and the advanced group ($\chi^2=10.031$, $p<0.02$ for zero; $\chi^2=9.577$, $p<0.02$ for overt pronouns).

In the written discourse, we find statistically significant differences between the natives and all groups of L2ers: the beginner group shows statistically significant differences ($\chi^2=15.127$, $p<0.02$ for zero; $\chi^2=15.127$, $p<0.02$ for overt pronouns); the intermediate group shows statistically significant differences ($\chi^2=16.659$, $p<0.02$ for zero; $\chi^2=15.464$, $p<0.02$ for overt pronouns) and the advanced group ($\chi^2=6.175$, $p<0.02$ for zero; $\chi^2=5.512$, $p<0.02$ for overt pronouns). There are also significant differences between the intermediate and advanced groups ($\chi^2=4.151$, $p<0.05$ for zero; $\chi^2=4.046$, $p<0.05$ for overt pronouns). In the written mode, still no native-like performance is revealed by the advanced learners, but results show developmental trends across proficiency groups.

Overall, the preferred RE in the analyzed texts is zero for all language groups both in spoken and written discourse. Importantly, however, the statistical results show, first, that that the mode of production affects the selection of REs in the native speakers' and also the intermediate and the advanced' texts, where there are statistically significant differences for zero and overt pronouns; i) advanced and native speakers, show a preference for zeros over overt pronouns both in their spoken and written texts as in (141) and (142), while the intermediate group shows a slight preference for zeros over overt pronouns in their spoken texts, as in (143), but a marked preference for zeros over overt pronouns in their written texts, as in (144). Second, in the spoken mode there are differences between the native speakers and all groups of L2ers for overt pronouns and zeros. This indicates that L2ers tend to use more overt pronouns in their spoken narratives than the natives. However, in the written mode there are differences

between the native speakers and all proficiency groups for zeros and overt pronouns, where learners, especially the beginner and the advanced groups show a higher tendency to select overt pronouns than the natives. Still, we observe a developmental trend in the distribution of null and overt pronouns in the advanced group (see Figure 56).

(141) ...**the woman_i** comes out and **starts_i** yelling at Chaplin_j. (ES_SP_C1_23_18_14_JHS)

(142) **He_i** takes the baby_j again and **starts_i** walking away. (EN_SP_20_14_CP)

(143) **Chaplin_i** at the end takes the baby_j and **sits_i** in the pavement. (ES_SP_B1_22_16_14_MBC)

(144) **Chaplin_i** leaves his hiding place and **walks_i** next to the baby carriage exactly when the woman_j appears. (ES_WR_B2_23_17_14_IMF)

7.3.2.3 REs in discontinuous syntactic coordination

Figure 57 and Figure 58 show the selection of REs in discontinuous topic continuity syntactic coordination across all language groups and both spoken and written production. The frequency of REs in discontinuous syntactic coordination is lower than in the previous subsection, given the lower amount of contexts where coordination is discontinuous (see 7.3.2.1).

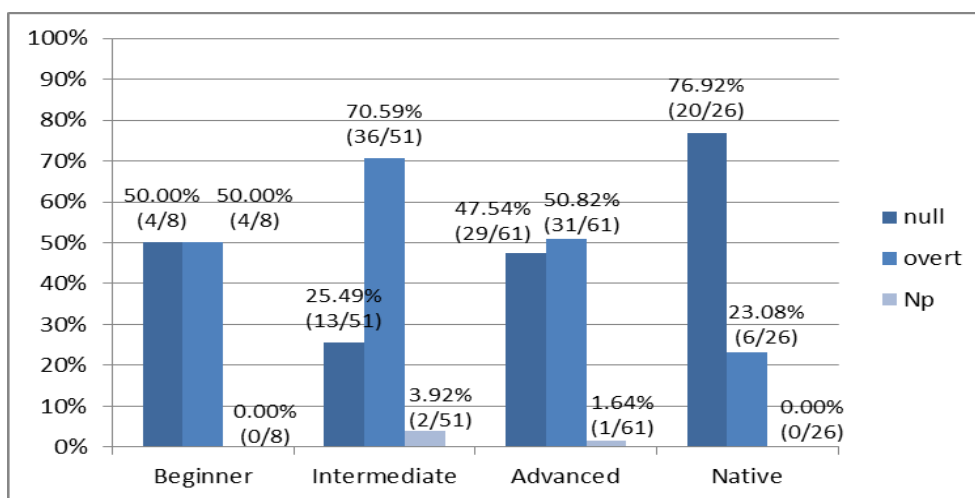


Figure 57. Selection of REs in discontinuous coordination in the spoken texts.

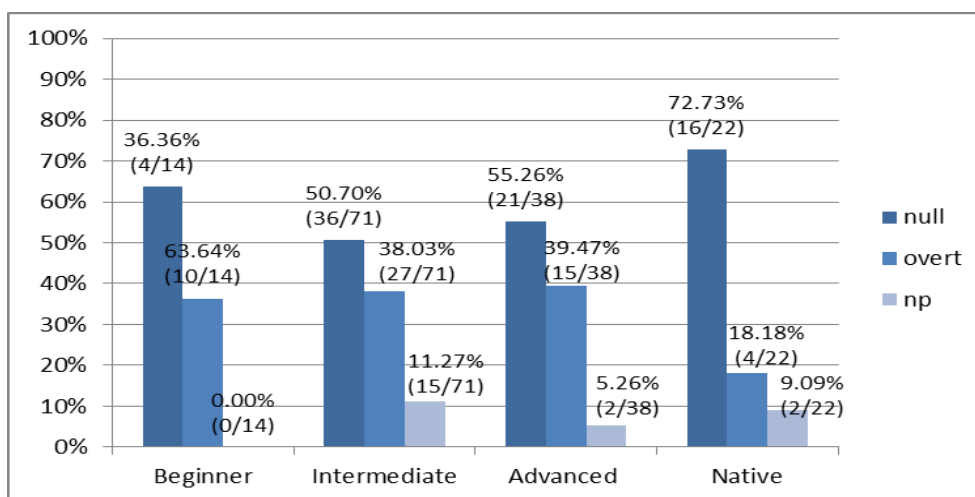


Figure 58. Selection of REs in discontinuous coordination in the written texts.

Figure 57 and Figure 58 show that the distribution of zeros and pronouns presents many differences across language groups and modes of production. First, in the spoken discourse, intermediateb show a high preference for pronouns (70.59%), while the beginner and the advanced group' tendency is no so marked (50%, 50.82%, respectively). This is not the case for native speakers, whose preference is zero over overt pronouns. Second, in the written discourse, L2ers and native speakers produce mainly zero. Importantly, native speakers show major differences on the selection of REs in the written texts (72.73% nulls vs. 18.18% pronouns). Finally, learners' amounts of NPs decrease as proficiency level increases, and in all language groups, it tends to be slightly more marked in their written texts.

Across modes of production, there are statistically significant differences within the intermediate group: ($\chi^2=7.852$, $p<0.02$ for zero; $\chi^2=12.600$, $p<0.02$ for overt pronouns). No statistical differences were found for the beginner, advanced or native groups.

In spoken discourse, there are statistically significant differences between the native speakers and the intermediate and advanced groups: intermediate ($\chi^2=18.602$, $p<0.02$ for zero; $\chi^2=15.679$; $p<0.02$ for overt pronouns); and advanced group ($\chi^2=6.397$, $p<0.02$ for zero; $\chi^2=5.740$; $p<0.02$ for overt pronouns). There are also statistically significant differences between the intermediate group and the advanced group ($\chi^2=4.226$, $p<0.05$ for zero; $\chi^2=4.516$; $p<0.05$ for overt pronouns).

In written discourse, there are no statistically significant differences between the native speakers and L2ers or across the different groups of learners.

These results show that in contexts of topic continuity discontinuous coordination L2ers produce mostly overt pronouns in their spoken texts, as in (144), and zeros in their written texts, whereas native speakers, despite the distance, tend to predominantly use zeros, as in (145).

However, there are number of statistical differences across the groups and modes of production. The statistical results show, first, that, no mode effects have been in beginner, advanced and L1 English, while the mode of production does seem to have effects on the intermediates selecting more zeros in their written narratives than in their spoken discourse. Second, in spoken discourse there are differences between the native speakers and the intermediate and advanced learners for zeros and overt pronouns. Particularly, the intermediates' production of overt pronouns is more marked in their spoken narratives than those in L1 English. There are also differences between intermediate and advanced learners in the spoken mode, where the intermediate's preference for overt pronouns is significantly higher than the selection of overt pronouns in the advanced narratives. In addition, even if the statistical differences between the native and advanced groups in their spoken productions suggest a no native-like behaviour for the advanced group, Figure 57 shows a developmental trend in the advanced group with an increase of null pronouns and a decrease of overt pronouns in their narratives. The latter is confirmed in the statistically significant differences for zeros and overt pronouns existing between the intermediates and the advanced groups in their spoken productions. Finally, in the written discourse, on the other hand, there are no differences between natives and learners where all proficiency groups show a preference for zeros. This reveals a native-like behaviour across all proficiency groups in the written narratives.

(144) uh this video is about a /a man_i who is Charles Chaplin_i/ and **he_i** is walking /uh in the street when when she_i when he_i finds a baby_j in the middle of the street/ an **he_i**/ picks him_j up/put he_i uh doesn't know what to do with him_j/ and **he_i** s=he continues walking/ and **he_i** sees a /a woman_k with a baby carriage (ES_SP_B2_21_13_14_AMO).

(145) he_i looks around to see if it is anybody's baby/and sees_i a mother_j/walking with a stroller (EN_SP_21_14_TS).

7.3.2.3.1 REs in discontinuous co-referential syntactic coordination

Figure 59 and Figure 60 show the selection of REs in topic continuity discontinuous co-referential syntactic coordination in learners' and natives' discourse respectively.

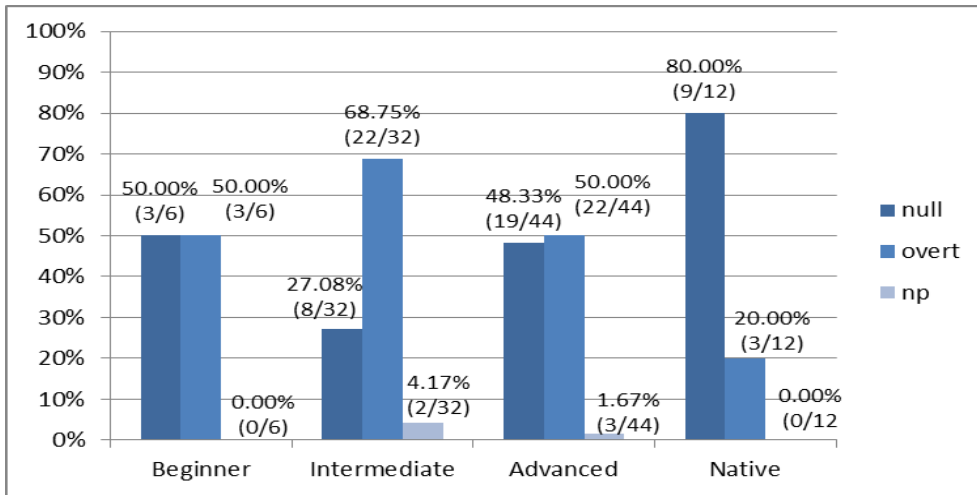


Figure 59. Selection of REs discontinuous co-referential coordination in the spoken texts.

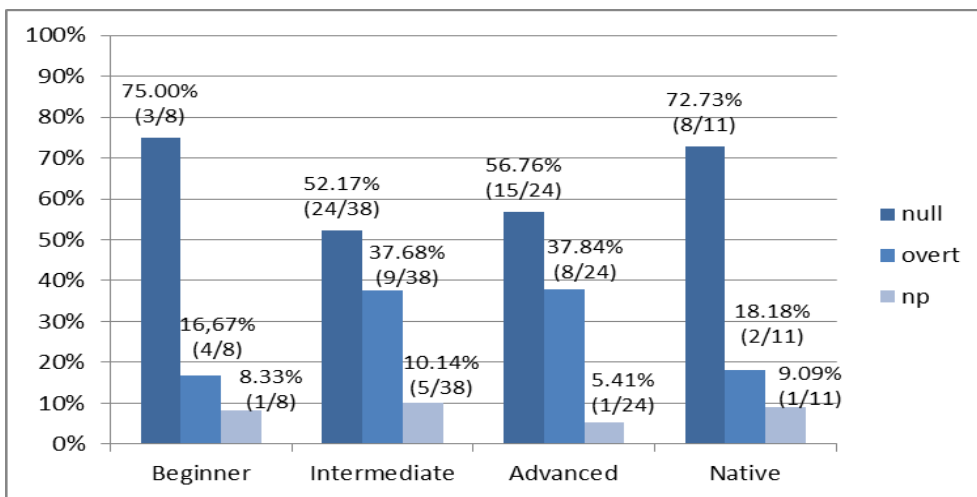


Figure 60. Selection of REs discontinuous co-referential coordination in the written texts.

Figure 59 and Figure 60 show a number of differences in the distribution of zeros and pronouns presents between the native speakers and the L2ers and across modes of production. First, in the spoken discourse, the intermediate and the advanced groups show a preference for pronouns (68.75%, 50.00%, respectively), while the beginner group show the same preference for overt and null pronouns. This is not the case for native speakers, whose preference is zero over overt pronouns. Second, in the written discourse, L2ers and native speakers produce mainly zeros in their written narratives (Beginner: 75.00%; Intermediate: 52.17%; Advanced: 56.76 %; Native: 72.73%).

Across modes of production, there are statistically significant differences within the intermediate group ($\chi^2=7.321$, $p<0.02$ for zero; $\chi^2=10.931$, $p<0.02$ for overt). No statistically differences were found in the beginner, advanced or native groups.

In spoken discourse, there are statistically significant differences between the native speakers and the intermediate group ($\chi^2=10.976$, $p<0.02$ for zero; $\chi^2=8.476$; $p<0.02$ for overt pronouns). There are also statistically significant differences between intermediate and advanced groups ($\chi^2=3.909$, $p<0.05$ for zero).

In written discourse, there are no statistically significant differences between the native speakers and L2ers or across the different groups of learners.

These results are similar to those for found in the contexts of topic continuity discontinuous coordination without taking into account the coreferentiality factor. Thus, L2ers continue to select mostly overt pronouns in their spoken texts, whereas native speakers tend to use zeros, as in (147). There are number of statistical differences across the groups and modes of production. The results indicate, first, that the mode of production affects the selection of REs in the intermediate group with a higher amount of zeros in their written narratives. Importantly, no effect was found for the beginner, advanced and native groups. Second, in the spoken mode, the statistical results show, first, that the intermediate group is overexplicit in comparison with L1 English selecting fewer zeros than pronouns in spoken discourse, as in (146). However, this is so only in their spoken production. Finally, in the written mode, there are no differences between natives and learners where all proficiency groups show a preference for zeros in the written discourse. Thus, L2ers show native-like behaviour in their written narratives.

(147) Charlie_i walks back towards where he_i finds the baby_j and **tries**_i to just put it_j where he_i found it_j / (EN_SP_21_14_CO).

(146)/he_i goes to the same place where he_i found the baby_j and **he**_i was about to put the baby_j in the floor. (ES_SP_B1_19_12_14_AFL).

7.3.2.3.2 REs in discontinuous non-coreferential syntactic coordination

Figure 61 and Figure 62 show the selection of REs in topic continuity discontinuous non-coreferential syntactic coordination in learners' and natives' discourse respectively.

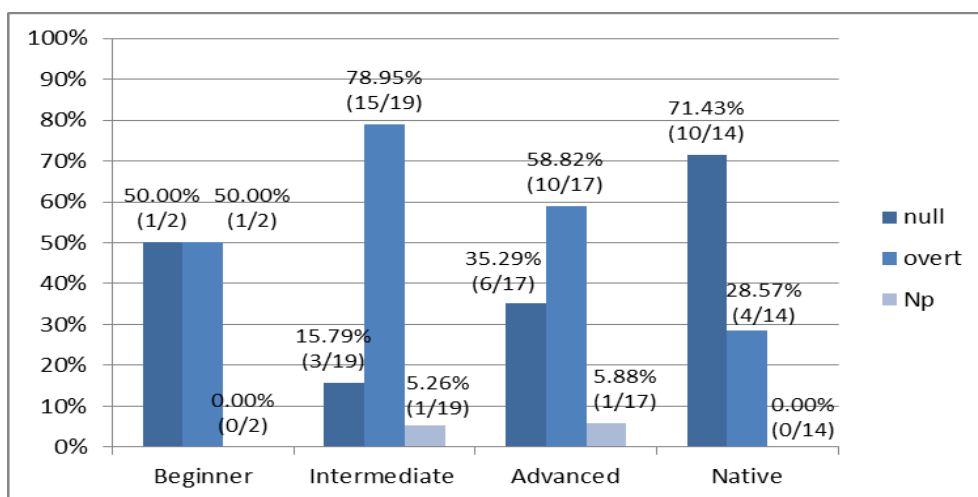


Figure 61. Selection of REs discontinuous non-co-referential coordination in the spoken texts.

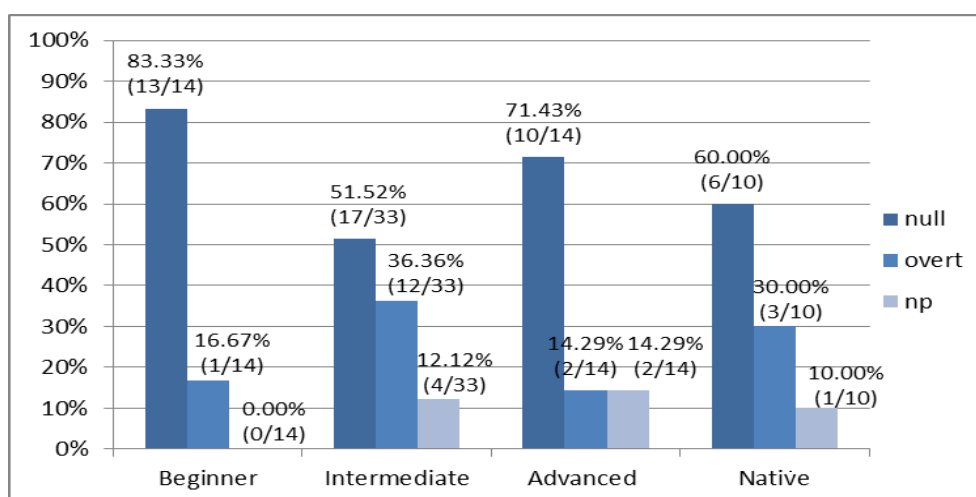


Figure 62. Selection of REs discontinuous non-co-referential coordination in the written texts.

Figure 61 and Figure 62 show that the distribution of zeros and pronouns presents a number of differences between native speakers and L2ers and modes of production. First, in the spoken discourse, L2ers show a preference for pronouns (Beginner 50.00%,⁸⁹ Intermediate 78.95%, and Advanced 58.82%). This is not the case for native speakers, whose preference is zeros over overt (71.43% and 28.57%, respectively). Second, in the written discourse, L2ers and native speakers produce mainly zero in their written narratives pronouns (Beginner 83.33% Intermediate 51.52%: Advanced 71.43% and Native: 60%).

Across modes of production, there are statistically significant differences within the intermediate group ($\chi^2=7.387$, $p<0.02$ for zero; $\chi^2=9.908$, $p<0.02$ for overt pronouns) and the

⁸⁹ The frequencies observed among the beginners are very low, which means that the (statistical) results might not be representative. This low frequency could lead to skewed data, making it difficult to draw accurate conclusions about their language use patterns.

advanced group ($\chi^2=5.125$, $p<0.05$ for zero; $\chi^2=7.882$, $p<0.02$ for overt pronouns). No statistically differences were found within the beginner and native groups.

In spoken discourse, there are statistically significant differences between the native speakers and the intermediate and advanced groups: the intermediate group ($\chi^2=8.077$, $p<0.02$ for zero; $\chi^2=5.531$; $p<0.02$ for overt pronouns), and the advanced group ($\chi^2=6.023$, $p<0.02$ for zero; $\chi^2=5.241$; $p<0.02$ for overt pronouns). There are no statistically significant differences across L2ers.

In written discourse, there are no statistically significant differences between the native speakers and L2ers or across the different groups of learners. Thus, results show a native-like performance in the intermediate group.

The statistical results show that in contexts of topic continuity discontinuous non-coreferential coordination L2ers produced mostly overt pronouns in spoken texts, whereas native speakers continue to use predominately zeros, as in (147). However, there are number of statistical differences across the groups and modes of production. The results indicate first, that the mode of production affects RE selection corresponding to a higher amount of zeros in written texts in intermediate and advanced groups in comparison with their spoken narratives, where they prefer overt pronouns, as in (148). Still, mode of production does not affect the selection of REs in the beginner and native groups. Second, in the spoken mode, results show that learners are overexplicit, as in (149), in comparison with L1 English selecting predominantly overt pronouns in their spoken discourse, while the native speakers prefer null pronouns. This indicates that there is no native-like behaviour or developmental trend across the learners' groups. Finally, in the written mode, there are no differences between the natives and learners in written discourse, where all proficiency groups show a preference for zeros. This reveals a native-like behaviour across all the proficiency groups. Still, these results should be taken cautiously given the low frequencies used in the statistical analyzes.

(147) / he_i then gives it_j to a random man_k walking down the street and/**runs away**_i
so that the man_k now is stuck with the baby_j. (EN_SP_21_14_CO).

(148) However, he_i still tries to get rid of the poor creature_j by giving it to an old man_k
and **running away**_i. (ES_WR_C1_19_13_14_MHM)

(149) /Uh the first person he_i finds is a woman_j who also carries another baby_k /
and he_i thinks that the baby_k may be from her. (ES_SP_B2_22_16_14_AMG)

7.4. Factors constraining RE selection in topic continuity contexts

In this last section, we examine whether the mode of production has an effect on the distribution of REs in topic continuity contexts when constrained by some factors, namely, the number of potential antecedents, distance of potential antecedents, protagonist hood and scenes (new vs. old). Importantly, such factors as the distance of the antecedent, the number of potential antecedents or protagonist hood, have traditionally been considered by different cognitive approaches (c.f 2.7). These factors can affect both native speakers and L2 learners, but it needs to be clarified whether the mode of production has an effect on these factors on the selection of REs by L2 learners and natives in their narratives, that is, whether the results obtained in the participants spoken and written productions' are comparable when REs are constrained by the specific factors listed above. The results in this section address RQ3 (See 5.3).

7.4.1. Distance of the Antecedent

This section presents the results motivated by RQ3a in Chapter 5 (see 5.3). This RQ looks at possible mode effects (written vs. spoken), when considering the distance of the antecedent as a constraint in topic continuity contexts. Previous anaphora studies have highlighted the importance of the antecedent distance (Gudmestad et al., 2013; Lozano, 2016; Mitkov, 2002). In this dissertation, we measure the factor of antecedent distance in terms of the number of clauses (4 clauses); first, we show how it is linearly related to the production of anaphoric subjects. We expect REs selection will differ based on the distance between the referent and its antecedent, with a tendency to favor overt pronouns over zero pronouns in spoken language as the distance between the REs and their co-referent antecedent increase. Additionally, there will be an effect on mode as the greater the distance, the higher the cognitive load, which implies fuller REs across L2ers.

Figure 63 and Figure 64 show the results regarding the distance of the antecedent across proficiency levels, both in spoken and written discourse.

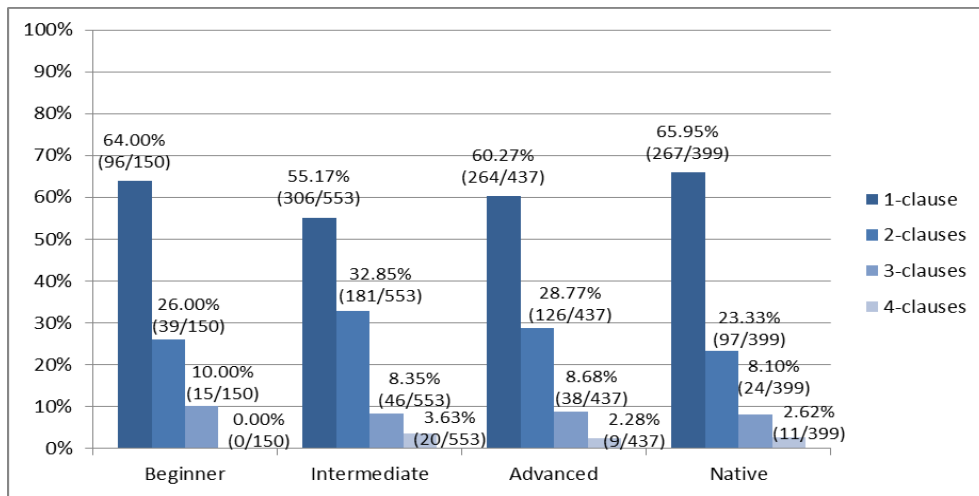


Figure 63. Antecedent distance in the spoken texts.

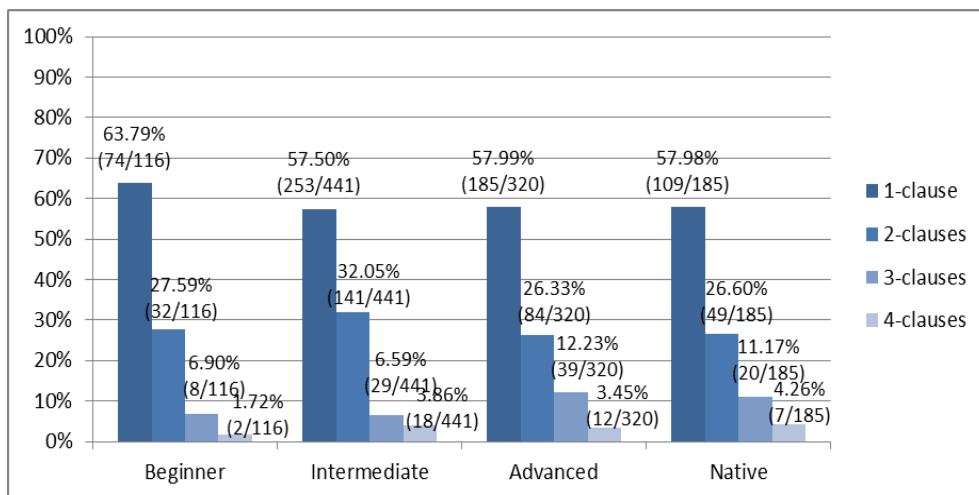


Figure 64. Antecedent distance in the written texts.

Figure 63 and Figure 64 show that over 55% the distance of the antecedent in the analyzed texts is in the preceding clause in both spoken and written discourse. This is the case for all language groups in spoken texts (Beginner: 64%; Intermediates: 55.17%; Advanced: 60.27%; Natives: 65.95%) and in written texts (Beginner: 63.79%; Intermediates: 57.50%; Advanced: 57.99%; Natives: 57.98%) followed by the second clause and very few cases in the third or fourth clause in their spoken narratives. However, the advanced and native groups increase the amount of 3 clause distant antecedents (12.23%; 11.17%, respectively) and in their written texts.

Across modes of production, there are no statistically significant differences across learner groups, while there is statistically significant difference across the native group ($\chi^2=4.966$, $p<0.05$ for 1 clause).

In spoken discourse, there are statistically significant differences between the natives and the intermediate and the advanced groups: the intermediate ($\chi^2=13.665$, $p<0.02$ for 1 clause, $\chi^2=4.966$, $p<0.02$ for 2 clauses; the advanced ($\chi^2=4.391$, $p<0.05$ for 1 clause). There are also statistically significant differences between the beginner and intermediate groups ($\chi^2=3.921$ $p<0.05$ for 1 clause $\chi^2=5.584$, $p<0.02$ for +3 clauses)

In written discourse, there are statistically significant differences between the intermediate and the advanced group ($\chi^2=7.837$, $p<0.02$ for 3 clauses). No statistical differences were found in the beginner or native groups.

Overall, the preferred distance between an anaphor and its antecedent in the analyzed texts is the first clause for all language groups both in spoken and written discourse (Givón, 1983). However, there are number of statistical differences across the groups and modes of production. The results show, first, that the mode of production does not affect the distance of the antecedent in their learners' narratives but it affects the natives for 1 clause in their spoken narratives. Second, statistical results show, that in the spoken mode there are differences in the antecedent distance between the native speakers and the intermediates and the advanced. The intermediate and advanced groups' preference for the distance of the antecedent is in the second clause, where the natives' preference is in the preceding clause. There are also statistical differences between the beginner and intermediate groups' for 1 clause and +3 clauses. This indicates there is no a native-like behaviour in any proficiency group. Still, we can see a developmental trend in the advanced group with an increase of the distance of the antecedent in the preceding clause and a decrease of the distance of the antecedent in the second clause. Finally, in the written mode statistical differences are found between the intermediate and advanced groups for 3 clauses, as in (150). The results for the written narratives reveal a native-like behaviour in the advanced group for the distance of the antecedent. Upcoming results will disclose whether the antecedent distance correlates with the selection of more or less specific anaphoric forms.

- (150) a. The angry woman_i denies that the baby_j is hers and **makes**_i him_k take it_j back. (ES_WR_A2_18_13_14_MDJ)
- b. The man_i, continue up looking somebody to give the baby_j and **he**_i cheats an old man_k. (ES_WR_B1_19_11_14_NLLB)

7.4.2. Number of potential antecedents

This subsection addresses RQ3a (see 5.3). In this RQ we examine, first, whether the mode of production affects the number of potential antecedents, then whether there is a mode effect on the selection of REs with 1, 2 or 3 antecedents. We hypothesize that the mode of production will affect both the number of potential antecedents present in discourse and the subsequent selection of REs. Initially, we expect an effect of mode on the number of potential antecedents. This effect, in turn, will shape the choice of REs used in communication. Moreover, we anticipate that the interaction between the number of potential antecedents and the selection of REs will differ depending on the mode of production and across all proficiency levels. In spoken language, particularly in the narratives of L2ers, we predict that an increase in potential antecedents will lead to a preference for more explicit and fuller forms of REs

Figure 65 and Figure 66 show the results of the overall numbers of potential antecedents across proficiency levels and across modes of production.

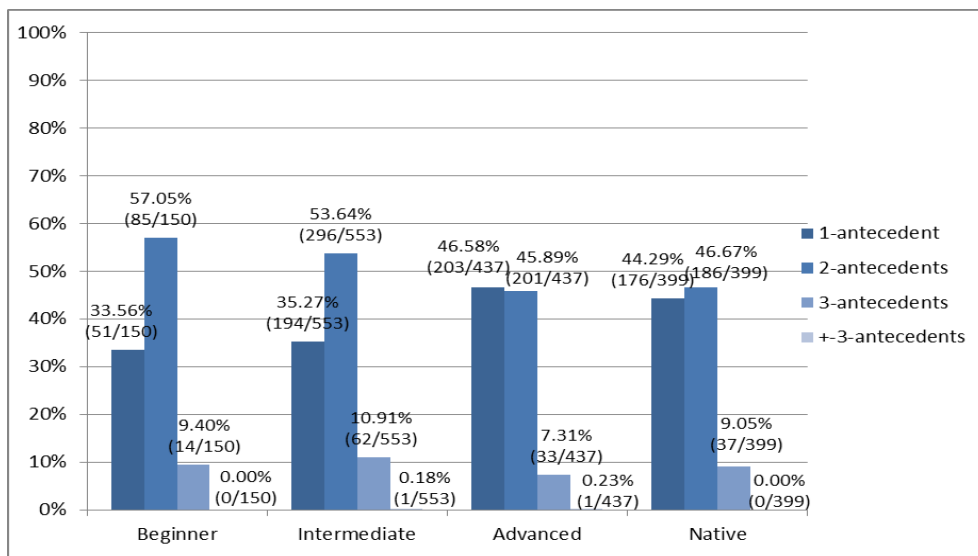


Figure 65. Number of potential antecedents in the spoken texts.

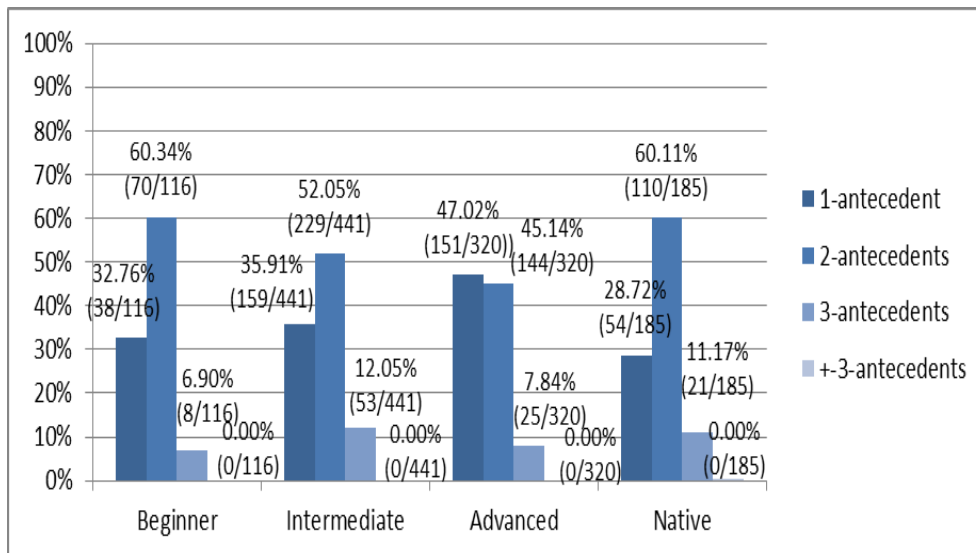


Figure 66. Overall numbers of potential antecedents in the written texts.

Figure 65 and Figure 66 show that the number of potential antecedents presents many differences between native speakers and L2ers and across modes of production within the native speakers. First, in the spoken discourse, the beginner and the intermediate groups show a preference for 2 antecedents (Beginner: 57.05%; Intermediate: 53.64%; Native: 46.47%), followed by 1 antecedent (Beginner: 33.56%; Intermediate: 35.27%; Native: 44.29%). This tendency is more marked in the beginner and intermediate groups. By contrast, the advanced group shows a similar distribution for 1 and 2 antecedents, giving preference to 1 antecedent (46.58%) followed by 2 antecedents (44.29%). Second, in written discourse, the results show that all proficiency levels give preference to 2 antecedents, except for the advanced group, which gives preference for 1 antecedent. Finally, learners' and natives' preference for 3 antecedents are similar in their spoken and written discourse.

Across modes of production, there are statistically significant differences within the native group ($\chi^2=15.992$, $p<0.02$ for 1 antecedent; $\chi^2=12.034$, $p<0.02$ for 2 antecedents).

In spoken discourse, there are statistically significant differences between the native speakers and the beginners and intermediates: beginner group ($\chi^2=6.993$, $p<0.02$ for 1 antecedent; $\chi^2=6.187$; $p<0.02$ for 2 antecedents); and intermediate group ($\chi^2=11.343$, $p<0.02$ for 1 antecedent; $\chi^2=6.720$; $p<0.05$ for 2 antecedents). There are also statistically significant differences between the beginner and advanced groups ($\chi^2=7.676$, $p<0.02$ for 1 antecedent; $\chi^2=5.539$, $p<0.02$ for 2 antecedents); and between the intermediate and advanced groups ($\chi^2=12.948$, $p<0.02$ for 1 antecedent; $\chi^2=5.852$, $p<0.02$ for 2 antecedents).

In the written discourse, there are statistically significant differences between the natives and the advanced group ($\chi^2=16.200$, $p<0.02$ for 1 antecedent; $\chi^2=10.877$, $p<0.02$ for 2 antecedents).

There are also statistically significant differences between the beginner and advanced groups ($\chi^2=6.917$ $p<0.02$ for 1 antecedent; $\chi^2=5.852$, $p<0.02$ for 2 antecedents) and between the intermediate and the advanced groups ($\chi^2=9.243$, $p<0.02$ for 1 antecedent).

Results show that, in contexts of topic continuity, 2 antecedents are preferred by the beginner, intermediate and native groups in their spoken and written texts. By contrast, the advanced group show a slight preference towards 1 antecedent over 2 antecedents in their written narratives, as in (151). Importantly, the statistical results show, first, there is an effect of mode of production across the natives with a mark tendency for 2 antecedents in their written discourse, while in their spoken production their preference is very similar for 1 antecedent and 2 antecedents with a slight preference for 2 antecedents. However, no effect of mode was found across L2 learners. Second, in the spoken mode there are statistical differences between the native and the beginner and intermediate groups, where the L2ers show a clear preference for 2 antecedents, while the natives show a slight preference towards 2 antecedents in the spoken mode. But there are not statistical differences between the advanced and the natives, where their preference divided between 1 and 2 antecedents. There are also statistical differences across the learners, more specifically between the beginner and advanced and intermediate advanced, where both beginner and intermediate show a preference for 2 antecedents and the advanced for 1 antecedent. This reveals a native-like behaviour in the advanced group for the number of antecedents in the spoken narratives. Second, in the written mode, there are statistical differences between the native and the advanced groups, where the advanced groups' preference is divided between 1 and 2 antecedents, while the natives' preference for 2 antecedents is highly marked. Across the learners, there are differences between the beginner and advanced, and the intermediate and advanced groups, where both beginner and intermediate show a preference for 2 antecedents, while the advanced shows a divided preference for 1 and 2 antecedents. These results show that the beginner and intermediate groups show a native-like behaviour in their preference for 2 antecedents in their written narratives. Importantly, previous research did not investigate the possible effect of mode of production in L1 Spanish-L2 English learners and natives; we reveal that mode of production does affect the number of antecedents intervening in topic continuity contexts in the native speakers.

(151) Charles Chaplin_i is walking down a narrow and dilapidated Street. **He_i** is struggling to avoid the rubble while smoking a cigar when he_i suddenly sees a baby_j lying on the floor. (ES_WR_C2_19_15_14_LPI)

7.4.2.1. Selection of REs with 1 antecedent

Figure 67 and Figure 68 show the selection of REs with 1 antecedent across proficiency levels and both spoken and written discourse.

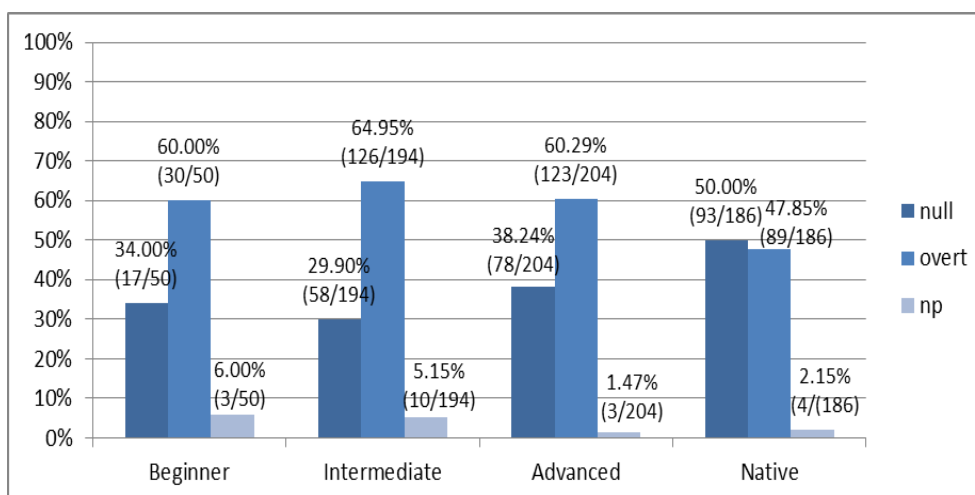


Figure 67. Selection of REs with 1 antecedent in the spoken texts.

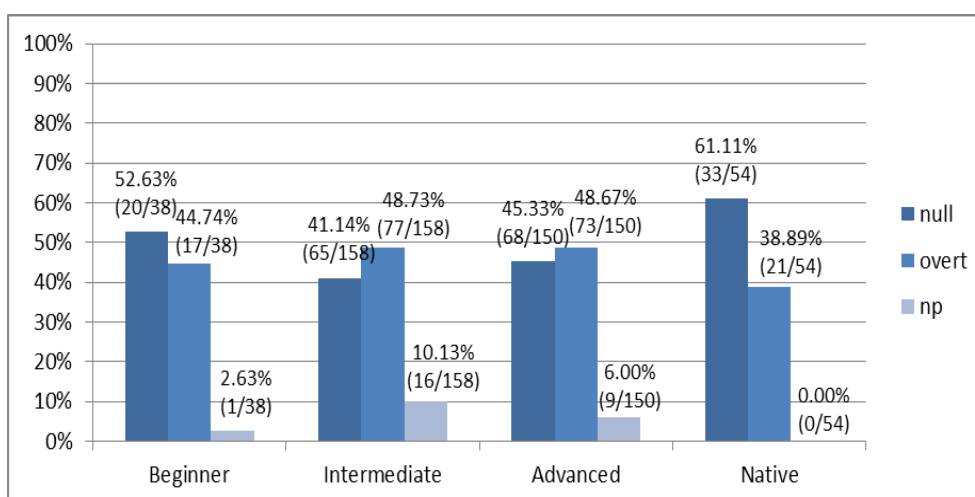


Figure 68. Selection of REs with 1 antecedent in the written texts.

Figure 67 and Figure 68 show that the selection of REs presents many differences between native speakers and L2ers and mode of production. First, in the spoken discourse, L2ers show a marked preference for pronouns, to the extent that pronouns exceed zeros (Beginner 61.60% vs. 34.00%; Intermediate 64.95% vs. 29.90%; Advanced 60.29% vs. 38.24%). By contrast, native speakers show a slight preference for zeros (50.00% vs. 47.85% for overt pronouns). Second, in the written discourse, L2ers show a similar distribution of zeros and overt pronouns. However,

the intermediate and advanced group tend to use more overt pronouns than zeros, while the beginner group use more zeros than overt pronouns. In contrast, the native group shows a clear tendency towards zeros. Finally, learners' amount of NPs is higher in the written texts than in the spoken texts.

Across modes of production, there are statistically significant differences within the intermediate and advanced groups: the intermediate group ($\chi^2=4.841$, $p<0.05$ for zero; $\chi^2=9.378$, $p<0.02$ for overt pronouns) and the advanced group ($\chi^2=4.729$, $p<0.05$ for overt pronouns; $\chi^2=5.415$, $p<0.02$ for NPs). There are no statistically significant differences in the beginner or the native groups.

In spoken discourse, there are statistically significant differences between the native speakers and all L2ers groups: the beginner group ($\chi^2=4.604$, $p<0.05$ for zero) the intermediate group ($\chi^2=17.637$, $p<0.02$ for zero; $\chi^2=12.713$; $p<0.02$ for overt pronouns) and the advanced group ($\chi^2=6.475$, $p<0.02$ for zero; $\chi^2=7.153$; $p<0.02$ for overt pronouns). There are also statistically significant differences across L2ers between the intermediate and advanced groups ($\chi^2=4.271$, $p<0.05$ for NPs).

In the written discourse, there are statistically significant differences between the natives and the intermediates ($\chi^2=5.914$, $p<0.02$ for zero; $\chi^2=5.807$; $p<0.02$ for NPs).

The results reveal interesting details as to the learners' and native speakers' selection of REs with 1 antecedent of their spoken and written narratives. Overall, the preferred REs in the analyzed texts for L2ers are overt pronouns both in the spoken and written discourse, with the exception of the beginner group which shows a slight preference for zeros in the written narratives. In contrast, native speakers show a marked tendency for zeros in their written texts compare to their spoken narratives. However, results show, first, that the mode of production affects the selection of REs with 1 antecedent in intermediate and advanced groups, where there is a higher preference for overt pronouns in their spoken texts compared to their written ones, where null pronouns increase. It also affects the selection of NPs in the written discourse by the advanced group compared to their spoken texts. Importantly, no effect of mode was found for the beginner and native groups. Second, in the spoken mode, there are differences between the native speakers and all L2ers groups, as learners tend to select overt pronouns rather than zeros in their spoken narratives, as in (151) and (152), and, there are also differences between the intermediate and the advanced groups, where the advanced group tend to increase the

number of zeros. This seems to indicate that L2ers are overexplicit in their spoken performance. It means they do not show native-like behaviour in their spoken narratives, and no development trend is found across the proficiency groups. Finally, in the written discourse, there are differences between the native speakers and the intermediate for overt pronouns and NPs, where the intermediate group tend to select less overt pronouns and more NPs than the native speakers. On the other hand, learners' marked preference for pronouns is less marked than in the spoken mode. Besides, the beginner group tends to use slightly more null pronouns than overt pronouns. By contrast, the native speakers show a marked preference for zeros in their written texts. No native-like behaviour or developmental trend is found across proficiency groups in the learners' written texts.

(151) so he_i walks by/and/ he_i goes to the same place where he_i found the baby_j.
(ES_SP_B2_19_12_14_AFL)

(152) / and so the man_i walks down on to a main street and sees_i an empty stroller belonging to the lady_j that Charlie_i has already tried to give the baby_k to/. (EN_SP_20_14_TK)

7.4.2.2. Selection of REs with 2 antecedents

Figure 69 and Figure 70 show the results regarding the selection of REs with two antecedents across proficiency levels, both in spoken and written discourse.

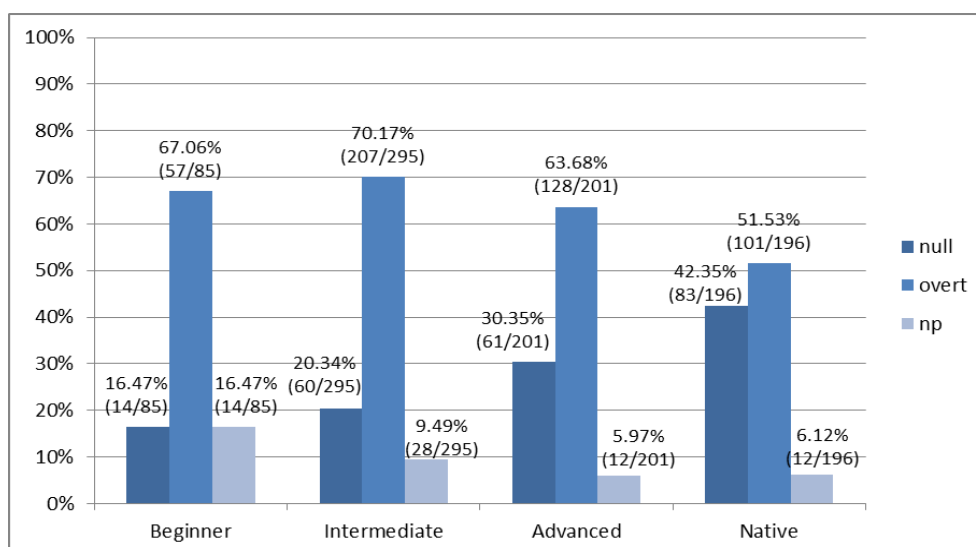


Figure 69. Selection of REs with 2 antecedents in the spoken texts.

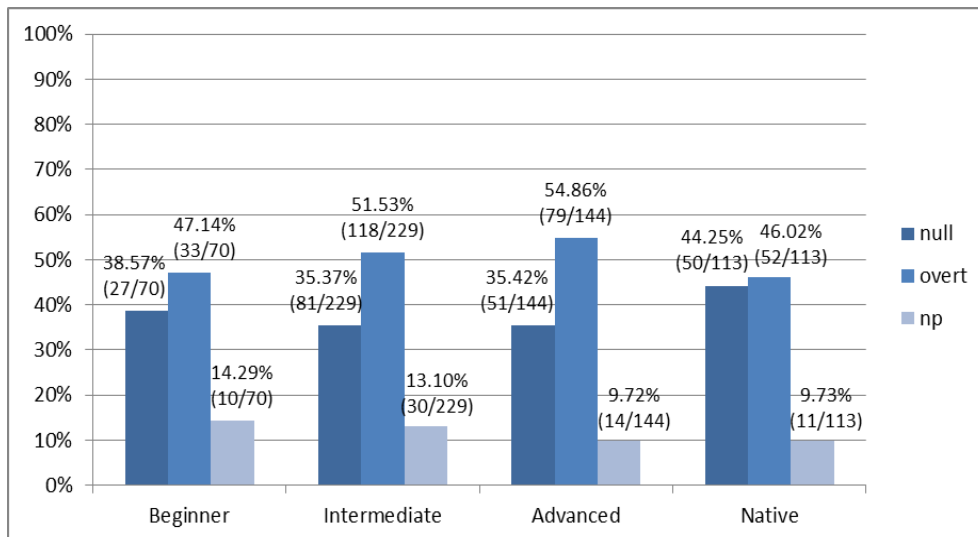


Figure 70. Selection of REs with 2 antecedents in the written texts.

Figure 69 and Figure 70 show that overt pronouns are by far preferred by L2ers and native speakers, both in their spoken and written texts. Still, the distribution of zeros and pronouns shows a number of differences across language groups and modes of production. First, in the spoken mode, learners show a marked preference for pronouns (Beginner: 67.06%; Intermediate: 70.17%; and Advanced: 63.68%). By contrast, native speakers show a similar distribution of zeros and pronouns, giving preference for zeros (42.35%, 51.53%, respectively). Still, in written mode, overt pronouns are the preferred REs by L2ers and native speakers, although the preference is not as marked as in the spoken mode. Second, L2ers' amount of NPs decreases as proficiency level increases both in the spoken and written discourse.

Across modes of production, there are statistically significant differences within the beginner and intermediate groups: the beginner group ($\chi^2=9.638$, $p<0.02$ for zero; $\chi^2=6.253$, $p<0.02$ for overt pronouns); and the intermediate group ($\chi^2=14.812$, $p<0.02$ for zero; $\chi^2=19.019$, $p<0.02$ for overt pronouns). No statistically significant differences are found for the advanced and native groups. The statistical results show that the mode of production affects the selection of REs only in the beginner and intermediate groups with a clear preference for overt pronouns in their spoken narratives and an increase of zeros in their written texts.

In spoken discourse, there are statistically significant differences between the native speakers and all L2ers group: the beginner group ($\chi^2=17.071$, $p<0.02$ for null pronoun; $\chi^2=5.966$; $p<0.02$ for overt pronouns; $\chi^2=6.271$; $p<0.02$ for NPs); the intermediate group ($\chi^2=26.198$, $p<0.02$ for zero; $\chi^2=17.409$; $p<0.02$ for overt pronouns) and the advanced group ($\chi^2=5.814$, $p<0.02$ for zero;

$\chi^2=6.150$; $p<0.02$ for *overt pronouns*). There are also statistically significant differences across the L2ers: the beginner and advanced groups ($\chi^2=5.947$, $p<0.02$ for zero; $\chi^2=7.970$, $p<0.02$ for NPs); and the intermediate and advanced groups ($\chi^2=6.494$, $p<0.02$ for zero).

In written discourse, we have found no statistically significant differences in neither of the participant groups.

Overall, the preferred RE in the analyzed texts is overt pronouns for all language groups both in spoken and written discourse, which is according to claims found in previous research on the number of potential antecedents (Lozano, 2016). Importantly, However, the statistical results show, first that the mode of production affects the selection of REs in the beginner and intermediate groups, where there are statistically significant differences for overt pronouns and zeros in their narratives. This shows that beginner and intermediate groups tend to use a higher amount of overt pronouns in their spoken narratives in comparison to their written ones. It seems then that beginner and intermediate groups are more redundant in their spoken texts than in the written texts. No mode effect was found in the advanced or native groups where the selection of null and overt pronouns is similar in their spoken and written texts. Second, in the spoken mode, there are differences between the native speakers and all L2ers. Particularly, learners' production of overt pronouns is highly marked in their spoken narratives in comparison to L1 English. There are also differences between beginners and advanced on the selection of REs. Results show that beginners tend to select fuller forms, namely overt pronouns and NPs in contrast with the advanced group, whose selection of null pronouns is higher than the beginners. There are also statistical differences between the intermediate and advanced for the selection of null and overt pronouns in their narratives, with an increase of null pronouns in the advanced group. This indicates a native-like behaviour in the advanced group in their spoken production. Finally, in the written mode, no differences were found between the native speakers and L2ers revealing a native-like performance across all proficiency groups.

7.4.2.3 Selection of REs with 3 antecedents

Figure 71 and Figure 72 show the results regarding the selection of REs with two antecedents across proficiency levels, both in spoken and written discourse.

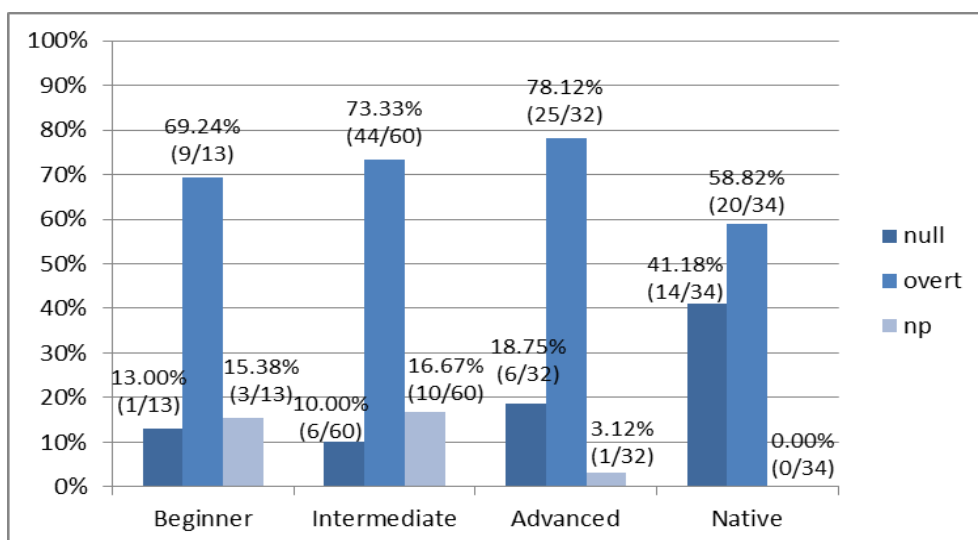


Figure 71. Selection of REs with 3 antecedents in the spoken texts.

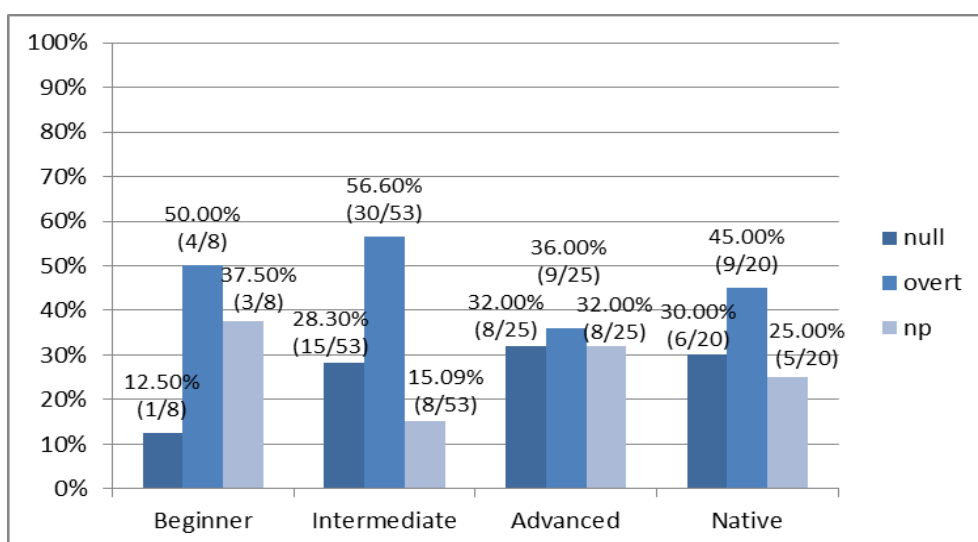


Figure 72. Selection of REs with 3 antecedents in the written texts.

Figure 71 and Figure 72 show that overt pronouns are by far preferred by L2ers and native speakers, both in their spoken texts. Still, the distribution of zeros and pronouns shows a number of differences across language groups and modes of production. First, in the spoken mode, learners and natives show a marked preference for pronouns (Beginner: 69.23%; Intermediate: 73.33%; Advanced: 78.12% and Native: 58.82%). Followed by zeros in the advanced and native narratives (Advanced: 18.75%; and native: 41.18%). By contrast, NPs are the second choice for intermediate and in a low percentage by beginners. Still, in the written mode, overt pronouns are the preferred REs by L2ers and native speakers, although the

preference is not as marked as in the spoken mode. Second, the amount of NPs increases in the beginner, intermediate and natives in the written discourse.

Across mode of production, there are statistically significant differences within the natives, the intermediate, and the advanced groups: intermediate group ($\chi^2=6.238$, $p<0.02$ for zero); advanced group ($\chi^2=10.348$, $p<0.02$ for overt; $\chi^2=8.801$, $p<0.02$ for NPs) and native group ($\chi^2=9.325$, $p<0.02$ for NPs).

In spoken discourse, there are statistically significant differences between the native speakers and the beginner and intermediate groups: beginner group ($\chi^2=5.213$, $p<0.05$ for NPs); the intermediate group ($\chi^2=11.970$, $p<0.02$ for zero; $\chi^2=6.520$; $p<0.02$ for NPs). There are no statistical differences across L2ers.

In written discourse, we have found no statistically significant differences in neither of the participant groups.

Overall, the preferred RE in the analyzed texts is overt pronouns for all language groups in spoken and written discourse. Importantly, however, the statistical results show, first the mode of production affects the selection of REs in the intermediate, advanced and native groups. This means there is a preference for overt pronouns when 3 antecedents in their spoken texts, as in (153), but this tendency decreases in their written texts, where there is an increase of null and NPs as in, (154). Importantly, no mode effect was found for the the beginner. Second, in the spoken mode there are differences between the native speakers and the beginner and intermediate groups on the selection of NPs, where NPs are a choice for the beginner and intermediate learners, natives do not select NPs for 3 antecedents in their spoken narratives. However, there are no statistical differences between the advanced and native groups revealing a native-like behaviour with 3 antecedents on the selection of the REs in the advanced spoken texts. Finally, in the written mode no differences are found between the native speakers and L2ers, where a native-like behaviour is revealed across all the proficiency groups.

(153) The lady_i catches him_j as she_i realize that the baby_k was put back inside the baby carriage/ she_i hit him_j with an umbrella/ (...) (ES_SP_B2_24_19_14_MABG)

(154) Later on, the man_i gave the baby_j to another older man_k who put the baby_j back into the same woman's stroller. The main man_i happened to walk by and the woman_l freaked out and got mad again. (EN_WR_20_14_SM)

7.4.3. Protagonisthood

The results here address RQ3c (See 5.3). In this section we examine whether there is an effect of mode associated with the factor of protagonisthood in context of topic continuity (See 6.4.4). The production of REs is shown for Charles Chaplin, the lady and the old man, in this order. The results for the baby and the policeman are not presented due to the low frequency of references to these two characters in subject position.

7.4.3.1. Selection of REs for Charles Chaplin

Figure 73 and Figure 74 show the selection of REs for the main protagonist, Charles Chaplin, across proficiency levels in both spoken and written texts.

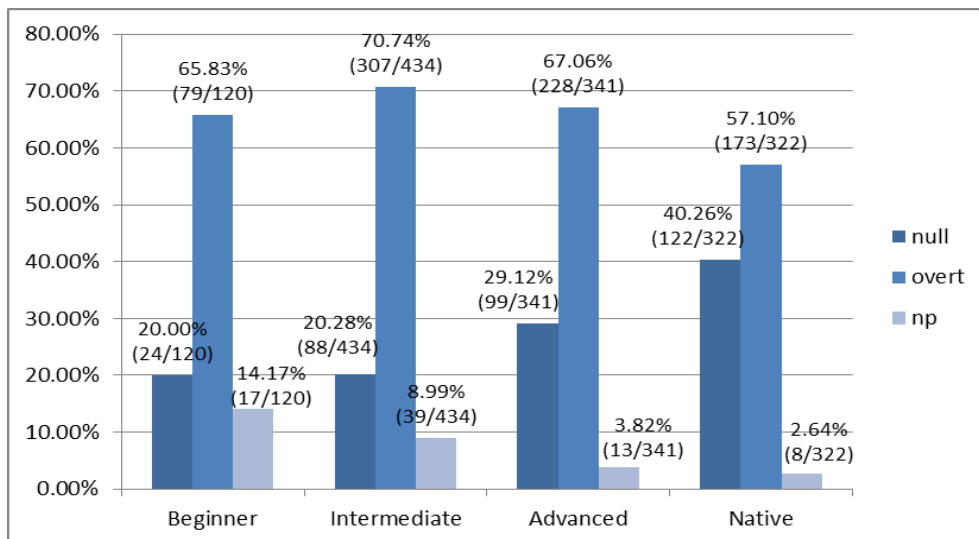


Figure 73. REs used for Charles Chaplin in the spoken texts.

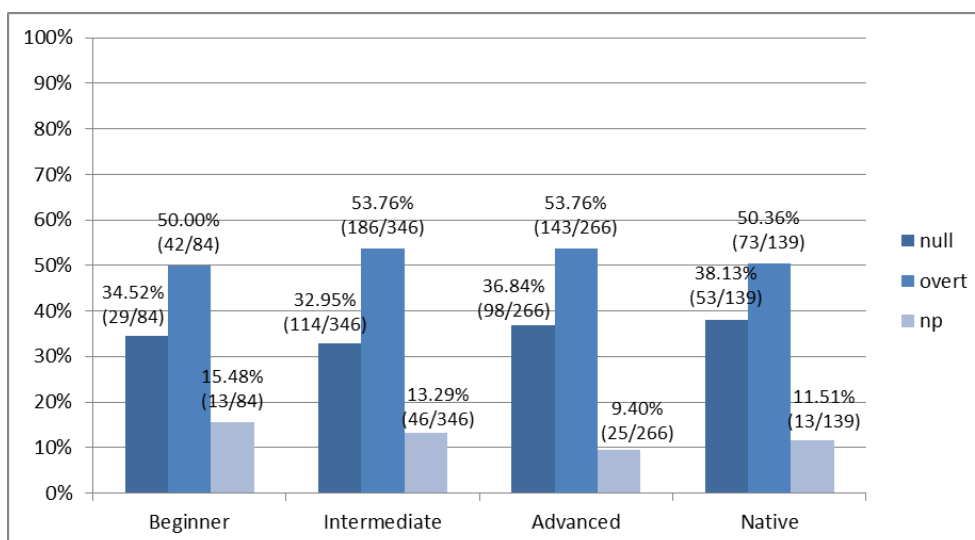


Figure 74. REs used for Charles Chaplin across proficiency levels in the written texts.

Figure 73 and Figure 74 show that overt pronouns are by far preferred by the L2ers and the native speakers both in their spoken and written texts. However, the distribution of zeros and pronouns shows several differences across language groups and modes of production. First, in the spoken mode, learners show a marked preference for pronouns (Beginner: 65.83 %; Intermediate: 70.74%; and Advanced: 67.06%). By contrast, native speakers show a similar distribution of zeros and pronouns, giving preference for zeros (57.10%). Second, in written mode, overt pronouns are the preferred REs by L2ers and native speakers, although the preference is not as marked as in the spoken mode. Finally, the choice of NPs across the learner and native's groups is more marked in the written texts (Beginner: 15.48%; Intermediate: 13.29%; Advanced: 9.40%; Native: 11.51%) than in the spoken texts (Beginner: 14.17%; Intermediate: 8.99%; Advanced: 3.82%; Native: 2.34%). The L2ers' amount of NPs decreases as proficiency level increases both in the spoken and written discourse. The statistical results show that the mode of production affects the selection of REs across all proficiency groups.

Across modes of production, we have found statistically significant differences for all the proficiency language group: beginner group ($\chi^2=5.420$, $p<0.02$ for zero; $\chi^2=5.133$, $p<0.05$ for overt pronouns); the intermediate group ($\chi^2=16.108$, $p<0.02$ for zero; $\chi^2=23.868$, $p<0.2$ for overt pronouns); the advanced group ($\chi^2=4.158$, $p<0.05$ for zero; $\chi^2=11.302$, $p<0.02$ for overt pronouns; $\chi^2=7.946$, $p<0.02$ for NPs) and the native group ($\chi^2=13.652$, $p<0.02$ for NPs).

In spoken discourse, there are statistically significant differences between the native speakers and all L2er groups: the beginner group ($\chi^2=15.616$, $p<0.02$ for zero; $\chi^2=20.537$, $p<0.02$ for NPs); the intermediate group ($\chi^2=34.986$, $p<0.02$ for zero; $\chi^2=14.620$, $p<0.02$ for overt pronouns; $\chi^2=12.035$, $p<0.02$ for NPs); and the advanced group ($\chi^2=8.979$, $p<0.02$ for zero; $\chi^2=6.922$, $p<0.02$ for overt pronouns). There are significant differences between the beginner group and

the advanced group ($\chi^2=15.642$, $p<0.02$ for *NPs*) and between the intermediate and advanced groups ($\chi^2=7.997$, $p<0.02$ for *zero*; $\chi^2=8.166$, $p<0.02$ for *NPs*).

In written discourse, there are no statistically significant differences between the native speakers and the L2ers or across the different groups of learners.

These results regarding the selection of RE for the main character in topic show that L2ers and native speakers produced mostly overt pronouns, both in the spoken and the written mode. Additionally, however, the statistical results show that the mode of production affects all the proficiency levels. When comparing the two modes of production, we observe that in the written mode, natives, intermediates, and advanced learners use more NPs in their written production, as in (155) than in their spoken production, where they tend to use overt pronouns, as in (156) to refer to Charles Chaplin in their narratives. However, this is not seen in the beginners. Beginners do not show differences in the use of NPs between their written and spoken performance. Second, in the spoken mode, there are differences between the natives and all groups of learners, where we observe a higher preference for overt pronouns when referring to Charles Chaplin by learners, where this tendency is not so marked in the natives' narratives suggesting overexplicitness in all the learners' spoken narratives and no native-like behaviour. Finally, in the written mode, no statistical differences were found between the learners and natives, where the preference for overt pronouns followed by null and NPs is similar. This reveals a native-like behaviour in their written narratives.

(155) / so Chaplin_i takes the baby_j again/ when he's about to drop the baby_j where he_i found him, uh / he_i bumps into an officer_k so he_i decides to take the baby_j again with him/ then he_i finds hhh a old man_l walking y so (...) (ES_C1_SP_23_18_14_JHS)

(156) Eventually, after several attempts at getting rid of the child, the man_i sits down with the baby_j and finds a note saying the child_j is an orphan and to please love and care him/her. The man_i takes the baby_k with him as he_i happily walks away. (EN_WR_20_14_CP)

7.4.3.2. Selection of REs for the lady

Figure 75 and Figure 76 show the selection of REs for the lady across proficiency levels in both in spoken and written texts.

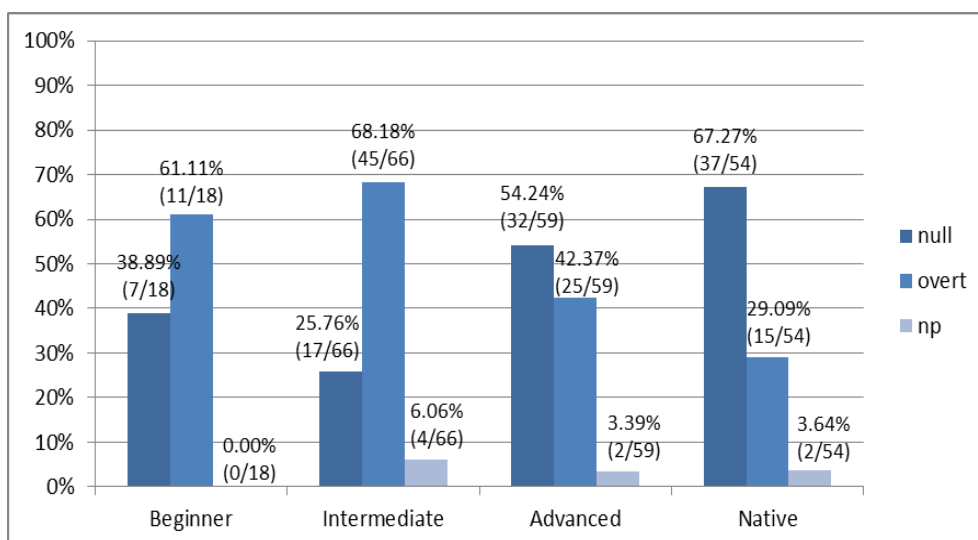


Figure 75. REs to the lady in the spoken texts.

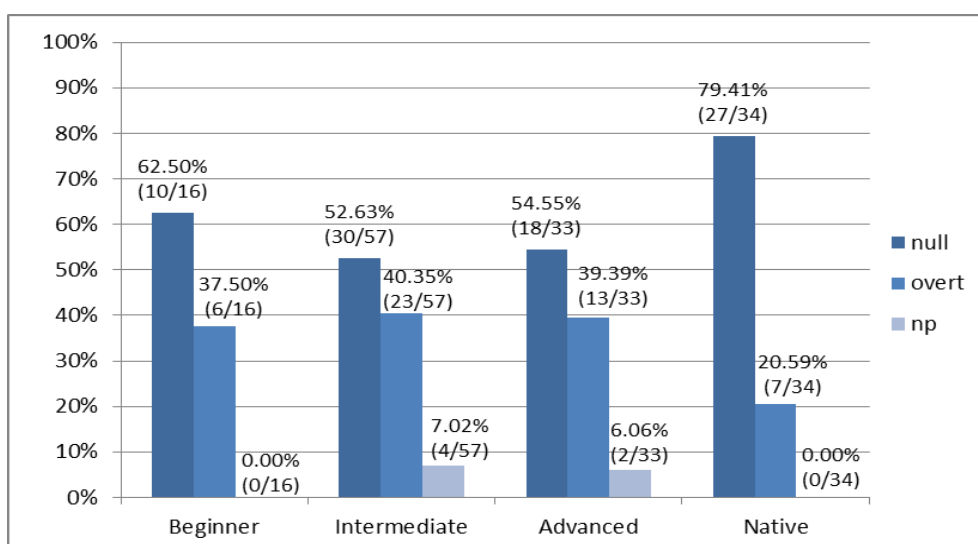


Figure 76. REs to the lady in the written texts.

As for the lady character, Figure 75 and Figure 76 show that the frequencies are much lower than the frequencies found for Charles Chaplin. As for the REs, the results show differences across the proficiency levels. First, in the spoken discourse, the beginner and intermediate groups show a preference for overt pronouns (Beginner: 61.11%; Intermediate: 68.18%). By contrast, the advanced and native groups prefer zero over overt pronouns in their spoken texts (Advanced: 54.24%, 42.37% and Native: 62.27%, 29.09%, respectively), in the case of the native group the use of zero is highly marked compared to the use of overt pronouns. Second, in the written discourse, L2ers and native speakers produce mainly zero (Beginner: 62.50%; Intermediate: 52.63%; Advanced: 54.55% and Native: 79.41%). Overt pronouns are also produced, but the percentages are considerably low in their written discourse (Beginner: 37.50%; Intermediate: 40.35%; Advanced: 39.39% and Native: 20.59%). Finally, native speakers'

and L2ers' amount of NPs decreases in the spoken discourse. Note that frequencies are low which affect specially the beginner group.

Across modes of production, there are statistically significant differences within the intermediate group ($\chi^2=9.356$, $p<0.02$ for zero; $\chi^2=9.583$, $p<0.02$ for overt pronouns). Statistical analysis does not yield a mode effect in the rest of the proficiency levels.

In spoken discourse, there are statistically significant differences between the natives and the beginner and intermediate groups: the beginner group ($\chi^2=4.987$, $p<0.05$ for null pronoun; $\chi^2=5.709$; $p<0.02$ for overt pronouns); and the intermediate group ($\chi^2=21.942$, $p<0.02$ for zero; $\chi^2=17.662$; $p<0.02$ for overt pronouns). There are also statistically significant differences across L2ers between the intermediate and advanced groups ($\chi^2=10.602$, $p<0.02$ for zero; $\chi^2=8.421$, $p<0.02$ for overt pronouns).

In the written discourse, there are statistically significant differences between the natives and the intermediate and advanced groups. The intermediate ($\chi^2=6.526$, $p<0.02$ for zero) and the advanced group ($\chi^2=4.695$, $p<0.05$ for zero). There are no statistically significant differences across the different groups of learners.

These results show that in contexts of topic continuity beginner and intermediate groups produced mostly overt pronouns in spoken texts, whereas native speakers and advanced tend to use more zeros than pronouns. Importantly, zeros are the preferred REs by native speakers and L2ers in their written texts. Statistical results show, first, that the mode of production only affects the selection of REs in the intermediate group given the preference for overt pronouns in the spoken mode. It seems that the intermediate group is more overexplicit in their spoken texts than in the written texts. Importantly, no effect of mode is found in the beginner, intermediate and native groups. Note that the low frequencies among the beginners might make the statistics unreliable, at least for this group.

Second, in the spoken mode, differences were found between the native speakers and beginner and intermediate groups, where the learners' preference when referring to the lady is by means of overt pronouns, as in (157), in contrast to native speakers whose preference when referring to the lady is by means of null pronouns. This reveals a native-like behaviour across the advanced group when referring to the lady. Finally, in the written mode, we found statistical differences for null pronouns between the native speakers and the intermediate and advanced groups: the native speakers markedly prefer zeros over overt pronouns while this preference is

no so marked in intermediates and the advanced learners. No native-like behaviour is found across the learners.

(157) a. / uh and then the woman_i sees Chaplin_j and **she**_i grabs him_j/ uh by his clothes. (ES_SP_B2_22_16_14_MBC).

b. Charlie_i walks out ont the street and **sees**_j Charlie_i and assumes_j that he_i put the baby_k in her stroller again. (EN_SP_20_14_TK)

7.4.3.3. Selection of REs for the old man

Figure 77 and Figure 78 show the selection of REs for the old man across proficiency levels in both spoken and written texts.

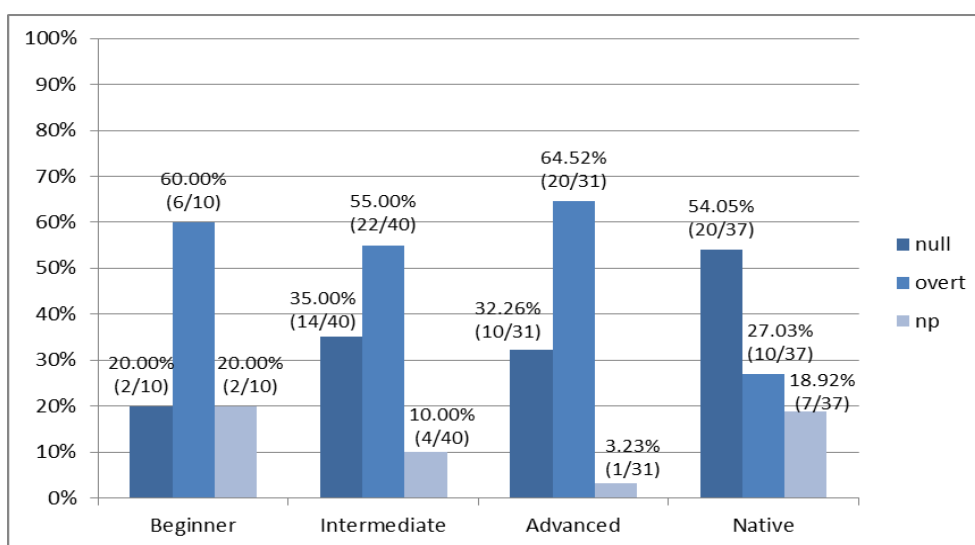


Figure 77. REs to the old man in the spoken texts.

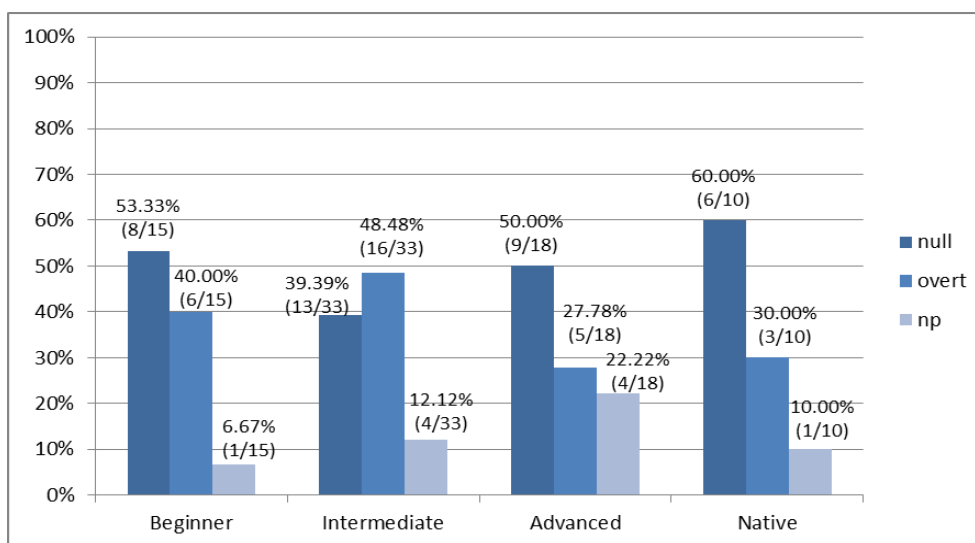


Figure 78. REs to the old man in the written texts

Figure 77 and Figure 78 show that the distribution of zeros and pronouns presents differences between native speakers and L2ers and modes of production. First, in the spoken discourse, L2ers show a marked preference for pronouns, to the extent that pronouns exceed zeros (Beginner 60% vs.20%; Intermediate 55% vs. 35%; Advanced 64.52% vs. 32.26%). By contrast, natives show a marked preference for zero than overt pronouns (54.05% vs. 27.03%). Second, in the written discourse, L2ers and native speakers produce mainly zero, except for the intermediate group. Finally, learners' amount of NPs increases in all proficiency groups; it is marked in their written texts. Finally, learners' amount of NPs decreases as their proficiency level increases in their spoken texts, while the use of NPs tends to increase as their proficiency level increases in their written texts. Note that the frequencies are low for "the old man," which could affect the reliability of the statistics.

Across modes of production, there are statistically significant differences within the advanced group ($\chi^2=6.151$, $p<0.02$ for overt pronouns; $\chi^2=4.485$, $p<0.05$ for NPs). Statistical analysis does not yield a mode effect in the rest of the proficiency levels.

In spoken discourse, there are statistically significant differences between the native speakers and the L2ers: the beginner group ($\chi^2=3.695$, $p<0.05$ for zero); the intermediate group ($\chi^2=5.760$, $p<0.02$ for overt pronouns) and the advanced group ($\chi^2=9.092$; $p<0.2$ for overt pronouns; $\chi^2=4.002$, $p<0.05$ for NPs). We have found no statistically significant differences across the language groups.

In written discourse, there are no statistically significant differences neither between the natives and the different groups of L2ers nor across the different groups of learners.

Results reveal interesting details as to the learners' and natives' selection of REs in their spoken and written narratives. Overall, L2ers produced mainly overt pronouns in spoken texts and zero in written texts, whereas native's tendency is the use of zeros in their spoken and written texts. Importantly, however, the statistical results show, first, that the mode of production affects the selection of REs in the advanced group with a high preference for overt pronouns in their spoken narratives and an increase of NPs in their written texts. Importantly, no effect of mode was found in the beginner, intermediate and native groups. Second, in the spoken mode, there are differences between the native speakers and the intermediate and advanced groups (but not the beginner group) due to the low frequencies, where learners tend to select overt pronouns to refer to the old man, as in (158). By contrast, natives' tendency to refer to the old man in

their spoken texts is null pronouns over overt pronouns. Thus, no native-like behaviour was revealed in the spoken mode when selecting REs to refer to the old man. Finally, in the written mode, there are no statistical differences between natives and learners where there is a tendency to prioritise zero over overt pronouns, with the exception of the intermediate group, where they show a slight preference for overt pronouns when referring to the old man in their written discourse. This reveals a native-like behaviour in the written mode across the learner groups, but it should remember that the frequencies are very low in some groups.

(158) a. / uh the old man_i/ uh/ finds out/what/uh Charles_j aims to do/ uh and he_i runs with the baby_k to give it_k back to him_j but he_i uh he doesn't found Charles_j. (ES_SP_C1_18_13_14_AGL)

b. /an the man_i does the same thing as Charlie_j and puts it_k into the stroller of the woman. (EN_SP_21_14_CO)

As for the summary of the selection of REs regarding protagonist hood: First, the results show that Charles Chaplin stands in the narratives as main character, as his frequencies are much higher than those for the lady and the old man, who in turn are considered minor characters. Both learner and native groups produce mainly overt pronouns followed by zero for Charles Chaplin in both spoken and written discourse. Results show a developmental trend in the intermediate and advanced groups in the written mode, although no native-like behaviour is revealed in the spoken discourse. By contrast, results show a native-like behaviour in the written discourse. Second, in relation to the lady there is a mode of effect in the beginners and intermediates producing predominantly overt pronouns in their spoken discourse and null pronouns in their written discourse. However, mode does not affect on the selection of RE in the advanced and native groups where their preference in both modes of production is for null pronouns. Finally, in relation to the old man in the spoken mode, learners produce mainly overt pronouns followed by null pronouns and NPs. In contrast, the native speakers produce mainly null pronouns followed by overt pronouns and NPs. In the written mode, all proficiency levels except for the intermediate produce mainly null pronouns followed by overt and NPs.

These results show that mode of production affects the selection of REs in relation to the secondary characters, but not when referring to the main character. Still the results for the secondary characters should be taken with caution given the low frequencies in some of the batches. Additionally, it is noteworthy that there are hardly any differences between groups in the written mode but significant differences in the spoken mode.

7.4.4. Scene

This section addresses RQ3d (see 5.3). We examine whether mode of production affects the the selection of REs in new scene, when marking topic continuity across proficiency levels and both in spoken and written discourse.

7.4.4.1. Distribution of REs used to mark a new scene

The change of scenes has been previously investigated in SLA, stating that the change of scene requires the reactivation of a referent at the beginning of the new scene, which often leads to the choice of REs with a higher information load, i.e. lower accessibility and therefore fuller (cf. Clancy 1980; Van Dijk 1981; Marslen-Wilson et al. 1982; Givón 1983; Ariel 1990; Vonk et al. 1992; Van Vliet 2008).

Figure 79 and Figure 80 show the selection of REs in a new scene across proficiency levels in both spoken and written texts.

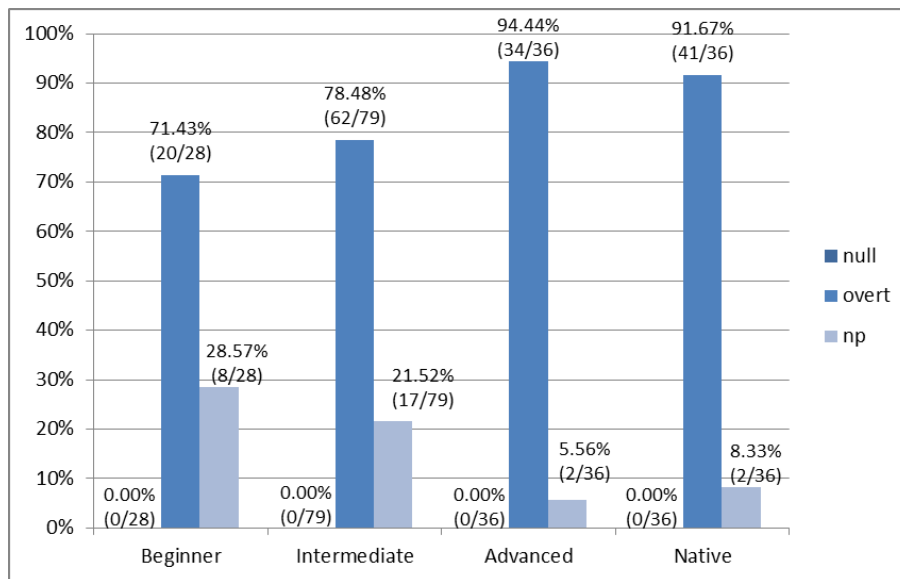


Figure 79. REs in a new scene in the spoken texts.

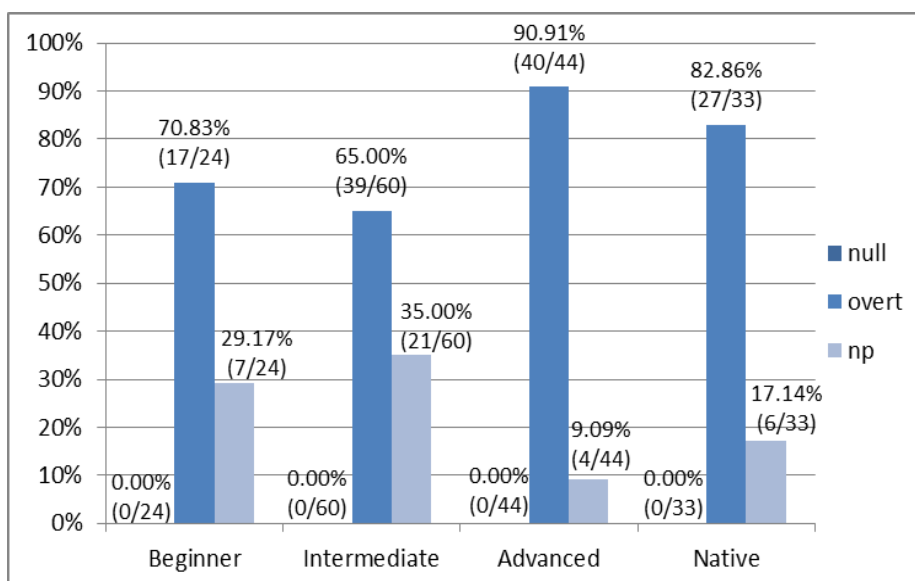


Figure 80. REs in a new scene in the written texts.

Figure 79 and Figure 80 show that overall the preferred RE in the analyzed texts are overt pronouns both in spoken and written discourse. This is the case for all language groups in spoken texts (beginner: 71.43%; Intermediates: 78.48%; Advanced: 94.44%; Natives: 95.35%) and in written texts (Beginner: 70.83%; Intermediates: 65%; Advanced: 90.91%; Natives: 82.86%). As with natives, NPS rates in L2ers decreased as proficiency level increased in the spoken discourse, whereas the presence of NPs in natives and L2ers is higher in the written discourse, with the exception of the advanced group.

Across modes of production, we have found no statistically significant differences across proficiency levels.

In spoken discourse, there are statistically significant differences between the native speakers and the beginner group ($\chi^2=4.532$, $p<0.05$ for *overt pronouns and NPs*). There are also statistically significant differences across the language groups between the beginner and advanced groups ($\chi^2=6.329$, $p<0.02$ for *overt pronouns*; $\chi^2=6.329$; $p<0.2$ for *NPs*); and between the intermediate and advanced groups ($\chi^2=4.569$, $p<0.05$ for *overt pronouns*; $\chi^2=4.569$; $p<0.5$ for *NPs*).

In the written discourse, we have found no statistically significant differences between the natives and L2ers. There are statistically significant differences between the beginner and advanced groups ($\chi^2=4.616$, $p<0.05$ for *overt pronouns* and for *NPs*); and between the intermediate and advanced groups ($\chi^2=9.332$, $p<0.02$ for *overt pronouns* and *NPs*).

These results reveal that in contexts of topic continuity when there is a new scene, native speakers and L2ers produced mostly overt pronouns in both spoken and written texts. However,

the statistical results show, first, that mode of production does not affect the distribution of REs in a new scene. In topic continuity contexts the change of scenes produces mainly overt pronouns and NPs (fuller forms), both in natives and L2ers. Second, in the spoken mode, there are differences between the native speakers and the beginner group. Results show that natives use mainly overt pronouns when a new scene is introduced (159), while beginners use a high percentage of NPs (160). There are also differences between the beginner and advanced and intermediate and advanced for NPs. Still, native-like behaviour is revealed in the advanced spoken narratives. Finally, in the written discourse, on the other hand, there are no differences between natives and learners but there are differences across proficiency levels between the beginners and advanced, where there is a significant differences on the selection of overt pronouns in the advanced group as in (161) when a new scenes is introduce, and intermediate and advanced, where there is a significant differences on the selection of NPs by the intermediate when introducing a new scenes as in (162). Importantly, native-like performance is revealed in the written narratives on the selection of REs in a new scene.

(159) /he_i took the the boy_j 'n' go away/hhh uh/after that uh **Chaplin**_i saw saw uh another man_k/uh another men/ 'n' hhh uh hhh she/he_i he give/gave/ this this boy_j uh to/to him_k/uh this this man. (ES_SP_A2_61_6_14_YY)

(160) /and he_i picks up this baby_j and intents_i to find the mother_k and he_i finds a woman_i with a baby stroller puts the baby_j inside and the woman_i stops him_i because it_j is not her. (ES_SP_20_14_EES)

(161) Chaplin_i thinks that the baby_j is likely to belong to that woman_k so he_i puts the baby_j on the carriage but the woman_k gets angry and she_k tell him_i that the baby_j is not hers. **Chaplin**_i comes back to the street and he_i leaves the baby_j again on the floor. (ES_WR_B2_21_13_14_AMO)

(162) Chaplin_i leaves the baby_j where he_i had found him_j, but a policeman_k appears and he_i sees himself forced to take the baby_j again. Then, **he**_i tries to get rid of him_j again by giving the baby_j to a man_k, who leaves the baby_k in the baby carriage of the same woman_i. (ES_WR_18_12_14_LBT)

Chapter 8. General discussion

This section discusses the results in this dissertation presented above (cf. Chapter 7)) and answers the research questions addressed above (cf. Chapter 5). The discussion shows first the possible effect of mode within group in the RQs presented in Chapter 5 and then, the possible effect of mode across proficiency groups in spoken and written narratives. Each section will examine the findings in relation to the specific RQ outlined in Chapter 5 and offer a general discussion of these results.

8.1 Discourse configuration and the selection of REs in topic continuity

8.1.1 Discourse configuration

This section addresses our RQ1, in Chapter 5 (c.f. 5.1 *RQ1a*), which looked at possible mode effects on the discourse configuration of the narratives across L1 Spanish-L2 English vs. L1 English discourse. Results showed, first, that over 50% of the discourse contexts in the analyzed texts are topic continuity contexts, consistent across all language groups and modes, supporting our hypothesis and aligning with claims found in L1 spoken English literature. Importantly, these results do not confirm our H1a, where we hypothesized there was not effect of mode in the preferred discourse configuration of the participants' texts, in line with L1 literature (cf. Dubois, 1987; Givón, 1983; Givón, 2001; Leclercq & Lennart, 2013). Our assumptions were taking from the spoken discourse but our study on written discourse shows that although topic continuity is the preferred discourse configuration both written and spoken narratives, we have found significant differences if written and spoken language are contrasted. The statistical analysis revealed a mode of effect on the preference of discourse configuration by L1, with a higher frequency of new topic introductions in written discourse, possibly aligning with the notion that written texts tend to be more elaborate and detailed (Givón, 2001), and high preference for topic continuity in their spoken narratives. For L2ers, the mode of production does not show significant differences, suggesting similar discourse strategies across both modes. The observed differences in spoken discourse between beginners and more advanced learners indicate a developmental trend in acquiring topic continuity discourse preferences. At the advanced level, learners exhibit native-like proficiency in spoken discourse, supporting the idea that proficiency

development improves the discourse configuration to maintain the topic. In the spoken mode, we observed a clear developmental trend in learners' acquisition of discourse skills. Topic continuity is the preferred discourse context across all groups, with an increase in preference as proficiency increases. The introduction of new topics is higher among beginners than among intermediates, advanced learners, and natives. This suggests a gradual acquisition of the ability to maintain topic continuity, with advanced learners exhibiting similar patterns to native speakers, and indicating a developmental trend where learners gradually acquire the ability to maintain topic continuity. In the written mode, we found that topic continuity remains the consistently preferred discourse context across all learner groups. New topic introduction is higher among beginners compared to other proficiency levels, but the differences are less pronounced than in spoken texts. The differences between learners and native speakers are minimal in written texts, indicating that learners achieve native-like performance more easily in written discourse. This suggests that the written mode allows for more controlled and reflective discourse management, facilitating learners' acquisition of native-like performance. The minimal differences between native speakers and learners in written discourse suggest that learners show native-like writing performance earlier than in speaking, possibly due to the more reflective nature of writing (see 4.2). These findings underscore the importance of considering both modes of production and proficiency levels in understanding discourse practices in L2 acquisition. They suggest that while learners may initially struggle with maintaining the topic in spoken discourse, they eventually achieve native-like proficiency, particularly in written narratives.

8.1.2 Selection of REs in topic continuity

This section addresses our RQ1b, in Chapter 5 (c.f. 5.1 *RQ1b*), which looked at possible mode effects on the selection of REs across L1 Spanish-L2 English vs. L1 English discourse. Results for the selection of REs in topic continuity above confirm our hypothesis for all the proficiency groups, for which mode differences affect the selection of REs. Importantly, the mode of production significantly, affects the selection of REs across L2ers, with spoken narratives containing more overt pronouns compared to written ones and natives increasing the selection of NPs in their written texts

In the spoken mode, results indicate differences between native speakers and all learner groups, suggesting deficits in the learners' selection of REs in their spoken narratives, indicating no native-like behaviour for any of the groups. Overall, we observed that L2ers tend to prefer overt pronouns over null pronouns compared to native speakers in line with previous corpus studies

(Crosthwaite, 2011; Hendriks, 2003; Leclercq & Lennart, 2013; Ryan, 2015). As for native speakers, there is more balanced distribution between overt and null pronouns in their spoken narratives. Results also show differences between proficiency groups: first, Beginner learners differ significantly from both intermediate and advanced groups, particularly in their higher use of overt pronouns and NPs in written narratives. Second, intermediate learners also differ from advanced learners, with the intermediate group using more overt pronouns and NPs than advanced in their spoken narratives.

In the written mode, statistically significant differences are observed between natives and intermediate groups with natives selecting more null pronouns than intermediates. These results indicate a no native-like behaviour but show a developmental trend in the advanced group.

Results on the selection of REs in topic continuity confirm our expectations suggested in H1bc, where an effect for all proficiency groups was expected. The study reveals distinct patterns on the selection of REs between learners and native speakers in spoken and written narratives. The study reveals differences on the selection of REs between learners and native speakers in spoken and written narratives. Native speakers prefer overt pronouns in spoken discourse but switch to null pronouns in written texts. In contrast, second language learners consistently favour overt pronouns in both modes, highlighting a non-native-like pattern in their RE selection. Importantly, the mode of production significantly impacts RE use across all proficiency levels. Learners are likelier to use overt pronouns in their spoken narratives, while native speakers increase their use of NPs in written texts. This difference suggests that learners have not yet developed native-like strategies, particularly in spoken discourse, where they tend to overproduce overt pronouns, leading to redundancy. Statistically significant differences are also observed between proficiency levels. Beginners use more overt pronouns and NPs in their written texts than intermediate learners, who similarly show higher usage than advanced learners. In written discourse, native speakers favour null pronouns more than intermediate learners, further distinguishing the RE selection patterns between these groups.

8.2 Syntactic context: coordination

This section addresses the set of RQs stated in our research questions section in Chapter 2 (see 5.2 RQ2), where we explore the nature of coordination and if the possibilities for using zero anaphors was consistent across both modes and across proficiency levels in topic continuity

syntactic coordination. This RQ2 had three parts: RQ2a looked at the incidence of syntactic coordination in topic continuity, RQ2b at the properties of syntactic coordination and finally, RQ2c at the selection of REs in topic continuity syntactic coordination.

8.2.1 The presence of coordination in narrative texts

This section addresses RQ2a posed in syntactic context coordination research questions in chapter 5 (see RQ2a). In this RQ we looked at whether the mode of production could affect the incidence of coordination in topic continuity narrative texts by L1 Spanish-L2 English and native speakers. According to previous studies (Quesada & Lozano, 2020; Leclercq & Lennart, 2013) and also in line with (Ryan, 2015 p. 832) we expected coordination to be combined with topic continuity across proficiency groups, regardless of the mode of production, as a discourse-syntactic device fostering discourse cohesion. Results partly confirmed our hypothesis as coordination was the syntactic device in combination with topic continuity preferred by all proficiency groups in spoken and written texts. However, our results did not confirm the lack of a mode effect on the incidence of topic continuity syntactic coordination. Importantly, the mode of production significantly affects the amount of syntactic configurations used by native speakers and L2ers. For native speakers, there is a significant preference for coordination in spoken discourse compared to written discourse, where they use a more balanced mix of coordinate and non-coordinate clauses in line with previous research, where coordinate clauses were abundant in the spoken discourse (Beaman, 1984; Crystal, 1995). As to L2 learners, the mode effect reveals distinct patterns: beginners show a higher frequency of non-coordinate clauses compared to their written discourse, indicating challenges in managing syntactic complexity in real-time conversation. This may be due to a lesser presence of coordination in their spoken discourse, which makes the sequence of events in the narration more discrete and markedly more discontinuous. Ultimately, their spoken discourse lacks the cohesion we see at later stages, especially in native speakers (Oh, 2006, p.832). However, intermediate learners demonstrate a developing proficiency in utilizing complex syntactic structures across different contexts, showing a preference for coordinate clauses in both spoken and written modes. Advanced learners prefer coordinate clauses in spoken discourse while favouring non-coordinate clauses in written discourse. This shift suggests that advanced learners adapt their syntactic strategies based on the mode of communication. Overall, these results illustrate that the mode of production affects syntactic choices in native and L2 learners' texts. The spoken discourse strongly prefers coordination due to its real-time and dynamic nature, with L2 learners showing developmental patterns from beginners to advanced levels. In written discourse, syntactic structures are more consistent across proficiency levels, indicating that written

communication supports a more balanced and constant combination of coordination and non-coordination.

When examining the results in the spoken mode, these highlight that native speakers employ coordination more extensively than L2 learners at any level. This indicates that coordination is a trademark of native fluency in spoken discourse (Beaman, 1984), and learner's exhibit developmental progress towards this native-like coordination as they advance in proficiency. Specifically, beginner learners use non-coordinate clauses more frequently than their advanced and intermediate groups, who begin to mirror the native preference for coordination as they progress. In contrast, the written mode reveals a reassuringly consistent use of coordination across proficiency levels. The intermediate, advanced and native groups all show a balanced approach to coordination vs. non-coordination in written texts. This balance suggests that learners are making steady progress, with only a slight tendency for advanced learners to prefer non-coordinate clauses. The beginner group, however, shows a marginally higher incidence of non-coordinate clauses in writing, though this difference is not as pronounced as in the spoken mode. The absence of significant differences between native and L2 learners in written discourse suggests that, unlike spoken discourse, written discourse achieves a level of syntactic coordination that is relatively consistent across the different proficiency levels. This indicates that learners achieve native-like behavior in their written texts. These results contrast with Ryan's (2015) results. Ryan (2015) found no differences in the distribution of the discourse context across the learners' and natives' spoken narratives in his study. The fact we examine three proficiency levels (beginner, intermediate and advanced), in comparison Ryan's (2015, p. 834) L2 English participants were described as high proficiency level (at least B2 level), may explain the diverging results for these results. In contrast, in our study native like behaviour is found in the intermediates' written narratives in line with Díaz-Negrillo & Espínola Rosillo (2024, p. 11). Therefore, the predictions were not confirmed and an effect of mode on topic continuity syntactic coordination across all proficiency groups was revealed.

8.2.2 Properties of coordination

This section addresses RQ2b presented in Chapter 5 (c.f. RQ2b). In this RQ we investigated whether the mode of production could affect the different properties of syntactic coordination in topic continuity, i.e. chains of coordination, coordinators and intervening subordination across L2 English learners vs. L1 English discourse. We anticipated mode effects on chains of

coordination across all proficiency levels, expecting them to be more prevalent in spoken discourse, consistent with findings by previous literature. Regarding coordinators, we predicted a preference for "and" coordinator in both spoken and written narratives. We anticipate no mode effects in L1 English, whereas we predict mode effects in L2 English, with deficits becoming more pronounced, particularly in spoken production. As to intervening subordination, we do not expect a mode effect on intervening subordination in topic continuity syntactic coordination contexts of the narratives across the different proficiency groups in their spoken and written narratives.

Results above, confirmed our expectations in H2b about a mode effect on chains of coordination across all proficiency levels, with spoken discourse showing a higher prevalence of coordination chains. This finding aligns with previous studies (Beaman, 1984; Miller & Weinert, 2015; Atkas & Steder, 2022) and can be attributed to the natural flow and spontaneous nature of speech. Unlike written language, which allows for extensive planning and editing, spoken language requires speakers to construct sentences as they speak. The results demonstrate that a 2-clause chain of coordinate clauses is standard across all spoken and written discourse language groups. However, the mode of production affects the length of these chains. Among intermediate and advanced learners, 2-clause chains are more prevalent in spoken texts than in written ones. This suggests that while learners at these proficiency levels can manage essential coordination in both modes, the spontaneity of spoken discourse results in shorter coordination chains possibly due to the immediate processing demands. As to native speakers, on the other hand, exhibit longer chains of coordination (three or more clauses) in spoken texts. This indicates that native speakers are more adept at handling the syntactic complexity and cognitive load required for extended coordination in real-time speech. The fact that intermediate and advanced learners do not significantly produce longer chains in spoken discourse underscores their ongoing development in mastering the the continuous nature and characteristic cohesion of speech, which is largely achieved by the extensive use of syntactic coordination.

In the spoken mode, statistical differences between the native speakers and the L2 learners are evident, particularly in the length of coordination chains. The native speakers produce longer coordination chains in their narratives than L2 learners. This finding suggests that L2 learners do not exhibit native-like behaviour in spontaneous spoken discourse. The ability to generate longer chains of coordination indicates a more advanced syntactic proficiency, shown by the native speakers. The spontaneity and immediacy of spoken discourse require speakers to manage syntactic complexity in real-time. L2 learners, particularly at lower proficiency levels, need help maintaining such close-knit connection of events under spontaneous production

pressure, leading to shorter coordination chains and hence higher discreteness in the presentation of events in their spoken discourse. However, the distribution of 2-clause and 3-clause chains in the advanced group shows similarities to native speakers' patterns. Advanced learners are starting to approach native-like syntactic behaviour, especially in handling 2-clause and 3-clause structures, reflecting their developing proficiency. While they have not fully reached native levels, their progress shows significant improvement in producing more complex syntactic structures as their proficiency increases.

In the written mode, the absence of significant differences between native and L2 learners suggests that written discourse allows learners to achieve a syntactic performance closer to native speakers'. The opportunity for planning and revision in writing helps learners manage syntactic structures more effectively, resulting in a native-like use of coordination for 2- and 3-clause chains. This consistency across proficiency levels in written discourse demonstrates that learners can meet the syntactic demands of writing, unlike those of the more challenging spoken mode.

In conclusion, the mode of production plays a crucial role in syntactic coordination. Spoken discourse demands syntactic choices whereby the events in the narrative can be closely linked together; their sequentiality is highly fostered, and, as a result, they can be presented in the discourse faster after each other. The latter, leads to a higher prevalence of longer coordination chains among native speakers' spoken texts but highlights developmental gaps among L2 learners. In contrast, with its allowance for planning and revision and a substantially different syntax and manner to achieve cohesion, the written discourse enables learners to achieve native-like syntactic coordination.

As to the type of coordinators, the results show, that "and" is overwhelmingly the preferred coordinator in both spoken and written discourse. Interestingly, "or" was not used by any participant in either mode. This aligns with the English language norms, where "and" is frequently used to link ideas clearly and straightforwardly (Beaman, 1984; Chafe, 1987). However, there are notable differences in the use of coordinators across different groups and modes of production, which confirm our hypothesis in H2b. Firstly, the mode of production affects the coordinators' choice in both the beginner and native groups. In their written texts, both groups exhibit a high preference for "and," which is expected given the structured and edited nature of writing that favours explicit connectors for clarity. In spoken texts, however,

there is an increased use of "no-coordinator" constructions. This shift is due to the faster flow of speech, where speakers often rely on juxtaposition to connect ideas. Juxtaposition involves placing clauses or phrases following each other without explicit connectors, relying on context and intonation to mark syntactic relationships. Secondly, in spoken discourse, there are significant differences between learners and native speakers. Native speakers demonstrate a lower preference for "and" and a higher preference for "no-coordinator" constructions compared to learners. This higher use of "no-coordinator" constructions indicates native speakers' comfort with implicit connections typical of natural spoken discourse. They often use juxtaposition to maintain fluency and coherence without explicitly linking every clause, a skill reflected in their ability to produce longer chains of clauses where relationships are understood through their sequential placement and conversational flow (Beaman, 1984; Biber et al., 1999; Halliday & Matthiessen, 2014; Miller & Weinert, 1998). In contrast, learners tend to rely more heavily on "and" in their spoken narratives. Using "and" helps them maintain clarity and coherence in their speech, compensating for their developing proficiency.

In written discourse, results show no significant differences between learners and native speakers when using coordinators. This indicates that learners achieve native-like syntactic behaviour in writing, where they can plan and revise their use of coordinators. The consistent use of "and" across all proficiency levels in written texts demonstrates that learners can meet the syntactic demands of writing, aligning with native norms.

Finally, this section discusses the results on the effect of mode on intervening subordination in topic continuity syntactic coordination contexts within L1 Spanish-L2 English vs. L1 English. We anticipated no mode effects across all the proficiency groups. Results confirm our expectations no significant differences across different proficiency levels were found, indicating that learners show a native-like performance in this aspect of their narratives. Specifically, there is no significant variation in intervening subordination and co-referentiality between the subjects of coordinate clauses in spoken and written texts across proficiency levels. This finding suggests that all participants, regardless of proficiency level or mode of production, consistently prefer minimal intervening subordination in topic continuity syntactic coordination contexts. While there is an evident trend where co-referentiality increases from intermediate learners to native speakers, this trend does not reach statistical significance, reinforcing that the presence or absence of intervening clauses is similarly managed across all groups.

Additionally, our results confirm partially our hypothesis H2b, where we did not expect an effect of mode on the co-referentiality of the grammatical subjects of the subordinate clauses with those of the coordinate clauses in both spoken and written. First, our results show that in L2

English, the grammatical subjects of subordinate clauses tend to be co-referential with those of the coordinate clauses in both spoken and written modes. This contrasts with L1 English, where spoken discourse exhibits less frequent co-referentiality than written discourse, reflecting a more implicit and context-dependent approach to topic continuity in spoken discourse. The consistent use of co-referential subjects across all L2ers proficiency levels and the lack of significant differences between the L1 and L2 groups suggest that learners' ability to manage intervening subordination and maintain topic continuity in narratives, achieves a level of native-like behaviour, particularly in written texts. Therefore, the absence of significant mode effects indicates that, across both spoken and written modes, the syntactic strategies employed for topic continuity are comparable among all proficiency groups, affirming that learners' performance in these contexts is effectively aligned with native speaker norms.

8.2.3 Selection of REs in topic continuity syntactic coordination

This section addresses RQ2c within syntactic context coordination research questions in Chapter 5 (c.f. 5.2c). In this RQ looked at possible mode effects on the selection of REs in two particular syntactic-discursive contexts: first we examined topic continuity syntactic coordination context and then the selection of REs in context of distant coreference. For the former, we expected no effect of mode in L1 on the selection of REs, which is according to what has been found in L1 literature on RE selection and also for other native languages. For L2 English, we expected an effect of mode, considering previous studies in RE selection exploring written or spoken production. For the latter, we expected no effect of mode on the selection of REs in L1, while mode effects were predicted in L2ers with deficit more prominent in the spoken mode of production. However, mode effects in these contexts are unexplored.

Results for topic continuity syntactic coordination above confirm our hypothesis for L1 English, for which mode differences do not affect the selection of REs. These findings are in line with previous research findings for other native languages (Bel et al., 2010 for L1 Catalan acquisition; Perales & Portillo, 2007 for Spanish; Ngo et al., 2019 for Vietnamese; however, Christensen, 2000 for Chinese), where zeros are the preferred REs both in the natives' written and spoken narratives. Importantly, no previous evidence for L1 English was available before this study, so the research results should be considered a relevant contribution. Overall, the preference for null pronouns in this particular syntactic context is in consonant with previous research on L1 English as control groups to L2 English on either written or spoken performance (Quesada &

Lozano, 2020, pp. 15-16; Leclercq & Lennart, 2013, p. 14, respectively). Additionally, results concord with L1 literature statements where zeros are described as a device enhancing cohesion (Ariel, 1988; Díaz-Negrillo & Espínola Rosillo, 2024; Givón, 1983).

Importantly, results confirm mode effects in intermediate and advanced' narratives, which select fuller forms in their spoken narratives than in their written narratives in line with Díaz-Negrillo & Espínola Rosillo (2024, p. 9).

Importantly, deficits are found in the intermediates' spoken and written production, selecting a higher amount of overt pronouns than the natives in their spoken discourse in line with Díaz-Negrillo & Espínola Rosillo (2024). However, it differs from it in that in their study, advanced learner show native-like behaviour in their written narratives. Notably, the results show that learners gradually become aware that zero is the target choice in topic continuity syntactic coordination in the written narratives. Still, native-like performance is not revealed. In written advanced selection of overt pronouns is still significantly higher than in written L1 English. Importantly, the differences between Díaz-Negrillo & Espínola Rosillo (2024) may be explained in terms of number of participants. The developmental trend found in the written mode is in line with Quesada & Lozano (2020), a study of written narratives where advanced learners select fewer zeros and do not show native-like behaviour.

In the spoken mode, results indicate differences between native speakers and all learner groups, suggesting deficits in the learners' selection of REs in their spoken narratives, indicating no native-like behaviour for any of the groups. However, the distribution of null pronouns increases and the use of overt pronouns decreases in the advanced group, showing a developmental trend in their spoken narratives. Crucially, the intermediate group shows signs of redundancy in their spoken mode, overproducing mainly overt pronouns, which confirms previous research.

In the written mode, statistically significant differences are observed between natives and all learner groups. Although there is a general tendency to use null pronouns across all proficiency groups, L2 learners do not use null pronouns to the same extent as native speakers. A high number of overt pronouns are observed in learners' written narratives compared to the selection of overt pronouns by native speakers. These results indicate a no native-like behaviour but show a developmental trend in the advanced group.

Results in discontinuous syntactic coordination confirm our expectations suggested in H2c, where no effects for L1 Speakers was expected. However, we expected an effect of mode for L2 learners with greater deficits in their spoken discourse but our results show that mode affects

only to the intermediate group which tend to select a great amount of overt pronouns in their spoken discourse in comparison to their written discourse. Note that the frequency of REs in discontinuous syntactic coordination is lower than in previous contexts due to fewer instances of discontinuous coordination.

In spoken discourse, differences are observed between native speakers and intermediate and advanced learners for zeros and overt pronouns. Intermediate learners' production of overt pronouns is significantly higher than native speakers. Additionally, there are differences between intermediate and advanced learners, with intermediates showing a significantly higher preference for overt pronouns in their spoken narratives. Although there are statistical differences between native and advanced groups, indicating non-native-like behaviour for advanced learners, a developmental trend is observed with an increase in null pronouns and a decrease in overt pronouns in advanced learners' narratives.

No differences are found in written discourse between natives and learners; all proficiency groups show a preference for zeros, revealing native-like behaviour across all proficiency groups in written narratives.

Regarding topic continuity syntactic coordination in contexts of distant co-reference, results confirm our hypothesis in H2c, where no effect for L1 speakers was expected. However, we hypothesized the effect of mode on L2ers, especially in their spoken discourse. Results show that mode affects only the intermediate group, whose preference is the selection of overt pronouns in their spoken discourse and zeros in their written discourse. No mode effect was found for the beginner or advanced groups.

In spoken discourse, significant differences are found between native speakers and intermediate learners for zeros and overt pronouns. Intermediate learners' production of overt pronouns is significantly higher than native speakers, which has a noticeable impact on the discourse. Additionally, there are differences between intermediate and advanced learners for zeros, with advanced showing a significantly higher preference for zeros than intermediates, further emphasizing the impact of proficiency on discourse.

No differences are found in written discourse between natives and learners; all proficiency groups prefer zeros, revealing native-like behaviour across all proficiency groups in written narratives.

Finally, as to topic continuity syntactic coordination in contexts of distant non-coreferential, results are similar to contexts of co-referentiality, where L2 learners produce mostly overt pronouns in spoken texts, whereas native speakers tend to use zeros. However, our predictions were confirmed in this context as learners show great explicitness in their spoken narratives. Importantly, our hypothesis in H2c is partly confirmed as a mode of production only affects the intermediate and advanced groups, with a higher number of overt pronouns in their spoken texts, where null pronouns are their choice in their written texts. No mode of effect was found in the beginner and native groups.

In the spoken mode, learners are overexplicit compared to L1 English, selecting overt pronouns where natives prefer null pronouns. This indicates that no native-like behaviour or developmental trend across the advanced group can be observed.

Finally, in the written mode, no differences are observed between natives and learners in written discourse; all proficiency groups prefer zeros, revealing native-like behaviour across all proficiency groups.

8.3 Other factors that constrains the selection of REs

This section addresses the set of RQs stated in our research questions section in Chapter 5 (c.f 5.3 RQ3), where we explore whether the mode of production equally affects the discursive factors chosen in this investigation in selecting REs across proficiency levels in topic continuity contexts. This RQ focuses on four different factors constraining the selection of REs: The first RQ focuses on the overall distance of the antecedent (see RQ3a), the second the number of potentials (see RQ3b), where we examine (1, 2 and 3 potential antecedents), the third RQ investigates the factor of protagonist hood (see RQ3c), and finally, we focus on the transition of scenes (see RQ3d).

8.3.1 Distance of the antecedent

This section addresses RQ3a posed in chapter 5 (c.5.3 *RQ3a*). In this RQ we looked at whether there is a mode effect on the distance of antecedents in topic continuity contexts across L2 English vs. L1 English narrative texts. We expected no mode effect for native speakers, while an

effect of mode was expected for L2ers due to the cognitive load and time constraint. Crucially, results do not confirm our hypothesis H3a. Results show, first, that the mode of production affects the natives for 1 clause in their spoken narratives, but it not affects the distance of the antecedent in learners' narratives

Second, statistical results show that in the spoken mode, there are differences in the antecedent distance between the native speakers and the intermediate and the advanced groups. The intermediate and advanced groups prefer the distance of the antecedent to be in the second clause, whereas natives prefer it to be in the preceding clause. There are also statistical differences across the beginner and intermediate groups for 1 and +3 clauses, where the beginner group prefer the distance of the antecedent to be in the first clause, while the intermediate group increase the distance of the antecedent in their spoken narratives. This may indicate that the beginners' narratives are shorter than the intermediates'. We can see a developmental trend in the advanced group with an increase in the distance of the antecedent in the preceding clause in their spoken texts and a decrease in the distance of the antecedent in the second clause in their written texts. Indeed, given the factor of the permanence of the written record discussed above (see 4.1), it does not seem problematic for the L2ers to refer back to antecedents which are farther away in the discourse, as the reader can always go back and re-read the text to resolve the antecedent. In contrast, spoken discourse relies on memory, which entails greater cognitive strain in comparison to written discourse (Grabowski, 2007; Herrmann & Grabowski, 1995). As a result, the speaker shows a preference to place the antecedent in the immediately preceding clause, making it more easily recoverable (Givón, 1992, p.37).

Finally, in the written mode, differences were found across intermediate and advanced groups for 3 clauses, where the advanced group tend to increase the distance of the antecedents in their written discourse, while the beginner group's tendency is lower than the advanced group. Importantly, native-like behavior was revealed in the advanced group for the distance of the antecedent.

8.3.2 Number of potential antecedents

This section addresses RQ3b posed in other factors constraining the selection of REs research questions in chapter 5 (c.f *RQ3b*). In this RQ we looked at whether the mode of production

affects the number of potential antecedents in topic continuity contexts, and it further explored this factor, together with the selection of REs in contexts of 1, 2 and 3 potential antecedents across L2 English vs. L1 English discourse.

The results for the number of potential antecedents do not confirm our expectations, where we hypothesized no mode effect on the number of potential antecedents in L1 while an effect was anticipated for L2ers. First, results show that mode affects the number of potential antecedents in the natives' narratives for 1 and 2 antecedents. Native speakers tend to prefer 1 antecedent in their spoken discourse, while their preference in their written discourse is two antecedents. Second, results show that in spoken mode, the number of potential antecedents in topic continuity by L2ers group is not comparable to the native speakers in the spoken mode, particularly marked at the beginner and intermediate, where learners' tendency is for 2 potential antecedents, while the natives' is one potential antecedent. By contrast, results show that all proficiency groups preferred two potential antecedents, except for the advanced group which slightly chose one antecedent in their written texts.

When it comes to the selection of the REs depending on the number of potential antecedents in contexts of 1 antecedent, 2 antecedents and 3 antecedents, we anticipated that the number of potential antecedents will influence the selection of REs in L1 Spanish-L2 English, as suggested by Arnold & Griffin (2007) and Contemori (2015). Specifically, we expected a preference for fuller forms over zero pronouns as the number of antecedents increase. Additionally, we anticipated that the degree of this constraint will vary across proficiency levels. Furthermore, we predicted mode effects for L2 English learners and L1 English speakers. Results show that there were significant differences on the selection of REs depending on this factor across the different proficiency levels and mode of production depending on the proficiency level. In particular, results related to the selection of REs with 1 antecedent. The results show that the mode of production triggered the number of potential antecedents in topic continuity contexts among native speakers but it does not affect L2ers. In spoken mode the number of potential antecedents in topic continuity by L2ers is not comparable to the native speakers', particularly marked at the beginner and intermediate levels, where learners tend to have two potential antecedents, while the natives typically have one. By contrast, in the written mode, all proficiency groups preferred two potential antecedents, except for the advanced group, which only slightly chose show a preference for one antecedent. Regarding the selection of REs depending on the number of potential antecedents (1, 2, or 3), significant differences was observed across different proficiency levels and modes of production. For one antecedent, mode of production significantly affects RE selection in the intermediate and advanced groups,

with the intermediate learners using more overt pronouns in their spoken texts, while null pronouns are used in their written texts, this also affects intermediate and advanced for NPs with an increase of the later in their written narratives. No mode effect was found for beginner or native groups. This indicates that no group achieves native-like performance, indicating that mode of production influences RE selection, particularly among intermediate and advanced learners.

In spoken mode, L2ers generally prefer overt pronouns, while native speakers show a slight preference for null pronouns. This indicates differences between native speakers and all L2ers groups, suggesting that L2ers are overexplicit in their spoken performance compared to the natives'. The results do not reveal a native-like behaviour, but we can observe a developmental trend across intermediate and advanced for overt and null pronouns. In written discourse, learners' preference for pronouns is less pronounced than in spoken mode, with beginners using slightly more pronouns than zeros, while native speakers show a clear preference for zeros. The statistical results show significant differences between the intermediate and native speakers for null pronouns and NPs, where intermediate tend to increase the use of NPs, natives increase the use of null pronouns.

As to two potential antecedents, the results shows that mode of production affects the beginner and intermediate for overt pronouns, where they show a high tendency to use overt pronouns in their spoken texts, where in their written texts there is an increase of null pronouns and a decrease on overt pronouns. No effect of mode was found in the advanced and native groups. In the spoken mode, the results confirm the expectations for hypothesis H3c, as hypothesized; the number of potential antecedents would constrain the selection of REs in L1 Spanish-L2 English contexts, as supported by Arnold & Griffin (2007) and Contemori (2015). Specifically, it was found that overt pronouns are the preferred REs for all proficiency groups, followed by null pronouns. This contrasts with Quesada's (2021) findings, where L2 English and English natives produced mainly overt pronouns followed by noun phrases (NPs) when dealing with two antecedents, a study that did not consider discourse configuration as our study did.

In the spoken mode, the statistical analysis highlights differences between native speakers and L2 learners. L2 learners tend to produce more overt pronouns than the native speakers, indicating a nonnative-like performance. This overuse of overt pronouns suggests that L2 learners are more explicit in their spoken performance. This tendency is particularly pronounced

in the beginner and intermediate groups, where significant differences were found between the use of overt and zero pronouns. These groups are more redundant in the spoken texts than in the written texts. Additionally in the spoken mode, developmental differences are evident. Beginners and intermediates increase their use of zeros and decrease their use of NPs over time, yet they still do not achieve native-like behaviour. This progression suggests that as learners advance, they begin to adopt more concise forms of REs, but the influence of their L1 and the complexities of managing multiple antecedents in real-time spoken discourse still pose challenges. In the written mode, the number of potential antecedents also plays a critical role in RE selection, but the patterns differ from those shown in spoken discourse. Unlike the spoken mode, no significant differences were observed between native speakers and the learners, indicating that learners' RE selections are closer to native-like behaviour when they have more time to process and plan their written output. Intermediate learners, however, show an increased use of NPs compared to the native speakers, suggesting a developmental trend where learners initially rely more on explicit markers before gradually adopting more concise forms.

Importantly, the prediction in H2c is confirmed for beginners and intermediates, particularly in the intermediate group, which shows an increase in NPs in their spoken narratives. This indicates that mode of production significantly affects RE selection, with intermediate learners being more explicit in their written texts, possibly due to a greater awareness of the need for clarity and precision in written communication, where the immediate context and interactive signs of spoken discourse are absent.

As to three antecedents, the results partly confirm our H2c, where a mode effects was expected. Results above show an effect of mode in the intermediate, advanced and native groups, but not in the beginner group. Intermediates tend to use more overt pronouns in their spoken texts, while their use decreases in their written texts. As to the advanced, there is a mode effect for overt pronouns and NPs, with a decrease in the use of overt pronouns and an increase of NPs in their written texts in line with previous studies (Quesada, 2021). Mode affects the natives in their increase of NPs in their written texts. In the spoken mode, statistical analysis reveals notable differences between native speakers and the beginner and intermediate groups, particularly in their selection of NPs. L2 learners tend to produce more overt pronouns than native speakers. In contrast, the written mode reveals no significant differences between native speakers and L2 learners, and all proficiency groups select fewer overt pronouns followed by null pronouns and NPs. The latter suggests that the written discourse allows learners to approach native-like behaviour. This can be attributed to the additional time for planning and

revising written texts, enabling learners to produce more concise and contextually appropriate REs. However, results show that L2ers while native speakers use less overt pronouns.

To sum up, results show, first, that the effect of mode on the number of potential varies depending on the proficiency group and the number of antecedents. The mode of production affects the selection of REs across different proficiency levels and numbers of antecedents. For 1 antecedent, only intermediate and advanced learners prefer overt pronouns in spoken texts, with more null pronouns in written texts; beginners are not significantly affected by mode. For 2 antecedents, beginner and intermediate learners use more overt pronouns in spoken texts than written ones. For 3 antecedents, native speakers, as well as intermediate and advanced learners, prefer overt pronouns in spoken texts, with this preference decreasing in written texts where null pronouns and noun phrases increase. Second, in the spoken mode, for 1 antecedent, all L2 learners differ from native speakers by favouring overt pronouns over null pronouns, with advanced learners using more null pronouns than intermediate learners, suggesting L2 learners are overexplicit and lack native-like behaviour. For 2 antecedents, L2 learners generally use more overt pronouns and noun phrases than native speakers, with beginners using fuller forms and advanced learners showing more native-like behaviour with increased null pronouns. For 3 antecedents, beginner and intermediate learners use noun phrases, while native speakers do not; however, advanced learners exhibit native-like behaviour, similar to native speakers in their selection of REs. Finally, in the written mode, for 1 antecedent, L2 learners vary in their use of zeros and overt pronouns: intermediate and advanced learners prefer overt pronouns, while beginners prefer zeros. Noun phrases are more common in written texts than in spoken texts. The results suggest that the written mode is less challenging for learners, as significant issues are primarily observed with 1 antecedent. For 2 and 3 antecedents, however, written texts show no significant differences between native speakers and L2 learners, indicating native-like behaviour across all proficiency levels.

8.3.3 Protagonisthood

This section addresses RQ3c (c.f. RQ3c), which looked at a possible mode effect on the selection of REs when constrained by the type of character mentioned in the story across L1 Spanish-L2 English vs. L1 English discourse. Previous studies in English and Spanish (Hendriks, 2003; Kang, 2004; Montrul & Rodríguez Louro, 2006; Ryan, 2015) stated that the type of character can influence the type of REs used. The results showed a change in the production of REs depending

on the character (i.e., primary or secondary characters) and the mode of production. These findings partially confirm our H3c as there is a mode effect on the selection of REs across L2ers when referring to the main character, i.e. Charles Chaplin. However, we did not expect a mode effect on the selection of REs in natives' narratives when referring to the main character and results show there is an effect of mode in natives' narratives with an increase of NPs in their written discourse. Overall, the results show that in contexts of topic continuity, both L2 learners and native speakers predominantly use overt pronouns in spoken and written narratives to refer to the main character (Charles Chaplin). This is in line with previous studies (Quesada, 2021; Kang, 2004), results where all groups produced mainly overt pronouns followed by null pronouns. However, statistical analysis reveals that the mode of production significantly affects RE selection within all proficiency levels. When comparing the two modes of production, it becomes clear that natives and advanced learners select the same amount of NPs in their written narratives about Charles Chaplin than in their spoken narratives. However, this pattern is not observed in beginners and intermediates, which show no significant difference in their use of NPs between spoken and written modes. Instead, these less advanced learners exhibit a distinct preference for overt pronouns and lower use of zeros in spoken mode, reflecting a tendency toward overexplicitness as they attempt to ensure clarity and avoid ambiguity. This overexplicitness is also present among advanced learners, though to a lesser extent, suggesting that while they are more proficient, they still do not entirely mirror the native speakers' more implicit referential strategies in spoken language. In the spoken mode learners show a higher preference for overt pronouns when referring to Charles Chaplin compared to native speakers. We also observe that advanced learners also exhibit this tendency, although to a slightly lesser degree, indicating they have yet to achieve native-like behaviour. Native speakers, on the other hand, use more null pronouns, due to the presence of abundant coordination in their narratives. In the written mode, both native speakers and advanced learners use more NPs than in their spoken production. Beginners and intermediates, however, do not show significant differences in NP usage between their spoken and written narratives. Instead, they display a higher use of pronouns and a lower use of zeros in spoken mode, indicating redundancy and overexplicitness. In written mode, the preference for overt pronouns, followed by null pronouns and NPs is similar between learners and native speakers, showing no significant statistical differences. This suggests that, in written narratives, learners can approach native-like referential behavior more closely, possibly due to the additional planning time and the less immediate nature of written communication.

As to refer to the lady, results partly confirmed our H3c for secondary characters, as mode of production affects RE selection only in the intermediate group, which shows a higher preference

for overt pronouns in spoken mode, suggesting they are more explicit than in written texts. Importantly, no mode effect was observed in beginner, intermediate, or native groups. In spoken mode, differences emerged between native speakers and both beginner and intermediate groups, with learners favouring overt pronouns to refer to the lady, unlike native speakers who preferred null pronouns. This pattern indicates that advanced learners exhibit a native-like behaviour. These results contrast with Ryan's findings in that in this study L2ers select fewer overt pronouns and null and they preferred NPs to refer to the secondary characters. However, first, the data in this other study comes from a picture-based task, while the present research data is from a video-based task, so the differences may be explained in terms of a task-effect. In written mode, there are significant differences in the use of null pronouns between native speakers and intermediate and advanced groups. Native speakers strongly prefer to use null pronouns to refer to the lady, while learners do not exhibit native-like behaviour. However, a developmental trend is evident in the advanced group, who increasingly use overt pronouns when referring to the lady. This high frequency of null pronouns in their written discourse can be related to the presence of more coordinate contexts created with these characters.

Finally, as to refer to the old man, results confirmed partly our H3c and reveal that mode of production affects the advanced group's RE choices more markedly than those of the beginner, intermediate, or native groups. Specifically, advanced learners show a notable preference for overt pronouns in their spoken narratives, contrasting their increased use of NPs in written texts, reflecting a developmental shift in their narrative strategies. By contrast, no such mode effect is evident among beginner or intermediate learners or native speakers. Furthermore, in spoken mode, differences between native speakers and L3ers are evident, with learners favouring overt pronouns to refer to the old man; native speakers prefer null pronouns to refer to the old man. In contrast, written mode data reveal a convergence in REs preferences among learners and native speakers, with both groups showing a tendency to use null pronouns over overt pronouns. However, a slight deviation is observed in the intermediate group's written texts, where they still show a marginal preference for overt pronouns when referring to the old man. Thus, these findings collectively illustrate that while the mode of production significantly impacts RE choices for advanced learners, both spoken and written modes reveal a broader trend towards native-like behaviour in written texts across proficiency levels.

To sum up, the mode of production significantly REs choices across different proficiency levels, with distinct patterns emerging based on proficiency and the character referenced. We can observe: First, when referring to the main character (Charles Chaplin), native speakers and advanced learners use similar amounts of NPs across both modes, while beginners and intermediates are more explicit in spoken mode, favouring overt pronouns. Second, to refer to the lady, the mode effect is most evident in the intermediate group, who prefer overt pronouns in spoken mode, unlike native speakers who use more implicit strategies. Advanced learners begin to show native-like patterns in written mode, with increased use of null pronouns. Finally, when referring to the old man, advanced learners are most affected by the mode, preferring overt pronouns in spoken mode and shifting to more NPs in written mode. Beginners and intermediates show explicitness in spoken narratives without significant differences between modes.

8.3.4 Scene

This section addresses RQ3d (c.f 5.3 *RQ3d*). In this RQ we looked at a mode effect on the selection of REs when constrained by the change of scene across L1 Spanish-L2 English vs. L1 English discourse in topic continuity contexts. According to previous studies (Ariel, 1990; Givón, 1983; Van Vliet, 2008; Vonk et al., 1992), an episode change constitutes a 'breaking point' in the discourse, and consequently, it prompts the use of more informative referential expressions. This factor has been previously studied in topic continuity contexts in L2 English and L2 Spanish (Quesada, 2021; Collewaert, 2019, respectively), in the case of Quesada's study, the task used was *The frog* which differs from the task used in this dissertation. We anticipated no mode effect on the selection of REs across proficiency groups when a new scene happens. The context chosen to explore this factor is topic continuity contexts, where minimal REs are expected when there is no change of scene, while fuller REs are when there is a new scene. Our results regarding the selection of REs in the same scene confirmed our H3d as results show no mode of effect across L2ers or natives' narratives.

Results reveal that in contexts of topic continuity involving a new scene, both native speakers and L2ers predominantly use overt pronouns in both spoken and written texts. Thus, a mode effect was not found on the selection of REs when a new scene happens. This indicates that our H3d is confirmed. Furthermore, in the spoken mode, distinct usage patterns emerge between native speakers and beginner learners. While native speakers predominantly use overt pronouns when introducing a new scene, beginners favour more NPs. Importantly, these differences in NP usage persist across proficiency levels, with advanced learners exhibiting a native-like behaviour

in their spoken narratives. Turning to written discourse, our research reveals a significant similarity in REs between native speakers and learners overall. However, differences do emerge across proficiency levels, with advanced learners demonstrating more native-like behaviour in their written narratives. This suggests that despite variations, L2ers can achieve native-like performance in their selection of REs when introducing new scenes. Overall, these findings suggest that while the mode of production does not markedly influence RE distribution in new scenes, proficiency level does impact the choice of REs, particularly in spoken narratives. Advanced learners demonstrate more native-like usage patterns, especially in written texts, highlighting their developmental progression in mastering RE selection.

Importantly, results showed that when there is a change of scenes in contexts of topic continuity, it produces mainly overt pronouns and, to a much lesser, extent NP, both in natives and L2ers. These results contrast with Quesada's (2021, p. 162-163) results. Quesada (2021) shows that in topic continuity contexts where a new scene is introduced L2ers and natives speakers tend to use mainly NPs followed by overt pronouns. Quesada (2021) also used written data from the COREFL corpus. However, first, the data in this other study comes from a picture-based task, while the present study data is from a video-based task, so the differences may be explained in terms of a task-effect. This effect has not been investigated in L2 English corpus studies (Ryan, 2015; Leclercq & Lennart, 2013) that used film retelling tasks. Additionally, results showed that the mode of production does not affect the selection of REs when a new scene is introduced.

Chapter 9. Conclusion

For this dissertation, we investigated the effect of mode in L1 Spanish-L2 English compared to native English speakers on RE selection in topic continuity contexts. Importantly, L2ers selection of RE was studied developmentally across different proficiency levels. The data used for this dissertation was production data (corpus data) both in spoken and written discourse. We crucially investigated mode of production differences in relation to the different factors which have shown to constrain the selection of REs using a fine-grained analysis. My thesis is based on a theoretical framework that distinguishes between spoken and written modes of production.

The distinction between spoken and written discourse is characterized by several key properties such as time, permanence of record, memory, and expression of explicit vs. implicit knowledge (see section 4.2). These properties significantly influence how language is used and processed in each mode. We also departed from previous corpus-based studies and study the selection of REs. Importantly, to the best of our knowledge, no research has yet addressed the effect of the mode of production on the selection of REs in both spoken and written discourse, especially in the context of L1 Spanish-L2 English learners vs. native English speakers. This gap in the literature highlights the significance of our research.

Understanding REs production is a complex process influenced by various factors. In this dissertation, we have systematically examined how the mode of production affects these factors (i.e. discourse configuration, syntactic configuration, antecedents, protagonism, and scenes), in a particular discourse context, i.e. topic continuity. These factors have been proven to affect the selection of REs for L2 English learners and native speakers. While there is existing research on how these factors affect L2 learners and natives, there has been no study focused on how the mode of production influences on RE selection when the latter is constrained by these factors. By exploring the effects of production mode on these factors, our research provides new insights that can guide future studies on referential expression production. Our findings indicate that using spoken and written data and corpus-based techniques are highly needed for studying learner language. Especially spoken data is believed to offer deeper insights into second language learners' evolving language patterns, known as interlanguage, as they occur in real time (Sorace, 2011).

After our investigation, several key conclusions can be drawn regarding how mode of production affects discourse configuration, syntactic context, and other factors influencing the selection of REs in narratives produced by L1 Spanish-L2 English learners and native speakers of English.

I. Discourse configuration and the selection of REs in topic continuity

Discourse configuration and the selection of REs in topic continuity: Our findings indicate that both L1 English speakers and L2 Spanish-English learners predominantly use topic continuity in their narratives, which is consistent with prior research on L1 spoken English. However, these findings challenge Hypothesis 1a, which suggested that mode would not influence discourse configuration preferences. We observed that L1 English speakers introduce new topics more frequently in written discourse compared to spoken discourse, reflecting the more elaborate and planned nature of writing. For L2 learners, a developmental trend is shown: beginners introduce new topics more often than intermediates and advanced learners, who adopt more native-like topic continuity strategies as they progress. This indicates that L2 learners develop native-like discourse skills over time, with written discourse showing these skills earlier than spoken discourse probably due to its reflective and controlled nature. Overall, our study highlights the importance of considering both mode of production and proficiency level in understanding L2 discourse practices, showing a developmental trajectory towards native-like coherence and cohesion in narrative construction.

As for the selection of REs in topic continuity contexts, based on the findings related to RQ1b, several key conclusions can be drawn about the effects of mode production on the selection of REs in L1 Spanish-L2 English learners compared to L1 English speakers. First, mode of production affects the selection of REs across all the proficiency groups. Specifically, L2ers tend to use more overt pronouns in their spoken narratives than in their written ones, while native speakers tend to increase their use of NPs in their written texts. Therefore, the type of behaviour in written and spoken production of learners and native speakers is different. Learners' spoken discourse suggests over-explicitness, with a much higher use of pronouns and a lower use of zero pronouns. In contrast, native speakers reflect more new introductions through noun phrases. Second, our findings show non-native behaviour in spoken narratives, where L2ers prefer overt pronouns in spoken narratives across all proficiency levels, which contrasts with the more balanced distribution of overt and null pronouns seen in native speakers. This suggests that L2 learners have not yet developed native-like strategies for maintaining topic continuity in spoken discourse, often leading to redundancy due to the overuse of overt pronouns. However, differences in REs are observed not only between L2 learners and native speakers but also across different proficiency levels within the L2 learner group. Beginner learners tend to use

more overt pronouns and NPs in written texts than intermediate and advanced learners. Intermediate learners also use these forms more than advanced learners, particularly in spoken narratives. This progression suggests that learners gradually reduce their reliance on overt pronouns and NPs as proficiency increases, moving closer to native-like patterns.

Overall, these findings confirm that the mode of production influences the selection of REs and that L2 learners still need to exhibit fully native-like RE strategies, particularly in spoken discourse. However, a developmental trend is evident, with higher proficiency levels showing closer alignment with native speaker patterns, particularly in written narratives.

II. Discourse-syntactic context: coordination

This dissertation has proven the extensive use of coordination in topic continuity (spoken) contexts and, in general, in narrative texts. This aligns with the theory that spoken discourse, constrained by real-time processing and the need for immediate communication, tends to favor simpler structures and more coordination (Crystal, 1995; Williams, 2012). Our results show that the mode of production significantly affects the presence syntactic coordination, with apparent differences observed between spoken and written narratives. Native speakers' spoken discourse shows a stronger preference for coordination and juxtaposition, a pattern that L2 learners, particularly at lower proficiency levels, still find challenging. L2 learners tend to perform more like native speakers when writing, suggesting that their language skills and the type of task (speaking vs. writing) interact in different ways. This means that their proficiency level influences how learners use language and whether they speak or write. Specifically, their written narratives show closer alignment with native norms, while their spoken narratives may differ more from native speaker patterns. This observation aligns with Beaman's (1984) study by showing that both spoken and written narratives use coordination effectively, but the nature of coordination differs between the modes, with spoken language favouring chained clauses and written language employing shorter sentence constructions. Furthermore, our study partially confirms Chafe & Danielwicz (1987), as there is a greater presence of coordination in spoken language than in written language.

Selection of REs in topic continuity syntactic coordination contexts: This research unveils significant findings on the influence of the mode of production (spoken vs. written) on the selection of REs in various syntactic-discursive contexts. For L1 English speakers, the mode of production does not significantly affect the choice of REs. In both topic continuity syntactic coordination and distant coreference contexts, native speakers consistently prefer null pronouns (zeros) across spoken and written narratives. In contrast, L2 English learners

demonstrate apparent mode effects. For topic continuity syntactic coordination, intermediate and advanced learners exhibit a developmental trend where they use more overt pronouns in spoken narratives than written ones. This suggests a gradual adaptation but persistent deviations from native usage. Regarding distant coreference, intermediate learners show a mode effect by preferring overt pronouns in spoken discourse and null pronouns in written discourse. Advanced learners also favour null pronouns in both modes but still differ from native patterns in spoken production. This supports the hypothesis that L2 learners, particularly intermediates, have a mode-dependent approach to RE selection, corroborating findings by Díaz-Negrillo & Espínola Rosillo (2024).

In discontinuous syntactic coordination, native speakers use null pronouns consistently across modes: L2 learners, mainly intermediate, overuse overt pronouns in spoken mode compared to native speakers. Advanced learners show a trend towards native-like behaviour with increased use of null pronouns, though they still do not match native patterns in spoken narratives.

In summary, this research has revealed that while L1 English speakers show no mode effect in RE selection in syntactic coordination, L2 English learners exhibit significant mode-related differences. Intermediate learners, in particular, display notable deviations from native patterns, especially in spoken mode, while advanced learners are progressively aligning their usage with native speakers but still demonstrate differences in spoken discourse. These findings underscore the impact of mode on L2 learners' RE selection and suggest potential areas for further research.

iii. Other factors constraining the selection of REs

Regarding antecedent distance and number of antecedents the findings reveal that native speakers clearly prefer one antecedent in spoken discourse and two in written discourse. In contrast, L2 learners, particularly at beginner and intermediate levels, tend to favour two antecedents in spoken mode, differing from the native pattern. However, in written mode, all proficiency groups of L2 learners predominantly chose two antecedents, with advanced learners occasionally showing a preference for one.

The selection of REs in contexts with varying antecedents demonstrated significant mode effects, particularly among intermediate and advanced L2 learners. For example, intermediate learners were found to use more overt pronouns in spoken texts but shifted towards null

pronouns in written texts. This finding aligns with the work of Arnold & Griffin (2007) and Contemori (2015), suggesting that the number of potential antecedents significantly influences RE selection. However, L2 learners did not fully replicate native-like behaviour. When dealing with two antecedents, beginners and intermediates overused overt pronouns in spoken mode but increased their use of null pronouns in written mode, partially confirming findings from Quesada (2021). The analysis of three antecedents revealed that mode effects were present in intermediate, advanced, and native groups, with intermediate learners using more overt pronouns in spoken discourse, which decreased in written mode, consistent with prior research.

Overall, the study concludes that the mode of production plays a crucial role in RE selection among L2 English learners, particularly in spoken discourse, where they tend to be more explicit than native speakers. This over-explicitness diminishes with increased proficiency, though L2 learners still need to achieve native-like performance. In written discourse, however, L2 learners' RE selections are more closely aligned with native speakers, likely due to the additional time available for processing and planning. These findings support the predictions of hypotheses H2c and H3c and are corroborated by previous studies, including those by Arnold & Griffin (2007), Contemori (2015), and Quesada (2021). The developmental trends observed indicate that while L2 learners progress towards more concise RE usage, their L1 influence and the complexities of managing multiple antecedents in real-time spoken discourse continue to present challenges.

As to protagonist-hood, the study's findings underscore the significant influence of the mode of production on RE selection across proficiency levels, particularly among advanced learners. In spoken mode, L2 learners, especially beginners and intermediates, tend to be over-explicit, using more overt pronouns than native speakers. This over-explicitness reflects a developmental stage where learners prioritize clarity but diminishes as proficiency increases. In contrast, written mode allows learners to more closely approach native-like RE selection, likely due to the additional time for planning and processing. As for character type and the selection of REs, our findings show that the character type (main vs. secondary) also affects RE selection. For the main character, native speakers and advanced learners use more NPs in written narratives, suggesting a convergence towards native-like behaviour in the written mode. However, intermediate learners show a mode effect when referring to secondary characters, using more overt pronouns in spoken mode, indicating that they are still developing more implicit referential strategies.

In conclusion, while L2 learners make noticeable progress towards native-like RE selection, their performance is heavily influenced by the mode of production, character type, and proficiency

level. Advanced learners show the most significant convergence with native-like patterns, particularly in written mode, but challenges remain in achieving similar patterns and implicitness in spoken discourse.

As to the change of scene, the findings of this study carry significant implications for the selection of REs in L2 English and native English speakers' narratives, particularly in the context of introducing new scenes. These findings provide a deeper understanding of the factors influencing RE selection. Our results confirmed no significant mode effect on the selection of REs across L2 learners or native speakers when a new scene was introduced. This consistency in RE selection, whether in spoken or written modes, suggests that introducing a new scene inherently triggers the use of overt pronouns and NPs, regardless of proficiency level or mode of production. The predominant use of these fuller forms aligns with the principle that fuller forms are used in cases where there is discontinuity (Givón, 1983). Secondly, while no mode effect was found, distinct patterns emerged between native speakers and L2 learners, particularly in spoken narratives. Native speakers primarily use overt pronouns when introducing new scenes, whereas beginner learners tend to favour NPs. These differences persist across proficiency levels, though advanced learners demonstrate more native-like behaviour, especially in their spoken narratives. This progression indicates that as L2 learners' proficiency increases, they gradually adopt more native-like RE strategies, reflecting their growing competence in managing discourse continuity. In written narratives, the study found that advanced learners exhibit RE selection patterns that closely resemble those of native speakers, mainly when introducing new scenes. This similarity suggests that with sufficient time for planning and processing, L2 learners can achieve native-like performance in RE selection, highlighting the optimistic potential for developmental progression in their linguistic skills.

Overall, these conclusions underscore that while the mode of production does not significantly influence RE selection in new scenes, proficiency level plays a crucial role, particularly in spoken narratives. Advanced learners demonstrate a clear developmental progression towards native-like RE usage, especially in their written texts, indicating their growing ability to manage referential coherence in complex narrative contexts.

All in all, this dissertation analyzed the effect of mode on the selection of REs in L1 Spanish-L2 English and native English across spoken and written discourses. Specifically, it focused on topic continuity in syntactic coordination contexts, and on other contexts which have been shown to

constrain the use of REs, mainly distance of the antecedents, protagonist-hood and change of scene. The findings underscored a notable effect of production mode on referential cohesion in L2 English and L1 English performance. Deficiencies persisted in spoken production, while those in written production appeared to be resolved earlier in the developmental trend. Regarding the distribution of topic continuity coordination configurations, while the maintenance of topical reference is expected in discourse, intermediate L2 English learners exhibited deficits in their spoken performance, resulting in a lower frequency of reference maintenance contexts than expected. By contrast, referential cohesion emerged as a more challenging aspect for L2 English learners than their narratives' discourse-syntactic configuration.

Notably, the study corroborates previous findings regarding L2 RE selection, highlighting learners' tendency towards redundancy in the REs they employ. Furthermore, it sheds light on a crucial aspect of language acquisition, revealing how the mode of production influences L2 performance. This underscores the significance of triangulating written and spoken performance data to gain comprehensive insights into L2 behaviour. Such a methodological approach becomes particularly promising when the data are derived from the same participant, task, and corpus, as demonstrated in the present study. The latter is only possible in L2 corpora like COREFL.

Moreover, the distinction between written and spoken performance data has been linked to the manifestation of different types of knowledge, with written data reflecting explicit knowledge and spoken data reflecting implicit knowledge. The findings of this study contribute further evidence to second language acquisition theory, encouraging continued investigation into the nature of knowledge reflected in each production mode.

In addition to the contribution of this thesis, it is also necessary to acknowledge its limitations, as they point towards potential areas for future research:

- i) The corpus data for this study was limited due to restrictions imposed by the COVID-19 pandemic on data collection procedures. Additionally, an important challenge of this study was the inability to find participants at the extreme ends of the proficiency spectrum (A1-A2 and C1-C2 levels) among university students. Typically, university students fall into the intermediate proficiency category, averaging around the B2 level on the Common European Framework of Reference for Languages (CEFR). To address these limitations, continued data collection is necessary to supplement the existing dataset. Future research should aim to gather more extensive data across all proficiency levels to provide a comprehensive understanding of RE selection strategies. The case of beginners requires particular attention, as their frequencies are notably low, leading to

anomalous statistical results that should be carefully reviewed. For instance, the data shows unexpected trends or inconsistencies not observed in more advanced learners in several areas. These anomalies suggest that the results for beginners need to be reconsidered to ensure accuracy. This includes finding ways to recruit participants from A1-A2 and C1-C2 levels, despite the practical challenges.

ii) Further exploration of the corpus-based data could yield complementary insights. While we thoroughly analyzed the most relevant factors, there remains potential for additional analysis of already tagged features to provide new perspectives to the field. Production data offers a rich context for analysis, allowing for the examination of various aspects associated with RE selection, such as character gender or (types of) subordinate sentences as intervening material in chains of coordinate clauses. Additionally, future studies should consider the gender of the antecedents. Gender could play a crucial role in how antecedents are processed and understood in different contexts, potentially influencing the REs. For instance, it would be insightful to analyze whether mixed-gender antecedents (e.g., one male and two female antecedents) affect comprehension differently compared to uniform-gender antecedents (e.g., all male or all female). This aspect of gender could help unravel more nuanced cognitive processes involved in language comprehension. Furthermore, the investigation should also account for other factors that might interact with the number and gender of antecedents following Lozano (2016). These factors could include the complexity of the sentences, the semantic relationships between the antecedents, and the overall context in which the antecedents are presented. By incorporating these variables, future research could provide a more comprehensive understanding of the mechanisms underlying antecedent activation and its impact on comprehension.

iii) Since we were unable to collect all the necessary data for some proficiency groups, some results remain incomplete. Nonetheless, we see this as an encouraging aspect rather than a drawback, given the highly promising nature of our preliminary results. Consequently, this thesis does not mark the ending of our research but the start of a new phase.

Conclusiones

En esta tesis, investigamos el efecto del modo en L1 español-L2 inglés en comparación con hablantes nativos de inglés sobre la selección de expresiones referenciales en contextos de continuidad temática. Es importante destacar que la selección de expresiones referenciales por parte de los hablantes de L2 se estudió de forma evolutiva a través de diferentes niveles de competencia. Los datos utilizados en esta tesis fueron datos de producción (estudio de corpus) tanto en discurso hablado como escrito. Se investigaron las diferencias en el modo de producción en relación con los distintos factores que limitan la selección de las expresiones referenciales mediante un análisis detallado. Para llevar a cabo nuestro estudio basado en corpus, partimos de un marco teórico que apoya la distinción entre los modos hablado y escrito para interpretar y justificar los resultados de esta disertación. La distinción entre discurso hablado y escrito se caracteriza por varias propiedades clave, como el tiempo, la permanencia del registro, la memoria y la expresión del conocimiento explícito frente al implícito (véase la sección 4.2). Estas propiedades influyen significativamente en cómo se utiliza y procesa el lenguaje en cada modalidad. También nos apartamos de los estudios anteriores basados en corpus y estudiamos la selección de las expresiones referenciales. Es importante destacar que, hasta donde sabemos, ninguna investigación ha abordado todavía el efecto del modo de producción en la selección de las RE tanto en el discurso hablado como en el escrito, especialmente en el contexto de aprendices de inglés L1 español-L2 frente a hablantes nativos de inglés. Esta laguna en la literatura pone de relieve la importancia de nuestra investigación.

La comprensión de la producción de expresiones referenciales es un proceso complejo en el que influyen diversos factores. En esta tesis, hemos examinado sistemáticamente cómo afecta el modo de producción a estos factores (es decir, la configuración del discurso, la configuración sintáctica, los antecedentes, el protagonismo y las escenas), en un contexto de discurso concreto, la continuidad tópica. Se ha demostrado que estos factores afectan a la selección de REs para aprendices de inglés L2 y hablantes nativos. Aunque existen investigaciones sobre cómo afectan estos factores a los aprendices de L2 y a los nativos, no ha habido ningún estudio centrado en cómo influye el modo de producción en estos factores. Al explorar los efectos del modo de producción sobre estos factores, nuestra investigación aporta nuevos conocimientos que pueden orientar futuros estudios sobre la producción de expresiones referenciales. Esta investigación indica que el uso de datos orales y escritos y de técnicas basadas en corpus es muy necesario para estudiar el lenguaje de los aprendices. Especialmente los datos hablados se cree

que ofrecen una visión más profunda de los patrones lingüísticos en evolución de los aprendices de segundas lenguas, conocidos como interlengua, ya que se producen en tiempo real (Sorace, 2011).

Tras nuestra investigación, se pueden extraer varias conclusiones clave sobre cómo afecta el modo de producción a la configuración del discurso, al contexto sintáctico y a otros factores que influyen en la selección de expresiones referenciales en narraciones producidas por aprendices de inglés L1 español-L2 y hablantes nativos de inglés. Tras llevar a cabo esta investigación, se pueden extraer las siguientes conclusiones:

I. La configuración del discurso y la selección de REs en la continuidad tópica

La configuración del discurso y la selección de expresiones referenciales en la continuidad tópica: Nuestros hallazgos indican que tanto los hablantes de inglés L1 como los aprendices de inglés-español L2 utilizan predominantemente la continuidad tópica en sus narraciones, lo que concuerda con investigaciones previas sobre el inglés hablado L1. Sin embargo, estos resultados cuestionan la Hipótesis 1a, que sugería que el modo no influiría en las preferencias de configuración del discurso. Observamos que los hablantes de inglés L1 introducen temas nuevos con más frecuencia en el discurso escrito que en el hablado, lo que refleja la naturaleza más elaborada y planificada de la escritura. En el caso de los aprendices de L2, se observa una tendencia evolutiva: los principiantes introducen temas nuevos con más frecuencia que los intermedios y los avanzados, que adoptan estrategias de continuidad temática más propias de los nativos a medida que progresan. Esto indica que los aprendices de L2 desarrollan habilidades discursivas similares a las de los nativos a lo largo del tiempo, y que el discurso escrito muestra estas habilidades antes que el discurso oral, probablemente debido a su naturaleza reflexiva y controlada. En general, nuestro estudio pone de relieve la importancia de considerar tanto el modo de producción como el nivel de competencia a la hora de comprender las prácticas discursivas en L2, mostrando una trayectoria de desarrollo hacia una coherencia y cohesión similares a las de los nativos en la construcción narrativa.

En cuanto a la selección de las expresiones referenciales en contextos de continuidad temática, basándonos en los resultados relacionados con la RQ1b, se pueden extraer varias conclusiones clave sobre los efectos del modo de producción en la selección de RE en aprendices de inglés L1 español-L2 en comparación con hablantes de inglés L1. En primer lugar, el modo de producción afecta a la selección de REs en todos los grupos de competencia. En concreto, los aprendices de L2 tienden a utilizar más pronombres manifiestos en sus narraciones orales que en las escritas, mientras que los hablantes nativos tienden a aumentar el uso de los PN en los textos escritos. Esto indica que las elecciones de expresiones referenciales de los aprendices de L2 están

influidas por el modo de producción, reflejando diferentes demandas cognitivas y lingüísticas entre el habla y la escritura. En segundo lugar, nuestros resultados muestran un comportamiento no nativo en las narraciones orales, donde los aprendices de L2 prefieren los pronombres manifiestos en las narraciones orales en todos los niveles de competencia, lo que contrasta con la distribución más equilibrada de pronombres manifiestos y nulos que se observa en los hablantes nativos. Esto sugiere que los aprendices de L2 aún no han desarrollado estrategias similares a las de los hablantes nativos para mantener la continuidad temática en el discurso oral, lo que a menudo conduce a la redundancia debido al uso excesivo de pronombres explícitos. Sin embargo, se observan diferencias en los RE no sólo entre los aprendices de L2 y los hablantes nativos, sino también entre los distintos niveles de competencia dentro del grupo de aprendices de L2. Los aprendices principiantes tienden a utilizar más pronombres y PN manifiestos en los textos escritos que los aprendices de nivel intermedio y avanzado. Los aprendices intermedios también utilizan más estas formas que los avanzados, sobre todo en las narraciones orales. Esta progresión sugiere que los aprendices reducen gradualmente su dependencia de los pronombres y los sustantivos manifiestos a medida que aumenta su competencia, acercándose a patrones similares a los de los nativos.

En general, estos resultados confirman que el modo de producción influye en la selección de las expresiones referenciales y que los aprendices de L2 todavía tienen que mostrar estrategias de expresiones referenciales totalmente similares a las de los nativos, sobre todo en el discurso oral. Sin embargo, se aprecia una tendencia evolutiva, ya que los niveles de competencia más altos muestran una mayor correspondencia con los patrones de los hablantes nativos, sobre todo en las narraciones escritas.

II. Contexto discursivo-sintáctico: coordinación

Se ha demostrado el uso extensivo de la coordinación. Esto se alinea con la teoría de que el discurso hablado, constreñido por el procesamiento en tiempo real y la necesidad de comunicación inmediata, tiende a favorecer estructuras más simples y más coordinación (Crystal, 1995; Williams, 2012). Nuestros resultados muestran que el modo de producción afecta significativamente a la presencia de coordinación sintáctica, observándose diferencias evidentes entre las narraciones orales y escritas. El discurso hablado de los hablantes nativos muestra una mayor preferencia por la coordinación y la yuxtaposición, un patrón que los aprendices de L2, sobre todo en los niveles de competencia más bajos, siguen encontrando difícil. Los aprendices

de L2 tienden a parecerse más a los hablantes nativos cuando escriben, lo que sugiere que sus destrezas lingüísticas y el tipo de tarea (oral o escrita) interactúan de distintas maneras. Esto significa que su nivel de competencia influye en el uso que hacen de la lengua y en si hablan o escriben. En concreto, sus narraciones escritas se ajustan más a las normas nativas, mientras que sus narraciones orales pueden diferir más de los patrones de los hablantes nativos. Esta observación se alinea con el estudio de Beaman (1984) al mostrar que tanto las narraciones orales como las escritas utilizan la coordinación de forma eficaz, pero la naturaleza de la coordinación difiere entre los modos, ya que el lenguaje oral favorece las cláusulas encadenadas y el lenguaje escrito emplea construcciones oracionales más cortas. Además, nuestro estudio confirma parcialmente a Chafe & Danielwicz (1987), ya que hay una mayor presencia de coordinación en el lenguaje hablado que en el escrito.

Selección de expresiones referenciales en contextos de coordinación sintáctico-discursiva de continuidad temática: Esta investigación revela hallazgos significativos sobre la influencia del modo de producción (oral frente a escrito) en la selección de REs en varios contextos sintáctico-discursivos. En el caso de los hablantes de inglés como lengua materna, el modo de producción no afecta significativamente a la elección de las RE. Tanto en la coordinación sintáctica de continuidad temática como en los contextos de coreferencia distante, los hablantes nativos prefieren sistemáticamente los pronombres nulos (ceros) en las narraciones orales y escritas. Por el contrario, los aprendices de inglés L2 muestran efectos de modo aparentes. En el caso de la coordinación sintáctica de continuidad temática, los aprendices de nivel intermedio y avanzado muestran una tendencia evolutiva en la que utilizan más pronombres manifiestos en las narraciones orales que en las escritas. Esto concuerda con Díaz-Negrillo y Espínola Rosillo (2024), quienes observaron que los aprendices de nivel intermedio muestran más redundancia con los pronombres evidentes, mientras que los aprendices de nivel avanzado avanzan hacia un comportamiento similar al de los nativos, pero siguen utilizando más pronombres evidentes que los hablantes nativos en las narraciones escritas. Esto sugiere una adaptación gradual, pero desviaciones persistentes del uso nativo. Por lo que respecta a la coreferencia distante, los aprendices de nivel intermedio muestran un efecto de modo al preferir los pronombres manifiestos en el discurso oral y los pronombres nulos en el escrito. Los aprendices avanzados también prefieren los pronombres nulos en ambos modos, pero siguen desviándose de los patrones nativos en la producción oral. Esto apoya la hipótesis de que los aprendices de L2, especialmente los intermedios, tienen un enfoque dependiente del modo en la selección de expresiones referenciales, corroborando los hallazgos de Díaz-Negrillo y Espínola Rosillo (2024).

En la coordinación sintáctica discontinua, los hablantes nativos utilizan pronombres nulos de forma coherente en todos los modos: Los aprendices de L2, principalmente los de nivel intermedio, utilizan en exceso los pronombres nulos en el modo hablado en comparación con los hablantes nativos. Los aprendices avanzados muestran una tendencia hacia un comportamiento similar al de los nativos con un mayor uso de los pronombres nulos, aunque siguen sin coincidir con los patrones nativos en las narraciones habladas.

En resumen, esta investigación ha revelado que, mientras que los hablantes de inglés de L1 no muestran ningún efecto de modo en la selección de expresiones referenciales, los aprendices de inglés de L2 muestran diferencias significativas relacionadas con el modo. Los aprendices de nivel intermedio, en particular, muestran notables desviaciones de los patrones nativos, especialmente en el modo hablado, mientras que los aprendices de nivel avanzado están alineando progresivamente su uso con el de los hablantes nativos, pero siguen mostrando diferencias en el discurso hablado. Estos resultados subrayan el impacto del modo en la selección de expresiones referenciales de los aprendices de L2 y sugieren áreas potenciales para futuras investigaciones.

iii. Otros factores que limitan la selección de expresiones referenciales

En cuanto a la distancia del antecedente y el número de antecedentes: los resultados revelan que los hablantes nativos prefieren claramente un antecedente en el discurso oral y dos en el escrito. Por el contrario, los aprendices de L2, sobre todo en los niveles principiante e intermedio, tienden a preferir dos antecedentes en el modo oral, a diferencia del patrón nativo. Sin embargo, en el modo escrito, todos los grupos de aprendices de L2 eligieron predominantemente dos antecedentes, mientras que los aprendices avanzados mostraron ocasionalmente preferencia por uno.

La selección de expresiones referenciales en contextos con antecedentes variables demostró efectos significativos del modo, particularmente entre los aprendices de L2 intermedios y avanzados. Por ejemplo, se observó que los aprendices de nivel intermedio utilizaban más pronombres manifiestos en los textos orales, pero se inclinaban por los pronombres nulos en los textos escritos. Este hallazgo coincide con los trabajos de Arnold y Griffin (2007) y Contemori (2015), que sugieren que el número de antecedentes potenciales influye significativamente en la selección de RE. Sin embargo, los aprendices de L2 no replicaron completamente el

comportamiento de los nativos. Cuando se trataba de dos antecedentes, los principiantes y los intermedios utilizaban en exceso los pronombres sobreentendidos en el modo oral, pero aumentaban el uso de los pronombres nulos en el modo escrito, lo que confirma en parte los resultados de Quesada (2021). El análisis de tres antecedentes reveló que los efectos de modo estaban presentes en los grupos intermedio, avanzado y nativo, y que los aprendices intermedios utilizaban más pronombres manifiestos en el discurso hablado, lo que disminuía en el modo escrito, en consonancia con investigaciones anteriores.

En general, el estudio concluye que el modo de producción desempeña un papel crucial en la selección de RE entre los aprendices de inglés L2, sobre todo en el discurso hablado, donde tienden a ser más explícitos que los hablantes nativos. Esta sobreexplicitud disminuye a medida que aumenta el dominio del idioma, aunque los aprendices de L2 siguen necesitando alcanzar un rendimiento similar al de los nativos. En el discurso escrito, sin embargo, las selecciones de RE de los aprendices de L2 se aproximan más a las de los hablantes nativos, probablemente debido al tiempo adicional disponible para el procesamiento y la planificación. Estos resultados apoyan las predicciones de las hipótesis H2c y H3c y están corroborados por estudios anteriores, incluidos los de Arnold y Griffin (2007), Contemori (2015) y Quesada (2021). Las tendencias de desarrollo observadas indican que, si bien los aprendices de L2 progresan hacia un uso más conciso de RE, su influencia en la L1 y las complejidades de gestionar múltiples antecedentes en el discurso oral en tiempo real siguen presentando desafíos.

Protagonismo: los resultados del estudio subrayan la influencia significativa del modo de producción en la selección de expresiones referenciales en todos los niveles de competencia, especialmente entre los aprendices avanzados. En el modo hablado, los aprendices de L2, sobre todo los principiantes y los de nivel intermedio, tienden a ser sobreexplícitos, utilizando más pronombres manifiestos que los hablantes nativos. Esta sobreexplicitud refleja una etapa de desarrollo en la que los aprendices dan prioridad a la claridad, pero disminuye a medida que aumenta el nivel de competencia. Por el contrario, el modo escrito permite a los aprendices acercarse más a la selección de expresiones referenciales de tipo nativo, probablemente debido al tiempo adicional para la planificación y el procesamiento. En cuanto al tipo de personaje y la selección de RE, nuestros resultados muestran que el tipo de personaje (principal frente a secundario) también afecta a la selección de expresiones referenciales. En el caso del personaje principal, los hablantes nativos y los aprendices avanzados utilizan más PN en las narraciones escritas, lo que sugiere una convergencia hacia un comportamiento similar al de los nativos en el modo escrito. Sin embargo, los aprendices de nivel intermedio muestran un efecto de modo cuando se refieren a personajes secundarios, utilizando más pronombres manifiestos en el

modo hablado, lo que indica que todavía están desarrollando estrategias referenciales más implícitas.

En conclusión, aunque los aprendices de L2 progresan notablemente hacia una selección de expresiones referenciales similar a la de los nativos, su rendimiento está muy influido por el modo de producción, el tipo de carácter y el nivel de competencia. Los aprendices avanzados muestran la convergencia más significativa con patrones similares a los nativos, sobre todo en el modo escrito, pero sigue siendo difícil conseguir patrones similares e implícitos en el discurso oral.

En el cambio de escena, los resultados de este estudio tienen implicaciones significativas para la selección de expresiones referenciales en las narraciones de hablantes nativos de inglés y de inglés L2, especialmente en el contexto de la introducción de nuevas escenas. Estos hallazgos proporcionan una comprensión más profunda de los factores que influyen en la selección de RE.

Nuestros resultados confirmaron la ausencia de un efecto significativo del modo en la selección de las expresiones referenciales entre los aprendices de L2 y los hablantes nativos cuando se introducía una escena nueva. Esta coherencia en la selección de expresiones referenciales, tanto en el modo oral como en el escrito, sugiere que la introducción de una nueva escena desencadena de forma inherente el uso de pronombres y PN manifiestos, independientemente del nivel de competencia o del modo de producción. El uso predominante de estas formas más completas está en consonancia con la necesidad de garantizar la claridad y mantener la coherencia al pasar de una escena a otra en las narraciones. En segundo lugar, aunque no se detectó ningún efecto de modo de producción, se observaron distintos patrones entre hablantes nativos y aprendices de L2, sobre todo en las narraciones orales. Los hablantes nativos utilizan sobre todo pronombres manifiestos al introducir escenas nuevas, mientras que los principiantes tienden a preferir los PN. Estas diferencias persisten en todos los niveles de competencia, aunque los aprendices avanzados muestran un comportamiento más parecido al de los nativos, sobre todo en sus narraciones orales. Esta progresión indica que, a medida que aumenta el nivel de competencia de los aprendices de L2, éstos adoptan gradualmente estrategias de RE más parecidas a las de los nativos, lo que refleja su creciente competencia en la gestión de la continuidad del discurso. En las narraciones escritas, el estudio revela que los aprendices avanzados muestran patrones de selección de expresiones referenciales muy parecidos a los de los hablantes nativos, sobre todo al introducir escenas nuevas. Esta similitud

sugiere que, con tiempo suficiente para la planificación y el procesamiento, los aprendices de L2 pueden alcanzar un rendimiento similar al de los nativos en la selección de expresiones referenciales, lo que pone de relieve el potencial optimista de progresión en el desarrollo de sus destrezas lingüísticas.

En general, estas conclusiones subrayan que, aunque el modo de producción no influye significativamente en la selección de expresiones referenciales en escenas nuevas, el nivel de competencia desempeña un papel crucial, sobre todo en las narraciones orales. Los aprendices avanzados muestran una clara progresión en el desarrollo hacia un uso de las ER similar al de los nativos, especialmente en los textos escritos, lo que indica su creciente capacidad para gestionar la coherencia referencial en contextos narrativos complejos.

En definitiva, esta tesis analizó el efecto del modo en la selección de expresiones referenciales en L1 español-L2 inglés e inglés nativo a través de discursos hablados y escritos. Específicamente, se centró en la continuidad temática en contextos de coordinación sintáctica, y en otros contextos que han demostrado restringir el uso de expresiones referenciales, como la distancia de los antecedentes, el protagonismo y el cambio de escena. Los resultados subrayaron un efecto notable del modo de producción sobre la cohesión referencial en la actuación en inglés L2 e inglés L1. Las deficiencias persistían en la producción oral, mientras que las de la producción escrita parecían resolverse antes en la tendencia de desarrollo. En cuanto a la distribución de las configuraciones de coordinación de la continuidad tópica, mientras que el mantenimiento de la referencia tópica se espera en el discurso, los aprendices intermedios de inglés L2 mostraron déficits en su rendimiento oral, lo que resultó en una menor frecuencia de contextos de mantenimiento de referencia de lo esperado. Por el contrario, la cohesión referencial se reveló como un aspecto más desafiante para los aprendices de inglés L2 que la configuración discursivo-sintáctica de sus narraciones.

En particular, el estudio corroboró hallazgos anteriores relativos a la selección de expresiones referenciales de L2, destacando la tendencia de los aprendices a la redundancia en las expresiones referenciales que emplean. Además, arroja luz sobre un aspecto crucial de la adquisición de lenguas, al revelar cómo el modo de producción influye en el rendimiento en L2. Esto subraya la importancia de triangular los datos de rendimiento escrito y oral para obtener una visión completa del comportamiento en la L2. Este enfoque metodológico resulta especialmente prometedor cuando los datos proceden del mismo participante, tarea y corpus, como se demuestra en el presente estudio. Esto último sólo es posible en corpus de L2 como el COREFL.

Además, la distinción entre los datos de rendimiento escritos y hablados se ha relacionado con la manifestación de distintos tipos de conocimiento, ya que los datos escritos reflejan el conocimiento explícito y los datos hablados el conocimiento implícito. Los resultados de este estudio aportan más pruebas a la teoría de la adquisición de segundas lenguas y animan a seguir investigando la naturaleza del conocimiento que se refleja en cada modo de producción.

Es fundamental reconocer las limitaciones de esta tesis, ya que apuntan hacia posibles áreas de investigación futura:

i) Los datos del corpus para este estudio fueron limitados debido a las restricciones impuestas por la pandemia COVID- 19 a los procedimientos de recogida de datos. Además, un reto importante de este estudio fue la imposibilidad de encontrar participantes en los extremos del espectro de competencia (niveles A1-A2 y C1-C2) entre los aprendices universitarios. Por lo general, los aprendices universitarios se sitúan en la categoría de dominio intermedio, con una media en torno al nivel B2 del Marco Común Europeo de Referencia para las Lenguas (MCER). Para hacer frente a estas limitaciones, es necesario seguir recopilando datos para complementar el conjunto de datos existente. Las investigaciones futuras deberían tener como objetivo recopilar datos más amplios sobre todos los niveles de competencia para comprender mejor las estrategias de selección de las expresiones referenciales. Esto incluye encontrar formas de reclutar participantes de los niveles A1-A2 y C1-C2, a pesar de las dificultades prácticas.

ii) Una exploración más exhaustiva de los datos basados en el corpus podría aportar ideas más profundas. Aunque hemos analizado a fondo los factores más relevantes, sigue habiendo potencial para realizar análisis adicionales de rasgos ya etiquetados que aporten nuevas perspectivas al campo. Los datos de producción ofrecen un contexto rico para el análisis, que permite examinar diversos aspectos asociados a la selección de RE, como el género de los caracteres o (tipos de) oraciones subordinadas como material intermedio en cadenas de cláusulas coordinadas. Además, futuros estudios deberían considerar el género de los antecedentes. El género podría desempeñar un papel crucial en cómo se procesan y entienden los antecedentes en diferentes contextos, influyendo potencialmente en las ER. Por ejemplo, sería revelador analizar si los antecedentes de género mixto (por ejemplo, un antecedente masculino y dos femeninos) afectan a la comprensión de forma diferente en comparación con los antecedentes de género uniforme (por ejemplo, todos masculinos o todos femeninos). Este aspecto del género podría ayudar a desentrañar procesos cognitivos más matizados implicados

en la comprensión del lenguaje. Además, la investigación debería tener en cuenta otros factores que podrían interactuar con el número y el género de los antecedentes. Estos factores podrían incluir la complejidad de las frases, las relaciones semánticas entre los antecedentes y el contexto general en el que se presentan los antecedentes. Al incorporar estas variables, las investigaciones futuras podrían proporcionar una comprensión más completa de los mecanismos que subyacen a la activación de los antecedentes y su impacto en la comprensión.

iii) Dado que no pudimos recopilar todos los datos necesarios para algunos grupos de competencia, algunos resultados siguen estando incompletos. No obstante, lo consideramos más positivo que negativo, dada la naturaleza altamente prometedora de nuestros resultados preliminares. Por consiguiente, esta tesis no marca la conclusión de nuestra investigación, sino el comienzo de una nueva etapa.

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Appendices

A. Call for participations (questionnaires and emails)

LINKS TO THE GOOGLE FORMS

Generic Google Form for Spanish natives and L1 Spanish–L2English L2ers:

<https://docs.google.com/forms/d/e/1FAIpQLSfnCY43ONPIm97qIGe6CG00CI7p2pmhgF1vPtcSYMxRGqNmVw/viewform?c=0&w=1>

Generic Google Form for English natives and L1 English – L2 Spanish L2ers:

https://docs.google.com/forms/d/e/1FAIpQLSePBehn429FQjPZHLu_ji8C7OTX0KoYof5e9_oJeuXJipMjA/viewform?c=0&w=1

CALL FOR PARTICIPATION AT UGR

PARTICIPACIÓN EN UN ESTUDIO ONLINE SOBRE EL APRENDIZAJE DEL INGLÉS

Gracias por mostrar interés en la participación del proyecto COREFL que, como sabes, es una base de datos de inglés como lengua extranjera que utilizamos en la Universidad de Granada para estudios sobre la adquisición del inglés. No se trata de un examen, nos interesa exclusivamente el lenguaje espontáneo y natural.

Además, toda la información que aportes será anónima.

Descripción de las tareas

Las tareas son sencillas y son totalmente online:

- En una primera fase, te pediremos que nos proporciones información sobre aspectos lingüísticos generales, que escribas un breve texto en inglés y que hagas un test de nivel. Para realizar esto debes **completar el siguiente formulario, preferiblemente antes de los próximos 10 días:**

<https://goo.gl/forms/Q8sBfCUxyz7jp702>

Una vez que hayas completado el formulario, deberás elegir un hueco (“**hueco spoken**”) del siguiente [calendario](#) para la realización de la tarea de la segunda fase. Para ello tendrás que indicarnos a través de email tu nombre completo, la fecha y la hora escogida. La fecha debe ser al menos 15 días después de haber completado el formulario de la primera fase.

- En una segunda fase, y una vez que hayas completado el formulario, solo te pediremos que produzcas un texto spoken durante una sesión de Googlemeet. Para esto necesitarás:
 - descargarte el programa Audacity (gratis) que utilizarás para grabar tu texto spoken (<https://www.audacityteam.org/download/>). Es muy fácil de usar. Aún así, te adjunto un breve tutorial sobre las funciones que necesitarás para grabarte y crear el archivo de audio.
 - conectarte en la fecha y hora que hayas elegido en el calendario a este enlace de Googlemeet: <https://meet.google.com/yhr-axiz-qog>
 - tener disponibles unos auriculares, a ser posible con micrófono, y estar en una habitación que no tenga ruido.

Si tienes cualquier duda puedes ponerte en contacto con nosotros en: maicae@ugr.es

¿Qué puedes conseguir de esta participación?

- Inmediatamente después de participar en la tarea escrita (primera fase), sabrás tu nivel de inglés en el área de gramática.
- 5 euros por participar en las dos fases.
- Además, podemos enviarte un certificado de participación de la Universidad de Granada.
- Tu participación ayudará a que la comunidad científica tenga un mejor conocimiento de cómo se aprende inglés.

No dudes en ponerte en contacto con los coordinadores del proyecto si quisieras obtener más información sobre el proyecto: Cristóbal Lozano (cristoballozano@ugr.es), Ana Díaz-Negrillo (anadiaznegrillo@ugr.es).

Gracias por tu participación

Proyecto ANACOR

EMAIL TO MAKE THE SECOND APPOINTMENT

Estimado participante,

Antes de nada, gracias por tu colaboración en la primera fase de la participación en el proyecto. Como ya sabes, la segunda tarea consiste en visualizar un video y contar en inglés el contenido del video mientras te grabas. La realización de esta tarea no te llevará más de 5 mins. y será online. Estos son los pasos que necesitas seguir:

- elegir un hueco del siguiente [calendario](#) y responder a este email con tu nombre completo, la fecha y la hora elegida para la cita. Asegúrate de que escoges un tramo de uno de los huecos llamados “Hueco spoken”, que tienen una duración de 15 minutos. La fecha debe ser al menos 15 días después de haber completado el formulario de la primera fase.
- descargarte el programa Audacity (gratis) que utilizarás para grabar tu texto spoken (<https://www.audacityteam.org/download/>). Es muy fácil de usar. Aún así, te adjunto un breve tutorial sobre las funciones que necesitarás para grabarte y crear el archivo de audio.
- conectarte en la fecha y hora que hayas elegido en el calendario a este enlace de Googlemeet: <https://meet.google.com/mod-xpzs-dxg>
- tener disponibles unos auriculares, a ser posible con micrófono, y estar en una habitación que no tenga ruido.

Si tienes cualquier duda puedes ponerte en contacto conmigo en: adquisicionlenguas@gmail.com. Antes del día de la cita recibirás un recordatorio con los datos de la misma.

Un saludo y gracias de nuevo por tu participación,

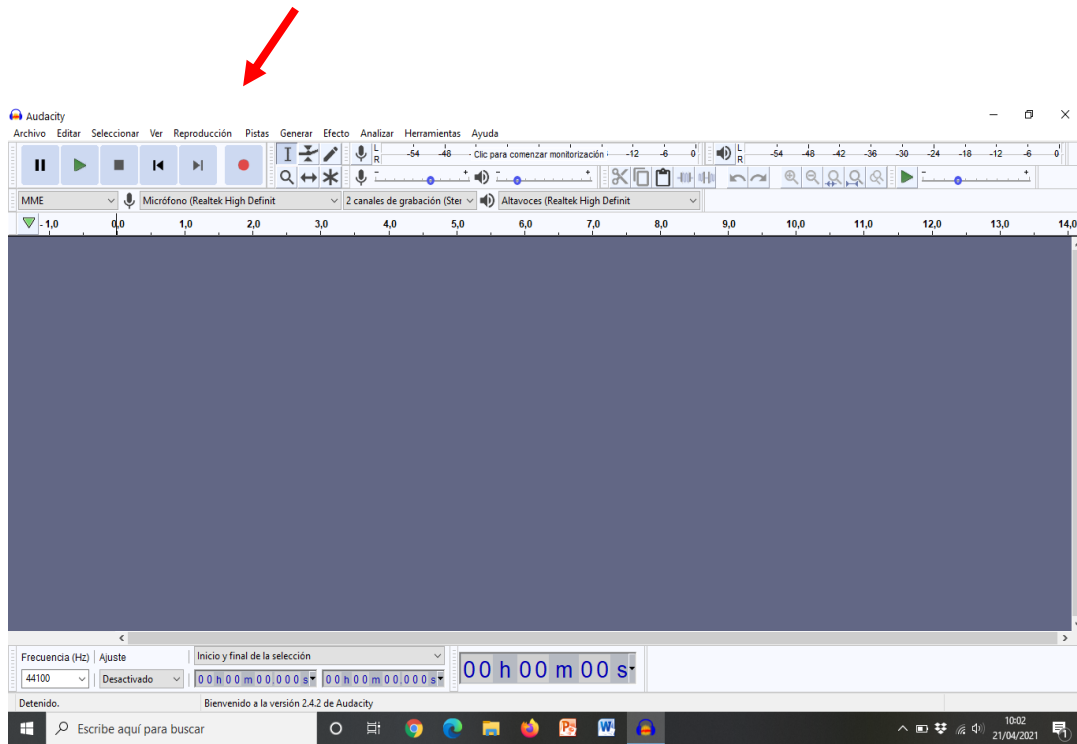
Equipo ANACOR

Instrucciones Audacity

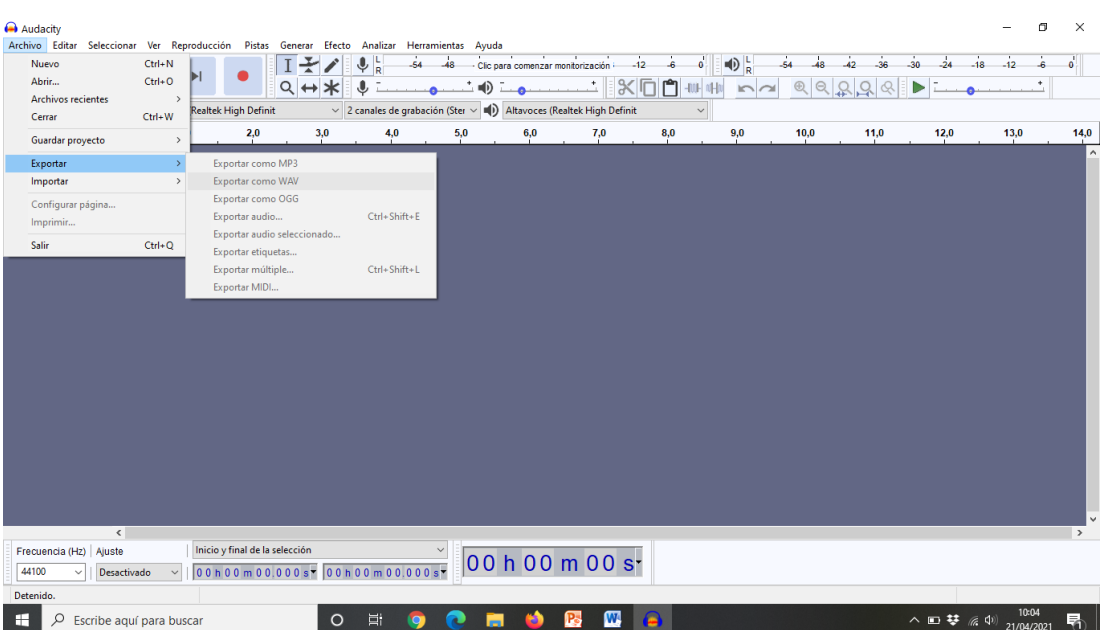
1. Por favor, recuerda bajarte el programa Audacity en el siguiente

enlace: <https://www.audacityteam.org/download/>

2. Una vez estés preparad@ para grabarte, tan sólo debes pulsar el botón rojo y empezar a contar la historia.



3. Una vez terminada tu grabación, debes irte a archivo y seleccionar **exportar como WAV**.



The screenshot shows the Audacity audio editing software interface. The 'Archivo' (File) menu is open, and the 'Exportar' (Export) option is selected, which has opened a sub-menu. The sub-menu contains the following options: 'Exportar como MP3', 'Exportar como WAV', 'Exportar como OGG', 'Exportar audio...' (with keyboard shortcut Ctrl+Shift+E), 'Exportar audio seleccionado...', 'Exportar etiquetas...' (with keyboard shortcut Ctrl+Shift+L), 'Exportar múltiple...', and 'Exportar MIDI...'. The main window shows a timeline with a selection from 0.0 to 14.0 seconds. The status bar at the bottom indicates a frequency of 44100 Hz, a disabled 'Ajuste' (Adjust) option, and a time display of 00 h 00 m 00 s. The Windows taskbar is visible at the bottom of the screen.

4. Por último, debes mandar tu archivo de audio al siguiente correo electrónico: adquisicionlenguas@gmail.com

B. COREFL participation form in Spanish and English

COREFL (CORpus of English as a Foreign Language)



¿Qué es COREFL?

- COREFL es parte de un proyecto de investigación en la Universidad de Granada (UGR), España financiado por el Ministerio de Economía y Competitividad (proyecto ANACOR nº FFI2016-75106-P).
- COREFL es un corpus de aprendices de inglés. Un corpus es una colección de textos (orales o escritos).
- Actualmente estamos recogiendo datos desde un proyecto de investigación de la Universidad de Granada (España).
- En el proyecto investigamos el aprendizaje del inglés como lengua extranjera.
- Hasta ahora hemos recogido más de 200.000 palabras en inglés nativo y en inglés no nativo.

¿Cómo puedes participar?

- Solo te pediremos que nos proporciones información sobre aspectos generales tales como edad, sexo, etc., información sobre aspectos lingüísticos generales y finalmente te pediremos que escribas un breve texto en inglés. Tu composición proporcionará información valiosa sobre la adquisición de diversos aspectos lingüísticos. Por último, te pediremos que hagas un test de nivel.
- Toda la información que aportes será anónima y en ninguna fase del estudio se pedirá tu nombre completo. Solo te pediremos tus iniciales para poder identificar de tus datos en el corpus.

¿Qué puedes conseguir de esta participación?

- Inmediatamente después de participar, sabrás tu nivel de inglés en el área de gramática.
- También podrás conseguir 10€ en total: 5€ EUROS si participas en la tarea oral como aprendiz de inglés + 5€ adicionales en la tarea oral como hablante nativo. Más información al final de esta participación.
- Además, si te interesa, podemos enviarte un certificado de participación de la Universidad de Granada.
- Tu participación ayudará a que la comunidad científica tenga un mejor conocimiento de cómo se aprende inglés.

Si quieres participar, ¡pasa a la siguiente sección!

Siguiente


Página 1 de 7

Borrar formulario

Figure 81. COREFL task instructions in Spanish.

COREFL for Native Speakers of English.

This form collects data from native speakers of English only. If you are learning English, please go to this other form: <https://goo.gl/forms/yGqDbMt86P0WFpXh1>

 cespinalarosillo@gmail.com (no compartidos)
[Cambiar de cuenta](#)



COREFL (CORpus of English as a Foreign Language)



What is COREFL?

- COREFL is part of a research project at the Universidad de Granada (Spain), funded by the Ministry of Economy and Competitiveness (ANACOR project no. FFI2016-75106-P).
- We are investigating how people learn English.
- So far we have collected over 200.000 words from native and non-native speakers of English.
- These words are part of a database or what we call a 'corpus' in linguistics.

How can you participate in COREFL?

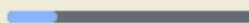
- You are simply requested to give some information about your linguistic background and then write a short text in English. The language you produce will help researchers investigate how people learn certain aspects of English.
- All the information you will provide is anonymous and at no stage are personal details or the names of the participants requested. We will only ask you to provide your initials to keep record of your data.

What can you get from COREFL?

- We can send you a certificate of participation from the Universidad de Granada.
- Your participation will help the research community to better understand how people learn English!

WOULD YOU LIKE TO PARTICIPATE IN COREFL? If so, move on to the next section.

[Siguiente](#)



Página 1 de 5

[Borrar formulario](#)

Figure 82. COREFL task instructions in English.

C. Screenshot's of Charles Chaplin's video

Link to the video: <https://www.youtube.com/watch?v=eO1HvF2G2Sw>



D. Software UAM Corpus tool interface

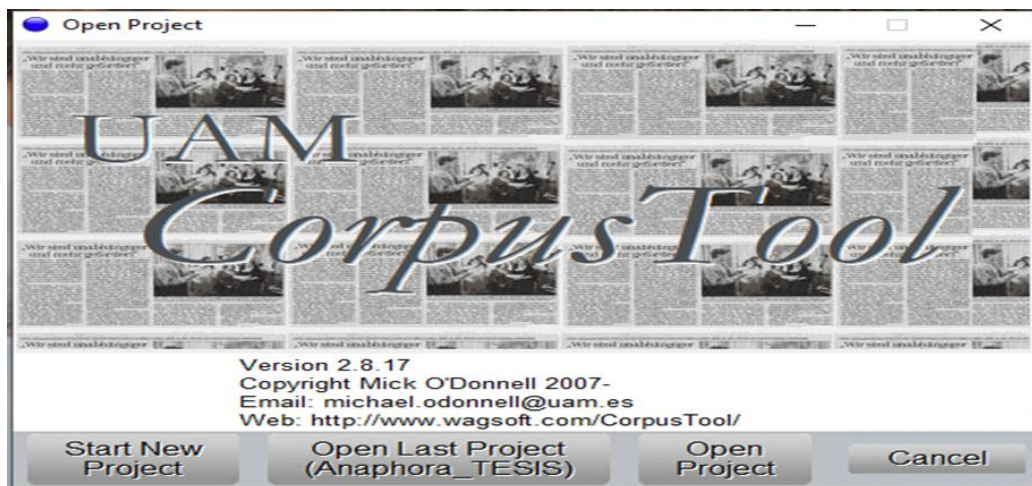


Figure 83. Initial menú UAM Corpus tool.

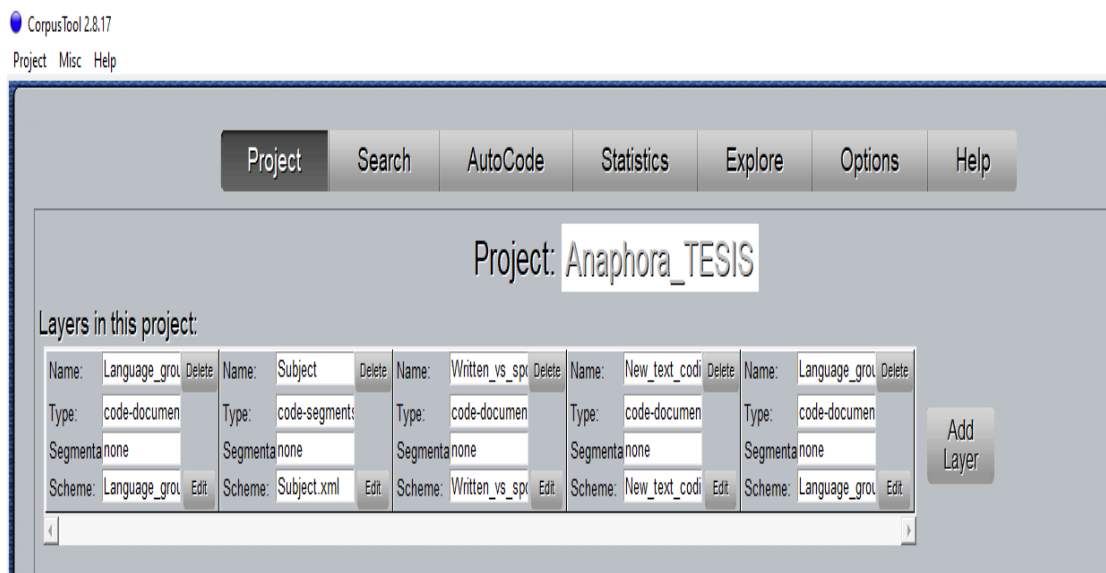


Figure 84. Project layout.

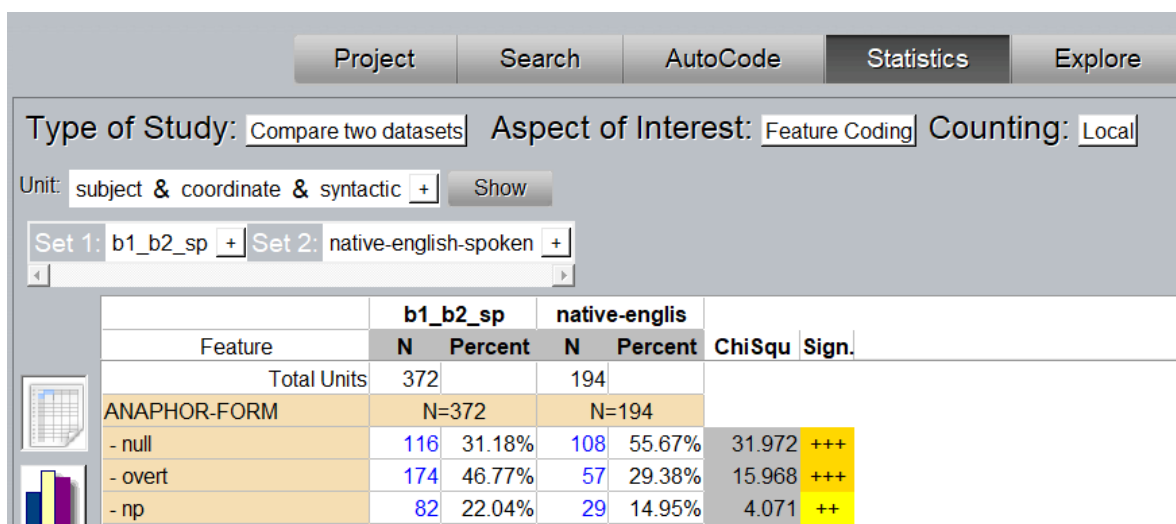
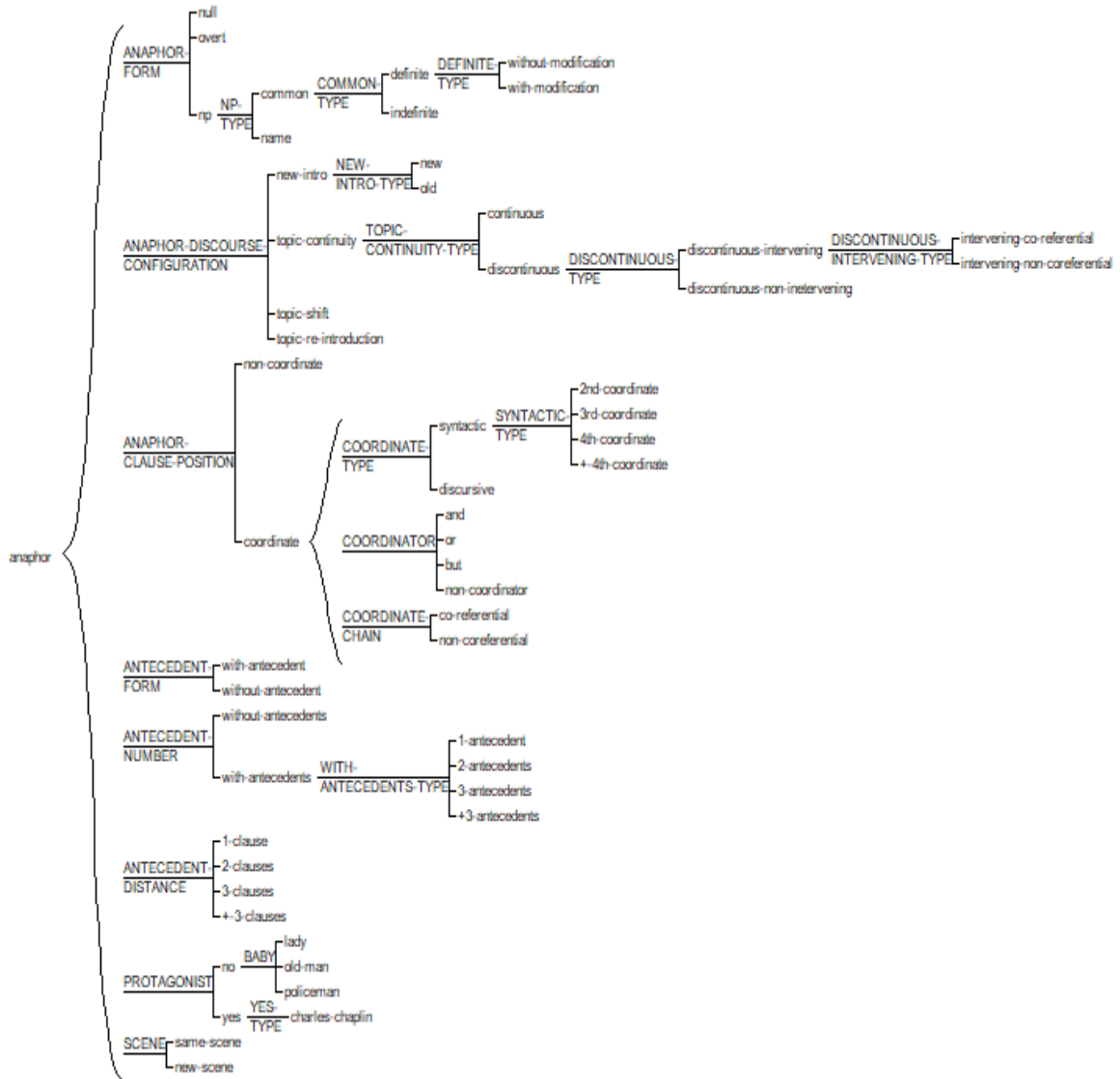


Figure 85. Results (sample.)

E. Tagset



F. L1 Spanish-L2 English Participants biodata and data information

FILENAME	GENDER	AGE	PLACEMENT TEST	WORD COUNT WR	WORD COUNT SP	DURATION
ES_A1_19_12_14_AIMF	FEMALE	19	20%	104	113	0:45
ES_A1_22_12_14_RLE	FEMALE	22	23.3%	122	305	3:31
ES_A1_17_11_14_MPS	FEMALE	17	26.7%	223	364	3:52
ES_A2_20_14_14_SFC	FEMALE	20	40%	138	158	0:46
ES_A2_21_10_14_RAG	MALE	21	41.7 %	86	209	2:09
ES_A2_22_13_14_COL	MALE	22	38.3%	132	253	2:19
ES_A2_22_9_14_SRM	FEMALE	22	45%	83	128	1:05
ES_A2_23_4_14_BC	MALE	23	45%	192	329	3:07
ES_A2_26_3_14_SM	MALE	26	38.3%	96	367	2:56
ES_A2_18_10_14_MFR	FEMALE	18	48.3%	115	156	0:58
ES_A2_18_13_14_MDJ	FEMALE	18	43.3%	187	221	1:14
ES_A2_18_15_14_IMF	FEMALE	18	45%	130	214	1:09
ES_A2_18_3_14_PAMM	FEMALE	18	38.3%	128	175	2:01
ES_A2_61_6_14_YY	FEMALE	61	45%	127	580	5:15
ES_A2_50_6_14_MJRC	FEMALE	50	36.7%	169	606	5:07
ES_B1_18_10_14_JAVG	MALE	18	63.3%	117	405	2:54
ES_B1_18_11_14_MRC	FEMALE	18	60%	171	246	2:01
ES_B1_18_12_14_CRM	FEMALE	18	65%	208	322	2:10
ES_B1_18_12_14_MGM	FEMALE	18	60%	197	354	3:03
ES_B1_18_15_14_CAM	FEMALE	18	61.7%	239	430	3:12
ES_B1_19_11_14_NLLB	FEMALE	19	60%	212	360	2:39

ES_B1_19_12_14_AFL	MALE	19	58.3%	248	444	3:00
ES_B1_19_13_14_JMR	MALE	19	56.7%	119	315	3:28
ES_B1_20_11_14_FER	MALE	20	63.3%	237	578	4:37
ES_B1_22_14_14_GG	FEMALE	22	56.7%	333	495	3:26
ES_B1_17_10_14_NCA	FEMALE	17	56.7%	346	434	2:26
ES_B1_18_8_14_AR	FEMALE	18	63.3%	182	236	1:56
ES_B1_18_9_14_LLC	FEMALE	18	51.7%	142	249	2:09
ES_B1_18_15_14_RVB	FEMALE	18	61.7%	105	419	3:22
ES_B1_19_7_14_EMGV	FEMALE	19	50%	343	141	1:13
ES_B1_18_12_14_IJQ	FEMALE	18	60%	219	379	3:44
ES_B1_18_12_14_ASS	FEMALE	18	55%	309	418	2:57
ES_B2_18_9_14_AHG	FEMALE	18	73.3%	207	360	3:23
ES_B2_18_10_14_LCF	FEMALE	18	66.7%	73	144	1:30
ES_B2_18_11_14_AIVR	FEMALE	18	66.7%	171	407	3:06
ES_B2_18_12_14_LHA	FEMALE	18	73.3%	216	244	1:31
ES_B2_18_13_14_SJM	MALE	18	75%	106	203	1:54
ES_B2_18_14_14_LAM	FEMALE	18	70%	216	629	6:19
ES_B2_19_15_14_ADHR	FEMALE	19	66.7%	133	272	2:04
ES_B2_21_15_14_MMM	FEMALE	21	68.3	181	250	1:49
ES_B2_22_16_14_AMC	FEMALE	22	73.3%	258	351	2:37
ES_B2_22_16_14_MBC	FEMALE	22	75%	321	512	4:04
ES_B2_23_17_14_IFM	FEMALE	23	70%	518	689	5:46
ES_B2_23_17_14_RGM	FEMALE	23	66.7%	280	281	1:53
ES_B2_24_19_14_MABG	MALE	24	71.7%	225	263	1:38
ES_B2_19_13_14_MAA	MALE	19	68.3	108	470	3:51
ES_B2_21_13_14_JGG	MALE	21	76.7%	80	296	2:02
ES_B2_19_16_14_AMO	FEMALE	19	76.7%	257	464	3:39
ES_B2_18_15_14_JCL	FEMALE	18	70%	185	275	2:29

ES_C1_18_12_14_LBT	FEMALE	18	88.3%	174	187	1:27
ES_C1_18_13_14_AGL	FEMALE	18	83.3%	288	529	4:45
ES_C1_18_13_14_RLR	MALE	18	81.7%	148	382	2:18
ES_C1_19_13_14_IGT	FEMALE	19	85%	163	307	2:08
ES_C1_19_13_14_MHM	FEMALE	19	86.7%	262	459	3:11
ES_C1_19_9_14_VMFV	FEMALE	19	90%	135	228	1:19
ES_C1_21_13_14_A ^o RP	FEMALE	21	85%	171	330	2:23
ES_C1_21_15_14_PGM	MALE	21	85%	175	273	1:52
ES_C1_21_8_14_LAR	FEMALE	21	86.7%	258	579	3:38
ES_C1_24_16_14_DPD	FEMALE	24	83.3%	218	568	4:08
ES_C1_18_12_14_PMJ	FEMALE	18	83.3%	158	426	2:57
ES_C1_23_18_14_JHS	MALE	23	85%	569	442	2:46
ES_C1_22_12_14_MVP	MALE	22	85%	346	431	3:24
ES_C1_19_13_14_IMPA	FEMALE	19	80%	107	263	2:31
ES_C1_19_10_14_DM	FEMALE	19	81.7%	210	357	2:32
ES_C2_21_11_14_CGT	MALE	21	96.7%	245	465	3:10
ES_C2_57_49_14_MAMC	MALE	57	96.7%	357	676	5:11
ES_C2_24_18_14_EB	FEMALE	24	100%	553	707	5:21
ES_C2_23_18_14_TOTTI	FEMALE	23	93.3%	76	571	5:21
ES_C2_19_15_14_LPI	FEMALE	19	100%	112	206	1:21
ES_C2_19_13_14_PSR	FEMALE	19	96.7%	257	506	3:54
ES_C2_20_16_14_ALC	FEMALE	20	100%	211	275	1:16

Figure 86. L1 Spanish-L2 English participants' biodata and data information.

G. English native speakers' biodata and data information

FILENAME	GENDER	AGE	WORD COUNT WR	WORD COUNT SP	DURATION
EN_19_14_SC	FEMALE	19	323	492	2:43
EN_20_14_AB	FEMALE	20	191	646	4:03
EN_20_14_CP	FEMALE	20	182	296	1:31
EN_20_14_EES	FEMALE	20	218	348	1:32
EN_20_14_PM	MALE	20	220	441	2:05
EN_20_14_SM	FEMALE	20	221	528	3:24
EN_20_14_TK	FEMALE	20	194	373	1:48
EN_21_14_AF	FEMALE	21	231	506	2:04
EN_21_14_GLN	FEMALE	21	228	653	3:34
EN_21_14_TS	MALE	21	200	332	1:47
EN_21_14_AL	FEMALE	21	158	357	1:46
EN_21_14_CO	MALE	21	157	344	2:01
EN_23_14_KMR	FEMALE	23	299	376	2:36
EN_19_14_PG	MALE	19	212	362	2:12
EN_25_14_JF	FEMALE	25	259	729	4:19
EN_21_14_TL	FEMALE	21	182	582	3:03

Figure 87. English native speakers' biodata and data information.