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**THE SECOND LANGUAGE ACQUISITION
OF IRISH RELATIVE CLAUSES:
THE MORPHOLOGY/SYNTAX INTERFACE**

Sheila Scott

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the School of Graduate Studies and Postdoctoral Research
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Abstract

The thesis explores whether or not overt bound morphology triggers the acquisition of distinct structural representations or whether these representations are acquired independently of the morphology. Second language learners of Irish were tested to determine their level of sensitivity to distinct complementizer forms in Irish, aL which triggers lenition on the verb in the presence of a gap in the clause and aN which triggers eclipsis on the verb in the presence of a resumptive pronoun in the clause. Adult second language learners of Irish were tested using aural and written acceptability judgements tasks to determine if they had acquired a resumptive strategy according to the form of the complementizer.

Results indicated that learners were not sensitive to the distinct complementizer, i.e. to the distinct mutations of the verbs. Gap structures were preferred regardless of the mutation on the verb. An emerging resumptive strategy appears to be present based on the acceptance of resumptive pronouns in the form of prepositional pronouns in the clause. It is argued that access to Universal Grammar has facilitated this development independently of the acquisition of the prescribed morphology.

Results also appear to indicate that there is a generation gap between native speakers and their ability to distinguish between the aL and aN complementizers. A lack of sensitivity to the mutations appears to be present in the young bilingual speakers of Irish who grew up with both languages in the home. It is argued that increased exposure to a variety of dialects through the media as well as pressures of language contact, have had an impact.

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LIST OF ABBREVIATIONS AND SYMBOLS USED

—	indicates the position in a sentence where an element has moved from
→	becomes (used when discussing changes occurring to consonants as a results of lenition or eclipsis)
\bar{A}	pronounced 'A-bar', a non argument position, or a position which can be occupied by a non argument element
Agr	Agreement
AgrP	Agreement Phrase
<i>aL</i>	complementizer 'a' which triggers lenition on the verb
<i>aN</i>	complementizer 'a' which triggers eclipsis on the verb
ANOVA	Analysis of Variance
C	complementizer
CP	complementizer phrase
DO	Direct Object
DP	Determiner Phrase
HSC	Highest Subject Constraint
I	Inflection (same as Infl. below)
IL	Interlanguage
Infl.	Inflection (same as I above)
IRH	Impaired Representation Hypothesis
IP	Inflection Phrase
L	Listening Test
L1	first language
L2	second language
LF	Logical Form
MSB	Modulated Structure Building (hypothesis)
MSIH	Missing Surface Inflection Hypothesis
MT	Minimal Trees (hypothesis)
N	eclipsis
NP	noun phrase
Ob	Oblique Clause
OI	Optional Infinitives
PC	Paired Comparison Test
PF	Phonetic Form
PP	prepositional phrase
prep	prepositional pronoun
<i>pro</i>	null operator in the specifier of the CP position according to McCloskey (2000)
PRT	verbal particle
rep	pronoun at the foot of the relative clause chain (either resumptive pronoun or accusative pronoun)
RI	Root Infinitive
S	Subject
SLA	second language acquisition
SPEC	Specifier position
Spec: CP	Specifier position of the CP

SVO	Subject verb Object word order pattern (English)
T	learners tested at the Garda College in Templemore, Ireland
<i>t</i>	trace (=gap)
UG	Universal Grammar
VN	verbal noun
VNP	verbal noun phrase
VP	verb phrase
VSO	Verb Subject Object word order pattern (Irish)
W	Written Test
[+WH]	indicates that the element is specified as being a wh-element, has the features [wh]
wh-	used to designate a type of movement or characteristic of an element: either a question word (who, what ,when ...), or its equivalent or trace (who, what: NP, when, where: PP....)
WT	Written test

TEST ITEM CODES

aLaLgap:	Cyclical structure contains aL complementizers in both CPs and a gap in the relativised position at the foot of the chain
aNaLgap:	Cyclical structure contains an aN complementizer in the top CP and an aL complementizers in the lower CP and a gap in the relativised position at the foot of the chain
aNaNrep:	Cyclical structure contains aN complementizers in both CPs and a resumptive pronoun in the relativised position at the foot of the chain
*aLgorep:	contains *aL complementizer in the top CP and the default complementizer go in the lower CP and a resumptive pronoun in the relativised position at the foot of the chain
aNgorep:	contains aN complementizer in the top CP and the default complementizer go in the lower CP and a resumptive pronoun in the relativised position at the foot of the chain
*aLNP:	non-finite clause structure where the NP failed to raise to the specifier of AspP to get case, yielding the surface form which is similar to English non-finite clauses; and the obligatory mutation aL
DOaLgap:	Direct Object clause contains an aL complementizer and a gap in the relativised position

- *DOaNgap: **D**irect **O**bject clause contains an **aN* complementizer and a **gap** in the relativised position
- DOaNrep: **D**irect **O**bject clause contains an *aN* complementizer and a **resumptive pronoun** in the relativised position
- *DOaLrep: **D**irect **O**bject clause contains an *aL* complementizer and a ***resumptive pronoun** in the relativised position
- NPaL: non-finite clause structure where the **NP** has obligatorily raised to the specifier of AspP to get case and the obligatory mutation *aL*
- *NPaN: non-finite clause structure where the **NP** has obligatorily raised to the specifier of AspP to get case and the ungrammatical mutation *aN*
- ObaNprep: **O**blique clause contains an *aN* complementizer and a **prepositional pronoun** in the relativised position
- *ObaLprep: **O**blique clause contains an **aL* complementizer and a **prepositional pronoun** in the relativised position
- SaLgap: **S**ubject relative clause contains an *aL* complementizer and a **gap** in the relativised position
- *SaNgap: **S**ubject relative clause contains an **aN* complementizer and a **gap** in the relativised position
- *SaLrep: **S**ubject relative clause contains an *aL* complementizer and a ***resumptive pronoun** in the relativised position
- *SVO: the **S**ubject **V**erb **O**bject word of English, the L1 of the learners; unacceptable in Irish
- VSO the **V**erb **S**ubject **O**bject word of Irish; unacceptable in English

Chapter 1

Scope and Relevance of the Study

Does the L2 acquisition of morphology trigger the development of syntactic representations or do the L2 syntactic representations develop independently of the morphology? From an intuitive point of view, the morphology, free and bound morphemes marking tense, case, gender and number, should contribute to the development of agreement projections and the opportunities for feature checking which would trigger the development of the supporting syntactic structure. Many languages have morphemes for many, if not all, of these grammatical functions. Do children learning their L1 and adult L2 learners use these linguistic ‘hooks’? What about languages which are not morphologically rich? (Borer and Rohrbacher 1997, 2002; White 2003; Bobaljik 2002) How do children and adult L2 learners learn these languages?

Morphology is not equally prominent in all spoken languages. What some languages express morphologically, through inflection or other bound forms, other languages might express by a separate word, or even leave implicit. The terms analytic and (poly)synthetic are used to describe the degree to which a language makes use of bound morphology. Languages which on the surface look very different due to the varying ranges in the use of morphemes, are not very different. In fact, when we consider

the underlying abstract syntactic representations, the languages are pretty similar. The reason for this is that their syntactic structure is, for the most part, the result of universal principles of sentence construction, which are part and parcel of our genetically determined cognitive make-up.

This morphology-syntax interface has been examined in both first language (L1) and second language (L2) acquisition. It has been demonstrated that all children learn to speak their L1, regardless of the ratio of morphemes per word in the language, in a systematic way, which does not vary cross linguistically (Goodluck 1991, Guasti 2002 and references therein). All children, barring catastrophic circumstances, achieve a mastery of their language in a relatively short period of time. Studies in L1 acquisition have revealed for English that there is order in the acquisition of morphemes (Brown, 1973; and de Villiers and de Villiers (1974)).

Keenan and Comrie (1977) developed an implicational hierarchy for relative clause constructions (1.1a), such that if a language has a relative clause construction identified toward the lower end of the hierarchy, that language must have all of the relative clause structures which precede it (*i.e.* to the left of it). The hierarchy also implies an inverse relationship between the hierarchy and the resumptive pronouns, such that resumptive pronouns will be used more frequently in the lower position on the hierarchy than the higher ones (1.1.b).

(1.1)

a. Accessibility Hierarchy

subject > direct object > indirect object > oblique > genitive > object of a comparison

b. Resumptive Pronouns Hierarchy

object of a comparison > genitive > oblique > indirect object > direct object > subject

A direct consequence of the range and number of grammatical morphemes available in a language is that languages also differ on the basis of the functional categories they manifest (Bobaljik and Thráinsson 1998; Thráinsson 1996). Within the Minimalist framework, functional categories are understood to be bundles of features. These features are represented by the following functional categories: [\pm movement] complementizer, [\pm agr] agreement, [\pm past] tense, [\pm neg] negation, [\pm def] determiner and [\pm plur] number. Chomsky (1998) claims that while there exists a universal set of grammatical features, these are not all present in all languages.

These cross linguistic universals notwithstanding, variability exists within first language acquisition. At the syntactic and morphological levels, children learning French will use *qui* ‘who’ in subject relatives in their earliest subject relatives (1.2a), seemingly suggesting that movement has occurred but use the complementizer *que* ‘that’ in all early direct object and oblique clauses (1.2b,c), where pied-piping is obligatory in the latter which Labelle (1990) argues as evidence of a non-movement analysis. They use resumptive pronouns (1.2d) and double relatives (1.2e) until roughly the age of 5 (Labelle 1990). On the other hand these children never strand bare prepositions in oblique clauses, preferring to omit the preposition altogether because their grammar already has a rule which disallows prepositional stranding. All examples are from Labelle (1990).

(1.2)

- a. *Ce...lui qui – qu’attrape la balle.* (example 17b, p. 103)
‘The one that is-catching the ball.’

- b. *La maison que la maman dort.* (example 28, p. 107)
‘The house that the mother is-sleep.’
- c. *Sur la boîte que le camion rentre dedans.* (example 17c, p. 99)
‘On the box that the truck goes inside-it.’
- d. *Sur la balle qu’i(l) l’attrape.* (example 7a, p. 98)
‘On the ball that he it catches.’
- e. *Sur la balle qu’i(l) lance la balle.* (example 9a, p.100)
‘On the ball that he throws the ball.’
- f. *Sur la boîte que la petite fille elle embarque.* (example 11c, p. 100)
‘On the box that the little girl she goes.’

Researchers looking at the L1 acquisition of French (Labelle, 1990, 1996), (but see Guasti and Shlonsky, 1995 and Guasti 2000 for opposing views), Serbo-Croatian (Goodluck and Stojanović, 1996) and Irish (Goodluck, Guilfoyle and Harrington (2001, 2005 in press) have argued that a non-movement analysis may be the earliest instantiation for L1 relative clauses. Variability in the use of the complementizer morpheme and absent morpho-syntactic associations between the form of the morpheme and the types of clause has led to these conclusions. In L1 French, children over use *que* and resumptive elements and do not use pied-piped relatives¹. In L1 Serbo-Croatian children appear to apply a non-adult non-movement analysis in their use of the complementizer *što*. In the L1 acquisition of Irish, earlier relative clauses produced by children appear to use the default complementizer *go* which in adult grammars signals an absence of binding.

There is no disputing that there is variability in L2 acquisition. Post-puberty L2 learners rarely attain native-like fluency in phonology, syntax or morphology (Lenneberg

¹ When the preposition is moved to the specifier of the CP position with the complement NP as a wh-word in the case of relative clauses or a question, it is referred to as pied-piping. Examples in English and French would be ‘The box in which I placed the ball’ La boîte dans laquelle j’ai placé la balle.’

1967; Curtiss 1977; Bley-Vroman, 1989; Johnson and Newport 1989; Flege, Yeni-Komshian and Liu 1999; and White 2003 and references therein).

Studies looking at L2 acquisition of relative clauses have shown that adult learners show variability in the usage of particular structures and the overuse of particular complementizer forms, as we saw above, in the case of children. The additional complexities in L2 acquisition have to do with how much and what kind of influence does the L1 bring to bear on the acquisition process.

With respect to the accessibility hierarchy, described in (1.3a) above, Schachter (1974) looked at the position of relative clauses with respect to the head noun; and the use of resumptive pronouns in relative clauses by Japanese, Chinese, Arabic, and Persian L2 learners of English. She found that because the position of the clause in Persian and Arabic is similar to that of English, to the right of the head noun, these learners produced more relative clauses than did the Chinese and Japanese speakers, for whom the position of the clause is to the left of the head noun. She argued that the switching of the position of the head noun would require the speakers of Chinese and Japanese to change the order of the elements in the clauses as well, making the production of the English relative clauses an onerous task. She states that these learners avoided using the relative clause structures, preferring to use them only when they were confident that they would use them correctly. Schachter (1974) also found errors in the use of resumptive pronouns, which are found in all of the relative clause types listed in the hierarchy for Persian and Arabic. Resumptive pronouns are generally not permitted in English relative clauses. Examples are taken from Schachter, 1974: 211) for Persian speakers. The resumptive pronoun is in italics.

- (1.3) subject: the people that *they* are interested in space research
dir. objet: oil which we sell *it* to other countries
oblique: a little pool which the water for *it* comes from the mountains

Schachter noted that the Arabic and Persian speakers also had difficulty with the English relative pronouns, since only [-WH] complementizers are available in Persian, *ke*, and in Arabic, *illi*, similar to ‘that’ in English. Examples are taken from Schachter, 1974: 211). The relative pronoun is in italics.

- (1.4) Persian: persons *which* I have to spend most of me life with them
Arabic: the college *who* asked my some questions

Hawkins (1980) reports that L2 learners generally have less difficulty with the relative clause types at the higher end of the accessibility hierarchy than with the ones at the lower end. Hyltenstam (1984) suggested that typological markedness could predict which structures L2 learners would find more difficult according to their L1 and the L2 they are learning. Tarallo and Myhill (1983) looked at right-branching (German and Portuguese) and left-branching (Chinese and Japanese) languages, and reported that the reason why subject relative clauses were easier for all the learner groups “may be due to the proximity of the lower sentence subject to the head in a right-branching, subject-initial language such as English, rather than anything about subject relativisation in particular”(Tarallo and Myhill 1983:57).

Hawkins (1989) took up this ‘configurational’ position described by Tarallo and Myhill and compared it to a ‘relational’ view based on the accessibility hierarchy of

Keenan and Comrie (1977) given in (1.1a). He concluded that there is some evidence for the ‘configurational’ view, stating that ‘learners construct rules for relative clauses first on the basis of adjacent categories in the surface configuration, and only subsequently on the basis of nonadjacent categories.’ (Hawkins 1989:178). Liceras (1986) looked at the acquisition of L2 relative clauses by L1 speakers of English from a markedness and ‘permeability’ position. Liceras (1986) defined permeability, a term first introduced by Adjémian (1976:308), as “characteristics of grammars which reflect the speaker’s variability of intuitions. Namely, permeability reflects competence, and competence included variable intuitions.” (Liceras 1986:182). IL grammars are very permeable according to the author. Liceras found that L2 learners used *que* both as a complementizer and as a relative pronoun more often than the native speakers. The use of the complementizer (Rivero 1979) or the sequence ‘determiner – complementizer’ Plann (1980a) *el que* was favored by the learners in both [+human] and [-human] oblique constructions, over the native-like forms *quien*, *el cual* and *even que*. Liceras concluded that the “versatility of this sequence makes it difficult for learners to decide on its specific function.” (Liceras 1986: 107). She concludes that potential areas of permeability “are the conditions on the application of rules (obligatory use of *que* in nonoblique relativization) and the L2 specific structures such as those in cleft and nounless constructions” and that permeability “should occur in any situation in which a speaker of the [non native grammar] uses his/her interlanguage.”(Liceras 1986:182-183).

A final example of variability to be examined here is taken from Hawkins and Chan (1997). They reported on the judgements concerning the use of resumptive pronouns on an acceptability task and a correction task by L1 speakers of Chinese and L1

speakers of French who were learning English as an L2. Chinese does not have wh-word or operator movement from any of its relativizable positions. The authors concluded that the [WH] feature is absent in Chinese. French, by contrast, is similar to English in that it has wh-words and operator movement from all positions, except the object of a comparison (the last position in the accessibility hierarchy). The test subjects were at three different levels of proficiency. The results showed that the elementary French L1 speakers outperformed the elementary Chinese speakers in both the grammaticality judgment task and in the correction task. The Chinese speakers appeared to catch up as their level of proficiency increased. Hawkins and Chan, however, do not conclude that the Chinese speakers had acquired wh-operator movement, instead, they claimed that the learners “analyze[d] the gap as a null resumptive pro[noun]” (Hawkins and Chan 1997:213), an option available to them based on the L1. In other words, Hawkins and Chan (1997) concluded that the Chinese speakers applied an L1 analysis to the L2.

This dissertation looks at the morphology/syntax interface which exists in the L2 acquisition of Irish relative clauses by adult L1 speakers of English. Irish is morphologically richer than English. Grammatical case assignment, gender and possessive forms are marked by morphemes both at the end and at the beginning of words. This is also true for verbs. Subject-verb agreement is marked at the end of the verb form, as are verb tenses, however past tense and conditional mood have an additional mark at the beginning of the word. These word-initial changes, lenition and eclipses, are pervasive (see Christian Brothers 1997; and Ó Siadhail 1988) for a thorough grammatical description). They also occur on the verb in a relative clause because they

are used in a morpho-syntactic relationship to signal the association between the form of the complementizers and the type of binding relationship, (gap or resumptive pronoun) at the foot of the clause.

In Irish, lenition, the weakening or spirantization of voiced obstruents of the word-initial consonant of the clausal verb, is an overt morphological indicator of subject and direct object relative clauses, which contain a gap, in the relativised site. Eclipsis, the voicing or nasalization of the word-initial consonant and vowels of the clausal verb, is the overt morphological indicator that a resumptive pronoun is required in the relativised site². Resumptive pronouns are found in direct object relatives in Irish and in oblique relatives. Examples of each of these relative clause types are given below in (1.5) to (1.8).

(1.5)

Sin é an fear_i [CP a cheanníonn ____i nuachtán gach maidin].
This-is-MASC the man_i [CP COMP buys ____i newspaper every morning].
This is the man that buys a newspaper every morning.

The sentence in (1.5) is an example of a subject relative clause. The complementizer is *a*. The initial consonant /k/ of the verb *ceannaigh* ‘to buy’ has been lenited, where /k/ has become /x/ as the word-initial consonant. This change is reflected in the orthography by inserting the letter “h” after the consonant in the word-initial position. At the level of the syntax, there is a gap in the subject position in the clause which is co-indexed to the noun in the matrix clause. Irish is a Verb Subject Object (VSO) language. Except for the variation in word order between the subject and the verb, the subject relative clause is similar in structure to its English counterpart.

² A more detailed account of these mutations will be presented in the following chapter.

(1.6)

Sin é an nuachtán_i [CP a cheanníonn an fear ____i gach maidin].
This-is-MASC the newspaper_i [CP COMP buys the man ____i every morning].
This is the newspaper that the man buys every morning.

The sentence in (1.6) is an example of a direct object relative clause. The complementizer is *a*. The initial consonant /k/ of the verb *ceannaigh* ‘to buy’ has been lenited yielding /x/ as the verb-initial consonant. There is a gap in the direct object position in the clause which is co-indexed to the noun in the matrix clause. Once again, except for the variation in word order between the subject and the verb, this clause structure is equivalent to English direct object relative clauses.

(1.7)

Sin é an nuachtán_i [CP a gceanníonn an fear é_i gach maidin].
This-is-MASC the newspaper_i [CP COMP buys the man it_i every morning].
This is the newspaper that the man buys it every morning.

The sentence in (1.7) is an example of a direct object relative clause which contains a resumptive pronoun in the relativised site. The complementizer is *a*. The initial consonant /k/ of the verb *ceannaigh* ‘to buy’ has been voiced yielding /g/ as the verb-initial consonant. This change is reflected in the orthography by inserting the voiced consonant in the word-initial position. There is a resumptive pronoun *é* in the direct object position in the clause which is co-indexed to the noun *nuachtán* in the matrix clause. There is no equivalent to this clause structure in English for direct object relative clauses.

(1.8)

Sin é an doctiúir_i [_{CP} a bhfanann Úna leis_i.]
This-is-MASC the doctor_i [_{CP} COMP waits Una for-him_i.]
This is the doctor that Una waits for-him.

The sentence in (1.8) is an example of an oblique relative clause which contains a resumptive pronoun in the relativised site. The complementizer is *a*. The initial consonant /f/ of the verb *fan* ‘to wait’ has been voiced yielding /v/ as the verb-initial consonant. This sound change is represented by the letters ‘bh’ which represent the sound /v/ in Irish. There is a resumptive pronoun in the form of a fused prepositional pronoun *leis* in the relativised site in the clause which is co-indexed to the noun *doctiúir* in the matrix clause. There is no equivalent to this clause structure in English since it requires a gap in the complement position of the Prepositional Phrase (PP).

The morpho-syntactic links between an overt mutation on the verb in the relative clause and the content of the relativised site are evident in examples (1.5) to (1.8). A summary of the distribution of the clause types and the corresponding mutation forms is given in Table 1.1.

Table 1.1

mutation	relativised site	clause type	equivalent clause type in English
lenition	Gap	subject and direct object	yes
eclipsis	resumptive pro	direct object and oblique	no

The study of the acquisition of Irish relative clauses lends itself well to an examination of whether the morphologically overt mutation on the verb guides the learners in the development of L2 gap and resumptive pronoun constructions, or whether the learners ignore the morphological cues on the verb and focus simply on the structural analysis. This thesis explores whether adult L2 learners of Modern Irish are aware of this morpho-syntactic association or whether the learners are aware of the L2 syntax of the clauses independently of the morphology.

The morphology/syntax interface in the L2 acquisition of Irish relative clauses will be examined at three different levels. The first looks at differences in perceived saliency between bound and free morphemes. Zobl and Liceras (1994) in a review of the literature in L1 and L2 acquisition have identified that bound and free morphemes do not enjoy equivalent status in acquisition. Furthermore, they showed that the acquisition of morphemes proceeds differently in L1 than in L2.

The second level of investigation deals with the difference between approaches concerning the role of inflectional morphemes in L2 acquisition. One approach states that the acquisition of the L2 syntactic representation is critically dependant upon the acquisition of inflectional morphemes (Vainikka and Young-Scholten 1994, 1996a and 1996b; and Hawkins 2001). The second approach states that the full syntactic representation is available to the L2 learner in the initial state of the IL grammar and as a result, the acquisition of the morphology does not have a role to play in its development (Schwartz and Sprouse, 1996; and Epstein, Flynn and Martohardjono 1996).

The third level of investigation looks at the second one from a slightly different angle: the significance of variability in L2 production. On the one hand, it is argued that

variability is the result of an impaired representation, where certain functional categories are not present in the IL grammar (Beck 1998). On the other hand, the variability is deemed to be the result of a mapping problem between different parts of the grammar (Haznadar and Schwartz 1997; Haznadar 2001; Prévost and White 2000; and Lardière (1998a, 1998b).

This thesis also contributes to the descriptive linguistics of Irish. Variability can be looked at from yet another angle: language contact. Language contact can take many forms, but the effect generally tends to be that one of the languages, or both languages, undergo changes affecting the grammar as well as the vocabulary (Dorian, 1978, 1981; Dressler, 1991; Maher 1991). Changes in the grammar of a language are generally toward simplification. Particularly dramatic changes can occur when the speakers of language 'L' become politically and economically successful, and expand to new territory where people speaking languages other than 'L' live. Any study looking at spoken Irish in the last 50 years must contend with the fact that all native speakers of the language are now bilingual. English is the language of the economy and politics in Ireland. Levels of proficiency in Irish are variable, depending on the exposure to the language received before puberty and frequency of usage in daily life. While most children in Ireland are exposed to the language as a subject in the school system, as many children in the Ottawa area are taught Core French, these are not the fluent speakers in the country. The fluent speakers are those who were raised in Irish-speaking homes. Subsequent generations, are being raised in bilingual homes, and this thesis reveals some of the consequences of this phenomenon.

The next two chapters lay the foundation. Chapter 2 begins with detailed examination of the distinct characteristics of Irish that are involved in the construction of subject, direct and oblique relative clauses, cyclical (with the same complementizer) and mixed chains (with distinct complementizers) as well as long distance \bar{A} -dependencies where binding is not required (embedded verbal complements). Three syntactic approaches to account for Irish relative clauses are also presented in this chapter. One of these, (McCloskey 2000), is then applied to each of the simple and complex relative clause types under examination. Chapter 3 looks more closely at the models/hypotheses developed for L1 and L2 acquisition. The role of the morphology in the development of these models/hypotheses is the dominant theme. Expected outcomes for each of the L2 models/hypotheses are also given. Chapter 4 identifies the three off-line tests used in the experiment, the three learner groups who participated and the eight basic relative clauses structures under examination. Chapter 5 provides the results and discussion of each of the three test formats and Chapter 6 examines more closely the unanticipated results obtained for the native speaker control group that revealed a phenomenon of language change which is currently taking place in Irish. The overall conclusions are presented in Chapter 7 along with suggested areas for further research.

Chapter 2

Relevant Features of the Irish Language

2.0 Introduction

Irish is a Celtic language of the Indo-European family. The first part of this chapter looks at some of the distinct characteristics of Irish which come into play in the construction of Irish relative clauses. These include: V(verb) S(subject) O(object) surface word order, resumptive pronouns, prepositional pronouns, and word-initial mutations which change the first consonant sound of nouns, verbs and adjectives. Presented in the second part of the chapter is a description of the syntactic structures under investigation in this thesis, namely: subject relative clauses, direct object clauses, oblique clauses, sentences containing multiple cyclical clauses, and sentences with embedded verbal complement clauses. The theoretical basis for the syntactic analysis of these structures is contained in McCloskey (2000). All features of Irish clauses will be compared to English, the L1 of the subjects in the experiment.

2.1 Features of Irish Syntax and Phonology

2.1.1 Word Order

Two word order patterns are examined here. The first is the VSO¹ word order pattern used for simple sentences, relative and embedded clauses. The second is the word order pattern for non-finite constructions. Both of these patterns are used as distracter items in the experiment.

2.1.1.1 Word Order: Finite Constructions

The word order in Irish is VSO (Verb + Subject + Object) as compared to the SVO (Subject + Verb + Object) word order in English.

(2.1)

- a. V S O
 Imríonn an buachaill peil.
 plays the boy football
- b. S V O.
 The boy plays football.

Nouns are not marked for nominative and accusative case in Irish and adherence to this word order pattern is required. While in (2.1) there is only one possible (real world) interpretation, the example in (2.2) exemplifies the need to rely on this pattern in the language.

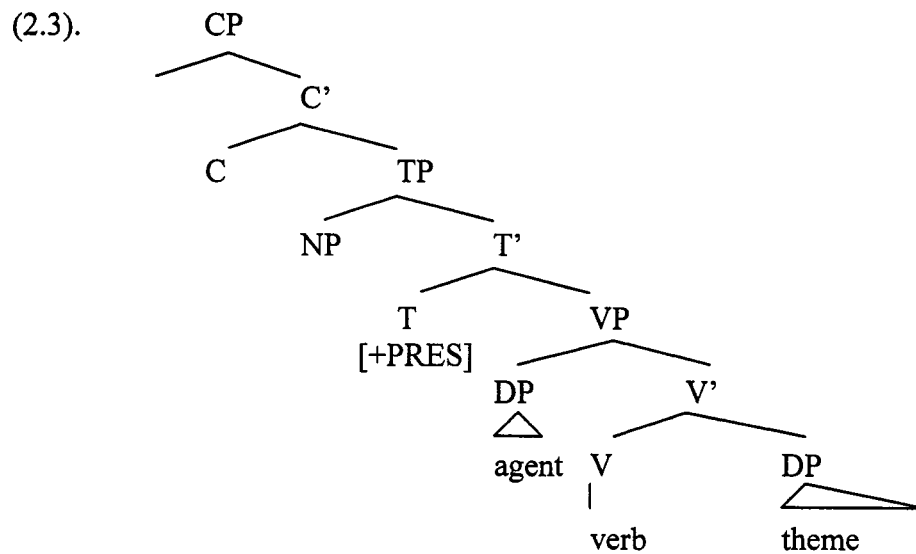
(2.2)

Pógann an cailín an leanbh.
kisses the girl the baby
The girl kisses the baby.

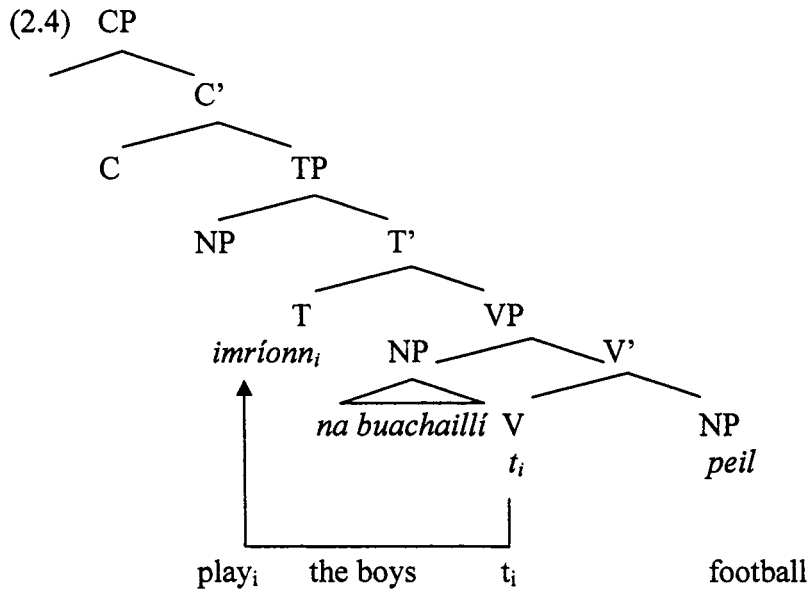
The only possible interpretation of this sentence is that the girl is the agent and the baby is the experiencer.

¹ The VSO word order is the third most common word order pattern, SVO word order being the most common (Orr, 2002). Other languages with this basic word order pattern include other Celtic languages e.g. Welsh and Scots Gaelic, as well as Arabic, Mixtec, Mayan, Tagalog, and Maasai.

The Verb Phrase (VP)-Internal Subject Hypothesis of Koopman and Sportiche (1991) provides an elegant explanation for VSO word order. The hypothesis was motivated by the need to accommodate thematic relationships between the verb and its arguments. These authors' claim is that subjects are generated inside the VP, and that the theta roles of both the external and internal arguments are assigned within the VP as in example (2.3) below.

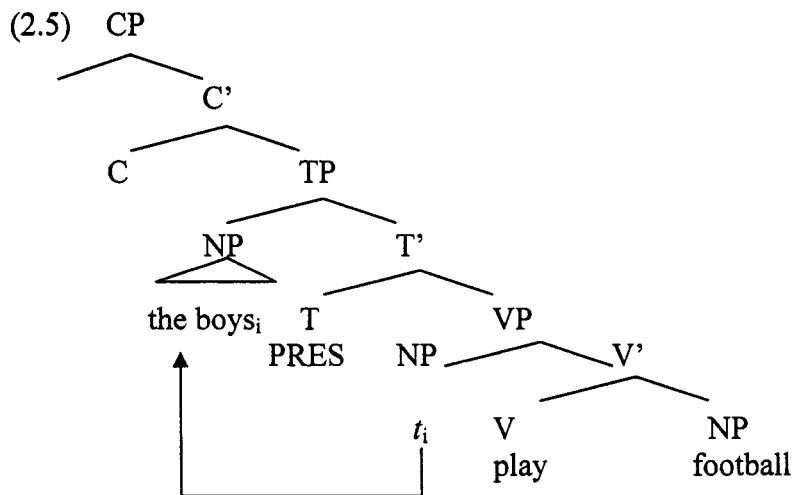


Sportiche (1988) argues that there is evidence for VP-internal subjects given the behavior of quantifiers such as 'all' where English subjects start in the specifier position of the VP. If we assume the VP-Internal Hypothesis, then we can account for the VSO surface order in Irish as simply a case of V to T(ense) raising as in (2.4).



In VSO languages, the nominative case position is the specifier position of the VP, as it must be immediately c-commanded by finite T. This allows the subject to remain inside the VP as illustrated in (2.4) above.

In English, the nominative case position is the specifier position of the finite T. The subject NP must therefore raise to this position to get case, as in (2.5), while the verb remains in situ.



Thus Irish and English differ in that the V raises to T in Irish giving the VSO order (2.4) while the subject raises to the specifier of TP, in English, as in (2.5) above, where the verb remains in V.

The VSO² pattern in Irish is present not only in simple sentences, as shown in (2.4) above, but also in more complex constructions containing relative clauses and embedded clauses, as in (2.6).

(2.6)

- a. *Duirt sé liom go dtiocfaidh said_amarach.*
 told he with-me that come-FUT they tomorrow
 He told me that they will come tomorrow
- b. *Cheannaigh mé an leabhar a labhairt tú faoi.*
 Bought I the book that spoke you about-it
 I bought the book that you spoke about.
- c. *Bhuail mé leis an bhean a gcreideann tú go bpósfaidh*
 Met I with the woman that believe you that will-marry
Seán léi.
 Sean with-her
 I met the woman that you believe that Sean will marry.

The subject in each of the examples in (2.6) immediately follows the verb in the clauses: *siad* ‘they’ in the verbal complement clause in (2.6a); *tú* ‘you’ in the simple direct object relative clause in (2.6b); and *tú* ‘you’ and *Séan* ‘Sean’ in the series of clauses as shown in (2.6c).

The examples above highlighted the word order pattern for finite constructions. In the following section the distinct word order pattern for non-finite constructions is examined.

² VSO languages also typically have other particular word order patterns such as noun + modifier (*‘buachaill beag’* = boy small > ‘small boy’), and possessed + possessor (*‘bróga an bhuachaill’* = shoes the boy > ‘the boy’s shoes’).

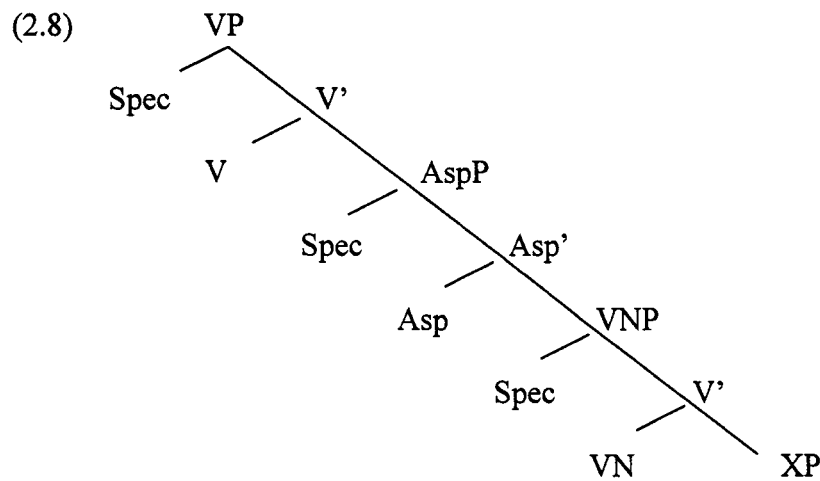
2.1.1.2 Word Order: Non-finite Constructions

The word order of Irish non-finite constructions is also different from English. The main reason for this is that while English uses a non-finite verb in these clause types, Irish uses a verbal noun and it is lenited, the word-initial palatalized /k'/ becomes /x'/ in (2.7b below). In this construction, the direct object moves to the left of the verbal noun (VN).

(2.7)

- a. I want [_{CP} PRO to buy a bigger house].
- b. *Ba mhaith liom* [_{AspP} *teach níos mó a cheannach*]
 Is good with-me [house more big PRT buy-VN]
 I want to buy a bigger house.

Travis (1991) argues that the VP consists of two segments and that each of these segments assigns case to an argument within its own projection. She assumes that the lower VP is headed by a VN and that a functional projection, Aspect Phrase (AspP), intervenes between the VP and the VN Phrase (VNP). The resulting structure would be as in (2.8), taken from Guilfoyle (2000:192).

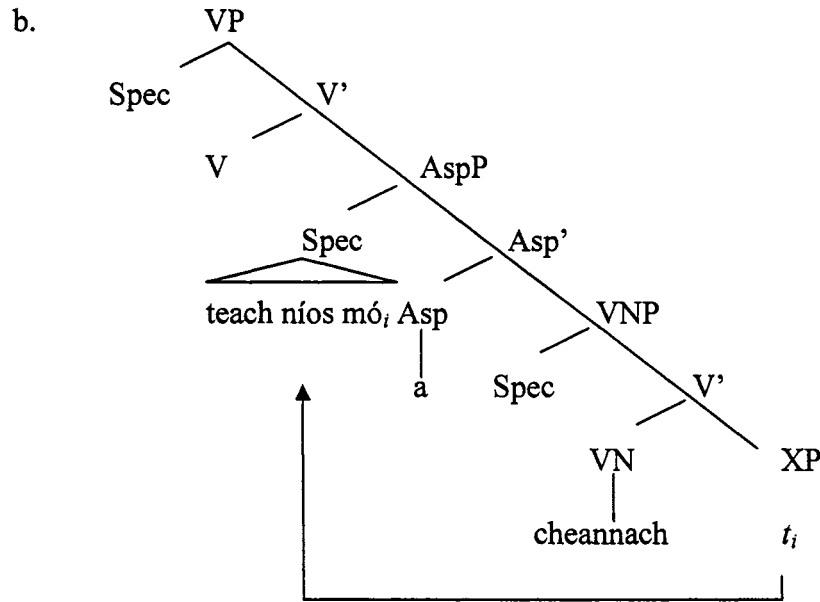


While Travis did not develop this proposal with Irish in mind, Guilfoyle (2000) demonstrates that this structure can account for the structure of Irish non-finite clauses. Guilfoyle (1997) argues that the verbal noun is actually a noun and not a verb. She supports this claim by providing morphological evidence that the verbal noun behaves like a noun in that it can bear genitive case and that it can also be used with the same reflexive morphology as ordinary nouns.

Guilfoyle argues that if verbal nouns are nouns, they do not have an external argument and that this is consistent with Grimshaw's analysis (1990). She claims that in non-finite clauses, the VN remains in *situ* and it takes a single internal argument (either a subject or an object) to which it can assign a theta role but not case. T is subcategorized for AspP and so the non-finite VP lacks an upper projection and thus does not have any position for an external argument. The particle *a* in the head of AspP is the case assigner. In sentence (2.7b), given here in (2.9a) for ease of reference, the particle *a* assigns accusative case to *teach níos mó* as shown below in (2.9b).

(2.9)

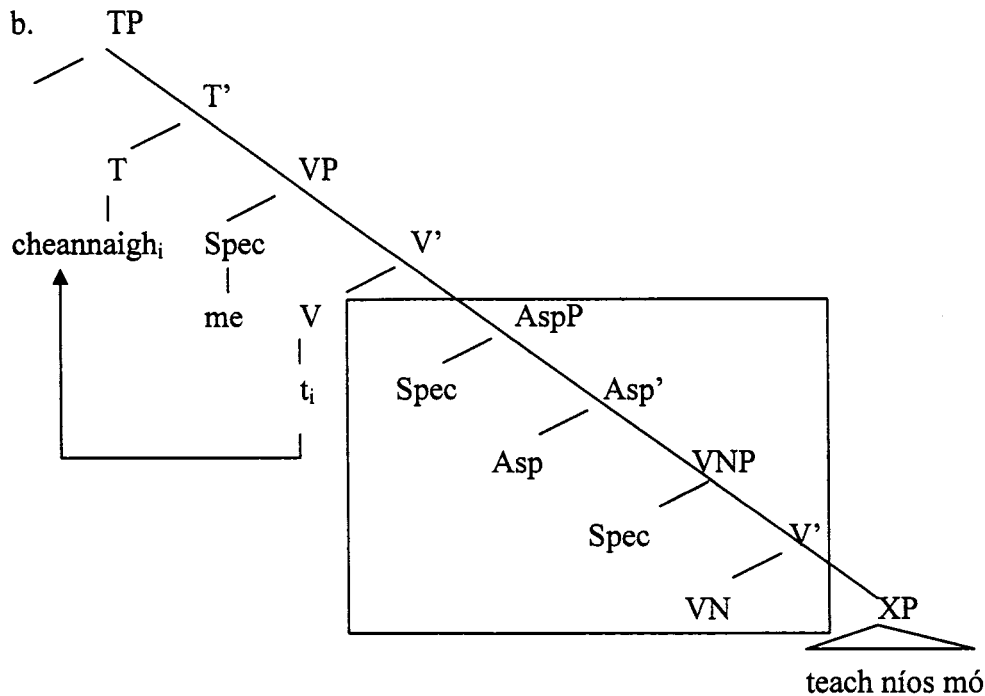
- a. *Ba mhaith liom* [_{AspP} *teach níos mó a cheannach*]
 Is good with-me [house more big PRT buy-VN]
 I want to buy a bigger house



Guilfoyle argues that only when the verbal noun merges with the higher V in the tensed clauses does it become a true verb. The verb fails to move in the non-finite clauses, thus supporting the underlying structure proposed above. In the structure in (2.9) it is the direct object that raises and not the verbal noun. This analysis allows us to account for the noun-like qualities of the verbal noun and to recognize that it has the argument structure of a verb. The verbal noun is lenited in these constructions. In the case of a sentence which does not contain a verbal noun, but a tensed verb, as in (2.10a) the corresponding structure would be (2.10b), as we saw above in (2.8).

(2.10)

- a. *Cheannaigh me teach níos mó.*
 Buy-PAST I house more big
 I bought a bigger house.



The AspP and VNP layers are not occupied because the verb is tensed. They can be omitted from the structure. They have been left in and placed inside a box to show the differences in the structure containing the VN in (2.9b) above. As we have seen before, the subject is generated in the specifier position of the VP and remains there to get nominative case. The object remains the sister of the V and is c-commanded by the tensed verb and is assigned accusative case. The verb is lenited in sentence (2.10). Lenition is also used to mark past tense.

Non-finite clauses are subject to dialectal variation. While the Ulster and Connaught³ dialects permit an overt subject pronoun in these clauses, the Munster dialect

³ Guilfoyle in a footnote (1997:187) identifies the Munster dialect as Southern Irish and the Ulster dialect as Northern Irish. She states that the Connaught dialect appears to pattern more closely with the Ulster dialect with respect to nonfinite clauses, but that more research is needed before this can be stated unequivocally. The example below is taken from Guilfoyle (1997:191). It would be considered ungrammatical in Munster.

Ba mhaith liom [sibh an doras a phéinteáil]
 COP good with-me [you-pl the door prt. paint-VN]

does not. Instead it restricts the number of lexical NPs which can precede the VN to only one. Given this dialectal variation, none of the sentences containing non-finite clauses reported in this thesis contain overt subjects. Sentences in this experiment are of the type found in the Munster dialect of the pattern in (2.7b) and (2.9b) above.

In sum, Irish adheres to a strict VSO surface word order in all its tensed clauses. In non-tensed clauses in the Munster dialect, it is the subject or the direct object which moves and not the verbal noun. All of the relative clause constructions investigated in this work contain tensed verbs. Certain test items containing non-finite constructions were included as distracter items in order to determine whether the learners perceived the lenition on the verb. All of the non-finite constructions were of the type where the direct object had been raised to the specifier of AspP.

2.1.2 Resumptive Pronouns

The term resumptive pronoun is widely used by both grammarians and linguists to designate a subject, direct object, or oblique object of a preposition pronoun which is co-referenced to a noun in a higher clause, often the matrix clause, or as a result of topicalized and dislocated NP. Resumptive pronouns are quite common in Irish as well as in other languages of the Indo-European language family e.g. Romance and Slavic, as well the Semitic languages. The reader is referred to Suñer (1998) for a cross-linguistic analysis of resumptive pronouns. While they are not typically found in English, they are accepted in sentences where there is a considerable distance between the matrix NP. For instance, in English, the resumptive pronoun at the foot of the chain in sentence (2.11) is not considered ungrammatical. On the contrary, given the distance between the head NP

‘woman’ and the foot of the chain, the sentence would be ungrammatical without the resumptive pronoun

(2.11)

‘I met the woman_i you believe that Peter claims that he overheard the other night at the party that Paul will marry her_i.’

The use of resumptive pronouns is prevalent in the constructions of various types of relative clauses in Irish. In the sentences below, the resumptive accusative pronoun *é*, ‘him’ refers to the noun *buachaill* ‘boy’ in the matrix clause (2.12a). Use of the overt ‘him’ in English would render the sentence ungrammatical. In (2.12b) the prepositional pronoun *leis* also refers to the noun. Use of the overt pronoun in the preposition in English renders the sentence ungrammatical.

(2.12)

- a. *Chonaic mé an buachaill a bpógann Máire é.*
Saw I the boy_i that kisses Mary **him**_i
I saw the boy that Mary kisses him.
- b. *Chonaic mé an buachaill a dhamhsaigh Máire leis.*
Saw I the boy_i that danced Mary **with-him**_i
I saw the boy that Mary danced with him.

In (2.12a) the resumptive pronoun is the direct object pronoun form, 3rd person singular *é* ‘him’, agreeing in number and gender with the head noun *buachaill* ‘boy’ in the main clause. In (2.12b), the resumptive pronoun is the fused prepositional pronoun form *leis* ‘with-him’. It also agrees in number with the head noun *buachaill* ‘boy’ of the main clause. Examples of this prepositional pronoun were seen earlier in (2.6), (2.7) and

(2.9)

There are therefore two types of resumptive pronouns in Irish: the direct object and the prepositional pronoun. The latter is more idiosyncratic and deserves to be examined more closely.

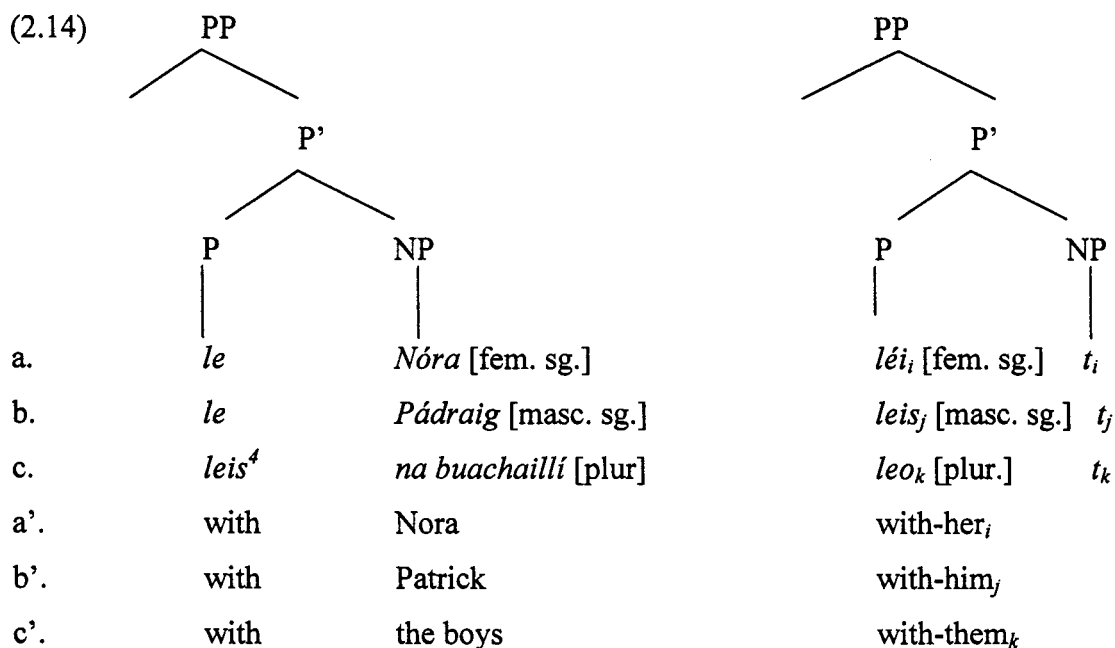
2.1.2.1 Prepositional Pronouns

Prepositional pronouns are fused combinations of a preposition and a pronominal morpheme marking person gender and number and they are declined in a similar fashion to verbs. The full declension of the preposition *le* ‘with’ is given in (2.13) below.

(2.13)

<i>liom</i>	[le+mé] with-me	<i>linn</i>	[le+sinn] with-us
<i>leat</i>	[le+tú] with-you (sg.)	<i>libh</i>	[le+sibh]with-you (plur.)
<i>leis</i>	[le+sé] with-him	<i>leo</i>	[le+said] with-them
<i>léi</i>	[le+sí] with-her		

The pronominal features of person, number and gender (singular only) are overt and recoverable. Examples given below show the forms for 3rd person forms.



In Irish, the prepositional pronoun can optionally be fronted and occur as the head of a [+wh] CP as in (2.15a) to form a question or as in (2.15b), where it is left at the end of the clause. A bare preposition cannot be stranded in Irish (2.15c) reinforcing the concept of it being a syntactic as well as a morphological unit. The same holds for the use of the prepositional pronoun used as a resumptive pronoun in relative clause constructions, where the full pronominal form must be present as in (2.15d). When there is simply a bare preposition as in (2.14e), the resumptive aspect disappears and the resulting sentence is ungrammatical. The argument structure of the verb is incomplete if pronominal reference for the theme/experiencer is missing.

- (2.15)
- a. Cé leis_i a raibh an cailín ag damhsa t_i
 Who with-him aN be-PAST the girl PRT dance-VN
 With whom was the girl dancing?

⁴ The form *leis* is used instead of *le* when this preposition is followed by an NP that is not a proper noun.

- b. *Cén fear_i a raibh an cailín ag damhsa leis_i?*
 Which man_i aN be-PAST the girl PRT dance-VN with-him_i
 Which man was the girl dancing with?
- c. **Cén fear_i a raibh an cailín ag damhsa le t_i?*
 Which man_i aN be-PAST the girl PRT dance-VN with
 Which man was the girl dancing with?
- d. *Sin é an fear_i a raibh an cailín ag damhsa leis_i.*
 This-is clitic the man_i aN be-PAST the girl PRT dance-VN with-him
 This is the man that the girl was dancing with(-him)
- e. **Sin é an fear_i a raibh an cailín ag damhsa t_i.*
 This-is clitic the man_i aN be-PAST the girl PRT dance-VN
 This is the man that the girl was dancing.

Although prepositions of this type are also found for instance in Slovenian and Hungarian, in Irish, every preposition can be declined in this fashion. A limited number of prepositional pronouns are found in Spanish where a combination of the preposition *con* meaning ‘with’ and the first and second person singular only (*conmigo* ‘with-me’ and *contigo* ‘with-you’) is possible.

Prepositional pronouns can be attached semantically to verbs to create new verbs in the same way that particles are used with verbs in English, such as ‘get up’, meaning ‘to rise’, or ‘check out’, meaning ‘to investigate’.

(2.16)

- a. *Tá úll agam.*
be apple **at-me**
 I **have** an apple.
- b. *Bhuail mé le mo chara inné.*
hit-PAST I **with** my friend yesterday
 I **met** my friend yesterday.

There is no verb ‘to have’ in Irish. The prepositional pronoun *ag*, “at” is used to render this concept in combination with the verb *tá* “to be” as shown in (2.16a). To create the verb ‘to meet’, the prepositional pronoun *le* is used with the verb *buail*, ‘to hit’ as seen in (2.16b).

In sum, there are two types of resumptive pronouns in Irish. Learners of the language will be more familiar with the prepositional pronouns because they are more commonly used than the accusative object forms. Prepositional pronouns act as arguments for certain verbs such as *éist*, to listen, where *le* and an NP or its declined pronominal form as in (2.13) above must be present. In addition, Irish does not have a simple verb forms for the common verbs ‘to have’, ‘to like’, ‘to need’. These are obtained by combining an NP or adjective and a prepositional pronoun⁵.

2.1.3 Word-initial Mutations

Probably the most striking feature of Celtic languages which L2 learners encounter are the changes which occur to word-initial consonants, and to a lesser extent, word-initial vowels. The types of mutations vary among Celtic languages, so I will focus on its manifestation in Irish.⁶

Before examining the word-initial mutations, it is important to point out that the basic consonant set in Irish varies from that of English. In particular, palatalization is phonemic and hence, in general, each consonant of English maps onto two distinct consonants in Irish, one palatalized (/bʲ/, /kʲ/, /gʲ/) and the other non-palatalized (/b/, /k/,

⁵ to have : *tá úll agam*, is apple to-me; I have an apple
to like: *is maith liom úlla*, is good with-me apples; I like apples
to need: *tá peann ag tastáil uaim*, is pen at need from-me; I need a pen.

⁶ The reader is referred to Ní Chiosáin (1991), Pyatt (1997) and Orr (2002) for examples of the differences between the Celtic mutation patterns.

/g/). The apostrophe is used here to indicate palatalization in the phonetic transcription. In ordinary orthography, the distinction between palatalized and non-palatalized is signaled by the adjoining vowels: e and i for palatalized; a, o, u, for non-palatalized.

(2.17)

a	<i>lón</i> [lo:n] lunch	<i>leon</i> [l'on] lion
b.	<i>bád</i> [bɑ:d] boat-NOM	<i>baid</i> [bɑd'] boat-GEN

In (2.17a) we have an example of the phonemic distinction based on the quality of the /l/. In (2.17b), we observe that palatalization also has a grammatical function.

There are two types of word-initial mutations in Irish: lenition and eclipsis. Diachronically, the phonological environment motivated each mutation form. Lenition occurred on consonants which occurred between vowels, and eclipsis occurred on consonants and vowels which followed a nasal consonant. In modern Irish the original phonological triggers are frequently absent yet the mutation remains. In the following two sections, each of the mutations is described in more detail.

2.1.3.1 Lenition

Lenition is a phonological term which refers to the weakening. In Irish it refers to when 'in word-initial position, a plosive or /m/ becomes a fricative, /s/ becomes /h/ and /f/ becomes zero...' (Trask 1996). It is the most commonly used mutation in Irish. The paradigm for Irish lenition is given in (2.18) below. All word-initial consonants in Irish undergo lenition except for /l/, /r/, /h/ and /n/. Vowels do not undergo lenition. Dialectal variation is evidenced where two lenited forms are given; e.g., /m/ is more frequently

pronounced /v/ in southern dialects and /w/ in northern dialects. Orthographically, the modern standard is to insert the letter ‘h’ after the affected consonant to indicate the lenition.

(2.18)

labial and velar stops

basic consonant	<u>/p/</u>	<u>/p’/</u>	<u>/b/</u>	<u>/b’/</u>	<u>/k/</u>	<u>/k’/</u>	<u>/g/</u>	<u>/g’/</u>
orthographic representation	p	p	b	b	c	c	g	g
lenited form	/f/	/f’/	/v//w/	/v’/	/x/	/x’/	/ɣ/	/ɣ/ /j/
orthographic representation	ph	ph	bh	bh	ch	ch	gh	gh

nasals

basic consonant	<u>/m/</u>	<u>/m’/</u>
orthographic representation	m	m
lenited form	/w//v/	/v’/
orthographic representation	mh	mh

dental stops and fricatives

basic consonant	<u>/t/</u>	<u>/t’/</u>	<u>/d/</u>	<u>/d’/</u>	<u>/s/</u>	<u>/s’/</u>
orthographic representation	t	t	d	d	s	s
lenited form	/h/	/h’/	/ɣ/	/j /	/h/	/h’/
orthographic representation	th	th	dh	dh	sh	sh

labio-dental fricative

basic consonant	/f/	/fʰ/
orthographic representation	f	f
lenited form	Ø	Ø' (the consonant disappears completely)
orthographic representation	fh	fh

A selection of examples of lenition is given below.

(2.19)

a.	<i>an buachaill</i> the boy	/ən buəxəl/	b.	<i>dhá bhuachaill</i> two boy(s) ⁷	/ɣa vuəxəl/
c.	<i>an focal</i> the word	/ən fokəl/	d.	<i>dhá fhocal</i> two word(s)	/ɣa okəl/
e.	<i>an mac</i> the son	/ən mak/	f.	<i>a mhac</i> his son (Nom sg.)	/ə wak/
			g.	<i>a mhic</i> his sons (Nom. pl.)	/ə vIk/

Celtic languages are unique among the Indo-European languages in having extended the application of lenition from an evolutionary process of the word itself to making its function grammatical. Lenition is used to indicate case and definiteness in nouns and, in verbs, it is used to indicate past tense, negation and relativization. Examples of relative clause constructions where lenition is used are given in (2.20). In (2.20a) a basic indicative sentence is given. In (2.20b) the same sentence has been reformulated into a sentence containing a subject relative clause. In (2.20c) an example of a sentence containing a direct object relative clause is given.

⁷ Plural forms of nouns are not used when the nouns follow numbers.

(2.19)

- a. [TP *Téann an buachaill go dtí an siopa.*]
/t'en ən buəxəl ɛr ən š'opə/
Goes the boy to the store
The boy goes to the store.
- b. [TP *Sin é an buachaill a* [TP *théann ar an siopa.*]]
/šIn e ən buəxəl ə hen ɛr ən š'opə/
This-is the boy that goes to the store.
This is the boy that goes to the store.
- c. [TP *Sin é an nuacht a* [TP *cheannaíonn an fear.*]]
/šIn e ən nuəxt ə xianiən ən far/
This-is the newspaper that buys the man.
This is the newspaper that the man buys.

The verb *téann* 'go', is in sentence-initial position in the declarative sentence in (2.19a) and in the relative clause in (2.19b). The word-initial consonant of the verb has undergone lenition. In (2.19a), the non-mutated form of the verb, the palatalized /t'/ is used. In (2.19b) the word-initial consonant has undergone lenition and the /t'/ has become /h/. In (2.19c) the word-initial consonant has undergone lenition and the /k'/, the common form of the verb *cheannaíonn* 'buys' has become /x/. In sentences containing clauses derived by movement *i.e.* subject and direct object relative clauses, the verb is lenited. The L2 learner's awareness of this morpho-syntactic association is one of the key factors under investigation in this thesis. The second mutation form, eclipsis, is described in the next section.

2.1.3.2 Eclipsis

The second word initial mutation of Irish is referred to as eclipsis. Two common phonological changes occur under eclipsis: the voicing of voiceless obstruents and the nasalization of voiced obstruents. Despite this duality of mutation, eclipsis is commonly

referred to simply as nasalization in the literature. A complete listing of the consonant alternations for eclipsis is given in (2.21).

(2.21)

voiceless and voiced stops

basic consonant:	<u>/p/</u>	<u>/p'/</u>	<u>/t/</u>	<u>/t'/</u>	<u>/k/</u>	<u>/k'/</u>	<u>/f/</u>	<u>/f'/</u>
orthographic representation	p	p	t	t	c,	c,	f	f
eclipsed form:	/b/	/b'/	/d/	/d'/	/g/	/g'/	/v/	/v'/
orthographic representation	bp	bp	dt	dt	gc,	gc,	bhf	bhf
basic consonant:	<u>/b/</u>	<u>/b'/</u>	<u>/d/</u>	<u>/d'/</u>	<u>/g/</u>	<u>/g'/</u>		
orthographic representation	b	b	d	d	g	g		
eclipsed form:	/m/	/m'/	/n/	/n'/	/ŋ/	/ŋ'/		
orthographic representation	mb	mb	nd	nd	ng	ng		

With eclipsis, the original consonant continues to be written, but it is not pronounced. It is the new initial consonant which is written in front of it that is pronounced. In this sense the term eclipsis is apt. During a solar eclipsis, the sun continues to exist, though not seen, while the moon moves in front of it. In the case of an eclipsed 'p' which is written orthographically as 'bp', it is the 'b' that is heard, in place of the 'p'. Words beginning with vowels can also be eclipsed. This is done by prefixing the letter 'n' to the word. Examples of eclipsis are given in (2.22).

(2.22)

- | | | | | | |
|----|---------------------|-------------|----|----------------------|-------------|
| a. | <i>an buachaill</i> | /ən buəxəl/ | b. | <i>sé mbuachaill</i> | /ʃe muəxəl/ |
| | the boy | | | six boy(s) | |

- | | | | | | |
|----|---|-------------|----|---|-----------------|
| c. | <i>an capall</i>
the horse | /ən kəhpəl/ | d. | <i>ar an gcapall</i>
on the horse | / ɛr ən gəhpəl/ |
| e. | <i>itheann sé.</i>
eat he
he eats (declarative) | /ɪhən še/ | f. | <i>n-itheann sé?</i>
eat [INTERR] he
Does he eat? | /nɪhən še/ |

Eclipsis does not occur word-medially as lenition does. Historically, the nasal endings on function words triggered the nasalization of verbs and nouns. In Modern Irish, many of these nasal triggers have disappeared, yet the mutation remains.

Eclipsis, although it does not occur as often as lenition does, has grammatical purposes also⁸. This mutation is also used to indicate case and definiteness in nouns and in verbs. It is used in interrogative sentences and relativization when a resumptive pronoun is present and in sentences containing verbal complement clauses. Listed in (2.23) are examples of eclipsis used in a relative clause (2.23a) and a verbal complement clause (2.23b).

(2.23)

- | | | |
|----|---|---|
| a. | [_{TP} <i>Sin</i> <i>i</i>
/ʃɪn i
This-is FEM-clitic
This is the woman that | [_{TP} <i>an bhean</i> <i>a</i> [_{TP} <i>ndamhsaíonn</i> <i>Seán</i> <i>leí.</i>]]
ən væn ə nausiən
the woman that dances
Sean with-her
Sean dances with. |
| b. | [_{TP} <i>Creidim</i> <i>go</i> [_{TP} <i>mbrisfidh</i> <i>an aimsir</i> <i>amarach.</i>]]
/krɛdʲɪm gə mɾɪʃhi ən iəmʃər əmarək/
believe-I that break-FUT the weather tomorrow
I believe that the weather will break tomorrow. | |

The verbs *damhsaíonn* ‘dances’, and *brisfidh* ‘will break’ are in sentence-initial position in the relative clause in (2.23a) and the verbal complement clause in (2.23b). The

⁸ The Christian Brothers Grammar lists 14 separate main entries for lenition, many of these have up to 4 and 5 sub-entries, whereas it lists only 7 separate main entries for eclipsis.

word-initial consonant of the verbs has undergone eclipsis. In (2.23a), /d/ is the initial consonant of the non-mutated form of the verbs, and has been eclipsed by /n/. In this sentence there is an absence of movement, as evidenced by the presence of the resumptive pronoun *léi* at the foot of the clause which is bound to the noun *bean* in the matrix clause. This is an example of an oblique relative clause. In (2.22b) the word-initial consonant /b/ of the common form has been eclipsed yielding /m/. In this sentence there is also an absence of movement. There is no binding of a resumptive pronoun either. In Irish, in cases where there is an absence of any kind of binding, the default complementizer *go* is used, and the verb is eclipsed. These examples show that in sentences where there is an absence of movement, either in oblique clauses or in verbal complement clauses, the verb is eclipsed. The L2 learner's awareness of this morpho-syntactic association is the second key factor under investigation in this thesis.

Another aspect of these word-initial mutations is that the resulting mutated consonants vary in degree of saliency. In Table 2.1 below, the lenited and eclipsed forms of the consonants are given. All consonants, which can appear in word-initial position in the common form of a word in Irish, appear in bold face.

Table 2.1

Comparison Between Common and Mutated Forms

COMMON FORM		LENITED FORM		ECLIPSED FORM	
/p/	/p'/	/f/	/f'/	/b/	/b'/
/t/	/t'/	/h/	/h'/	/d/	/d'/
/k/	/k'/	/x/	/x'/	/g/	/g'/
/b/	/b'/	/v/	/v'/	/m/	/m'/
/d/	/d'/	/ɣ/	/ɣ'/	/n/	/n'/
/g/	/g'/	/ɣ/	/ɣ'/ /j/	/ŋ/	/ŋ'/
/f/	/f'/	∅	∅	/v/	/v'/
/s/	/s'/	/h/	/h'/	/h/	/h'/
/m/	/m'/	/w/ /v/	/v'/		

The resulting lenited forms rarely appear as non-mutated word-initial consonants except for the lone /p/ → /f/ example. There are Irish words which begin with the consonants /h/, /v/ and /w/ but these are loan words such as *hairicín* ‘hurricane’ and *hiopnosis* ‘hypnosis’; *veirteabrach* ‘vertebrate’ and *vearnais* ‘varnish’; and *wigwam* ‘wigwam’ all of which would be obvious to the English L1 learner of Irish as being such. Scott (2001) argues that because the resulting lenited consonants are not potential word-initial common forms, they are more salient because of their distinctive function. It would follow therefore that the learner would recognize more readily that lenition has taken place. The resulting eclipsed forms on the other hand often yield word-initial consonants that are also in word initial position in the non-mutated form as seen by the majority of the examples. Scott argues that the double duty of these eclipsing consonants in word-initial position makes it more difficult for the learners to determine whether the word has been eclipsed or not.

2.1.4 Dialectal Variation

Within Ireland, there are three main dialects of Irish: Munster, Connaught and Ulster. The Munster dialect is spoken in the Kerry *Gaeltacht*, concentrated most specifically in the Dingle peninsula on the south western seaboard of Ireland. The Connaught dialect is spoken in the far western tip of Co. Galway, on the central western coast of Ireland, in the Aran Islands off the Galway coast, and slightly to the north along the coast in county Mayo. The Ulster dialect is spoken in the western seaboard of Co. Donegal, the northern-most county in Ireland. Dialectal variation is complex and beyond the scope of this thesis, but certain differences had an impact on this research. Some of these differences include: lexical variation and the distinct pronunciation of certain vowels and word endings; the varied uses of lenition and eclipsis; and the varied degree of preservation of synthetic verb forms (greatest in the Munster dialect and virtually absent in Ulster). Details concerning the implications of these dialectal variations will be raised as required throughout the thesis.

For these reasons, the concept of a standard usage for mutations is not clear for Irish. For example, the mutation on the verb when it is used in indirect speech according to the grammar books is eclipsis. This mutation would be considered inappropriate in Munster, where the dialectal preference would be to lenite the verb. The difference is similar to the distinct pronunciation forms for the word 'often', where in some dialects people pronounce the word-medial 't' and in other dialects people do not. While there exists a standard form for the Irish language, it is often referred to in derogatory terms as 'Dublin Irish' or 'school Irish'. A recent revision of the standard has been completed, where dialectal variation has been incorporated and recognized. For these reasons the

words ‘standard’ and ‘non-standard’ are used as opposed to ‘correct’ and ‘incorrect’ or ‘grammatical’ and ‘ungrammatical’.

2.2 The Features of Irish Relative Clauses

The second part of this chapter examines the different relative clause constructions that will be studied in this thesis. First a brief summary of the different syntactic approaches is presented. Second, the simple and complex clause structures used in the experiment are described under McCloskey’s analysis (2000).

Various syntactic analyses have been proposed for Irish clause structure for subject, direct object and oblique relative clauses, cyclical and mixed chains as well as long distance dependencies. While the analyses put forward by McCloskey (2000), Duffield (1995), and Noonan (1995) recognize the morpho-syntactic role of the word-initial mutations, all three differ on the basic question of whether or not all the relative particles in Irish should be treated as complementizers. McCloskey (2000) argues convincingly that they should be. Duffield (1995) argues that the relative particle *a*, which triggers lenition on the verb in the clause, is located in the TP and should, therefore, not be considered to be a ‘true’ complementizer. In his model, any particle which triggers lenition is located in T. Particles which trigger eclipsis are located in C, and only these are considered to be true complementizers. Noonan’s (1995) approach is somewhat similar to Duffield’s in that she claims *a*, whether it triggers lenition or eclipsis, is not a complementizer. She proposes that it is located in the head of a Focus Projection (FP) located under the CP. The syntactic analysis adopted for the purposes of this thesis is McCloskey (2000).

McCloskey's approaches (1985, 1990, 2000) are characterized by the integration of what happens under movement with what happens under resumption. Given this integration, all complementizers in Irish are located in C. He claims (2000) that Irish provides morphological evidence of the successive cyclicity of wh-movement. In his analysis, he identifies 3 complementizers: *aL*, *aN*, and *go*. The first two are forms of the surface form *a*, one which triggers lenition, which McCloskey labels *aL*, and the other which triggers eclipsis, which he labels as *aN*. The use of *aL* and *aN* were introduced by McCloskey (1985) and have been adopted as the standard short-hand for describing the association between the form of the complementizer and the type of mutation which occurs on the verb. The third complementizer, *go*, is used to introduce verbal complement clauses as in the following example (2.23b) repeated here as (2.24) for ease of reference.

(2.24)

[_{TP} <i>Creidim</i>	<i>go</i>	[_{TP} <i>mbrisfidh</i>	<i>an aimsir</i>	<i>amarach.</i>]]
/krɛdʲɪm	gə	mɾlʃhi	ən iəmʃər	əmarək/
believe-I	that	break-FUT	the weather	tomorrow
I believe that the weather will break tomorrow.				

There is no binding of an element in the complement clause. The verb undergoes eclipsis. The word initial consonant /b/, of the verb *bris* 'break' has undergone nasalisation, resulting in the /m/ sound heard in the sentence.

The other two complementizers *aL* and *aN* are used in the subject, direct object and oblique clauses. They are homophonous and are distinguished according to the mutation that they trigger on the clausal verb. The first is the complementizer *aL* which triggers lenition. This complementizer introduces clauses that contain a gap in either the

subject or the direct object position. The sentence in (1.3) illustrating a direct object clause is repeated here as (2.25).

(2.25)

Sin é an nuachtán_i [_{CP} a cheanníonn an fear ____i gach maidin.

This-is-agr-clitic the newspaper _i [_{CP} aL buys the man ____i every morning.

This is the newspaper that the man buys every morning.

The gap at the foot of the clause is evidence that movement has occurred⁹. Lenition is the mutation that is normally used in the presence of gaps/movement. The word initial consonant of the verb *ceannaigh* ‘buy’ /k/ has undergone fricativization resulting in the /ɣ/ sound heard in the sentence.

The second complementizer, *aN*, triggers eclipsis (or nasalization). This complementizer introduces clauses which contain a resumptive pronoun. The resumptive pronoun may be either the direct object position, or an oblique clause containing a prepositional pronoun. The equivalent sentence to (2.25) is given here in (2.26) with the direct object resumptive pronoun.

(2.26)

Sin é an nuachta_i [_{CP} a gceanníonn an fear é_i gach maidin.

This-is-agr-clitic the newspaper _i [_{CP} aN buys the man it_i every morning.

This is the newspaper that the man buys every morning.

⁹ Adger (2004) disputes the fact that movement is involved in Irish relative clauses. He claims that constructions containing gaps and resumption are base generated.

The resumptive pronoun at the foot of the clause is evidence that movement has not occurred. Eclipsis is the mutation associated with resumptive pronouns or non-movement. The word initial consonant of the verb *ceannaigh* ‘buy’ /k/ has undergone voicing resulting in the /g/ sound heard in the sentence

The critical difference between the choice of *aL* over *aN* is therefore the presence or absence of *wh*-movement. The form of the complementizer reflects the presence of movement properties. McCloskey (2000:22) represents the three-way distinction between the complementizers as follows:

(2.27)

- a. C whose specifier is filled by MOVE is realized as *aL*
- b. C whose specifier is filled by MERGE is realized as *aN*
- c. C whose specifier is not filled is realized as *go*

This three-way distinction can account for the eight different types of simple and multiple clause patterns under investigation in this thesis. The following sections look at each of the clause patterns in light of McCloskey’s analysis. Clauses formed *via* movement are referred to as gap clauses and those formed *via* resumption are referred to as resumptive pronoun clauses. Simple gap and resumptive pronoun clauses are presented first. These are followed by the cyclical and mixed chains and then finally the long distance dependencies.

2.2.1 Gap Clauses

Gap constructions are the result of the *wh*-movement of a null-operator, (McCloskey suggests a null *pro*), to an \bar{A} -position. In these clauses, which contain a gap,

the relativised positions are marked by ‘t’, (indicating a trace of the noun phrase (NP) has been left behind) in the relativised site which is co-indexed *via* the operator to the NP in the main clause. As mentioned above, the corresponding morphological marking on the verb is lenition. In his analysis, the presence of [+movement] on the operator and a merging of the C with the specifier of CP cause the verb to be lenited. The pattern for subject and direct object gap clauses is given in (2.28a) and the pattern for the cyclical binding of a gap is given in (2.28b) (McCloskey 2000:13).

(2.28)

a. $XP_i [_{CP} pro_i [C \text{ aL } [TP \dots t_i \dots]]]$
 C: EPP and *wh*-movement (MOVE)

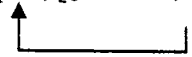
b. $XP_i [[_{CP} pro_i [C \text{ aL } \dots [_{CP} pro_i [C \text{ aL } [TP \dots t_i \dots]]]]]$
 C: EPP and *wh*-movement (MOVE)

The pattern in (2.28a) is examined below to show how it can account for both

subject and direct object gap clauses. The pattern in (2.28b) is discussed in the context of cyclical chains in section 2.2.1. The pattern for Irish subject relatives is given in (2.29).

(2.29)

a. $XP_i [_{CP} pro_i [C \text{ aL } \dots t_i \dots]]$

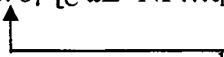

 subject position linked by movement to the Spec:CP → aL

b. *Sin an fear_i a cheannaíonn t_i an páipéar nuachtáin gach maidin.*
 That-is the man_i aL buys t_i the paper news every morning
 That in the man who buys a newspaper every morning.

The structure of the subject relative clause according to McCloskey (2000) would involve *wh*-movement from the subject position of the clause and a binding of that trace *via* the operator in the specifier of the CP.

The pattern for Irish direct object relative clauses containing a gap is given in (2.28a). The following is an example of the first structure.

(2.30)

a. $XP_i [_{CP} pro_i [_{C} aL NP \dots t_i \dots]]$

 object position linked by movement to the Spec:CP → aL

b. *Sin an páipéar nuachtáin, a cheannaíonn an fear t_i gach maidin.*
 That-is the paper news_i aL buys the man t_i every morning.
 That is the newspaper that the man buys every morning.

The structure of the direct object relative clause, according to McCloskey (2000), involves wh-movement from the object position of the clause, and a binding of that trace via the operator in the specifier of the CP.

Gap clauses have a limited distribution in Irish. They are obligatory in subject relative clauses, but are in apparent free variation with resumptive pronouns in direct object clauses. There is evidence, however, that native speakers prefer the gap construction over direct object clauses (McCloskey 1990, 2000, Goodluck, Guilfoyle and Harrington 2002). McCloskey (1990) extends the domain of application of the Principle B to include \bar{A} -binding, as well as A-binding. He argues that the subject position of relative clauses must be empty in accordance with what he calls the Highest Subject Constraint (HSC). This principle, as stated in McCloskey (1990:215), is given in (2.31). Examples are provided in (2.32).

(2.31) a pronoun must be \bar{A} -free in the least complete functional complex ([CFC]) containing the pronoun and a subject distinct from the pronoun [...where] a subject is an NP that is governed by INFL.

(2.32)

- a. *Sin an fear_i a cheannaíonn t_i an páipéar nuachtáin gach maidin*
 That-is the man aL buys t the paper news every morning
 That is the man who buys a newspaper every morning.
- b. **Sin an fear_i a cheannaíonn sé_i an páipéar nuachtáin gach maidin*
 That-is the man aL buys he the paper news every morning
 That is the man who he buys a newspaper every morning.

The example in (2.32a) is grammatical due to the presence of a gap in the subject position of the relative clauses modifying the subject of the main clause. Sentence (2.32b) is ungrammatical because a resumptive pronoun has been inserted into the subject position of the clause.

Given the HSC, the ungrammaticality of (2.32b) can be explained because the pronoun *sé* ‘he’ and a distinct subject *an fear* ‘the man’, are contained within the minimal CFC. In this case, the CFC extends to the higher clause in which the whole relative structure is embedded. The pronoun is therefore not \bar{A} -free in its domain since it is bound by the head NP or by the null operator in the specifier of the CP. The sentence in (2.33) below is grammatical because there is no \bar{A} -binding relationship with the complementizer *go*. This complementizer is also used with verbal complements. The result is that the pronoun is \bar{A} -free in its domain. This example is taken from McCloskey (1985:72).

- (2.33) *Dúirt Seán_i go dtiocfadh sé_{ij} abhaile.*
 Said Sean that come-COND he home
 Sean said that he would come home.

This constraint applies not only to Irish but also to other languages which allow gap and resumptive pronoun alternations. Hebrew and Palestinian, for instance, do not allow a resumptive pronoun in the highest subject position of relative clauses, but do allow subjects resumptives in embedded subject positions. The fact that this constraint is

observed across such distinct language types suggests that it may be a robust constraint within UG.

Gaps are disallowed in oblique clauses. As seen earlier in (2.14d,e), the full prepositional pronoun form is required to render the argument structure of the verb.

In sum, McCloskey suggests that Irish gap clauses are formed *via* movement from the direct object or subject position within the clause. The null operator of the specifier of the CP is marked [+wh] which ensures the presence of the complementizer *aL*, an overt morphological marker on the C realized as lenition on the clausal verb. Gap clauses are obligatory in subject relatives, optional in direct object relatives and disallowed in oblique relative clauses.

2.2.2 Resumptive Pronoun Clauses

The pattern for resumptive pronoun clauses is given below in (2.34). McCloskey (1990; 2000) argues that there is no distinction between pronouns and resumptive pronouns. It follows therefore, that he does not distinguish between the bare and prepositional pronoun forms.

(2.34)

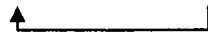
$XP_i [_{CP} pro_i [C \text{ a}N [_{TP} \dots rep_i \dots]] \quad C: \text{EPP (MERGE)}$

Two examples of resumptive constructions are given below. The pattern for pronominal \bar{A} -binding used to construct direct object resumptive pronoun clauses and oblique clauses¹⁰ is given in (2.35a).

¹⁰ Both of these constructions are referred to as indirect clauses in the Irish grammar book *Leabhar Gramadaí Gaeilge* by Nollaig Mac Congáil (2002:184).

(2.35)

a. $XP_i [_{CP} pro_i aN NP... resumptive pronoun_i, \dots]]$



b. *Sin an páipéar nuachtáin, a gceannaíonn an fear é, gach maidin.*
This-is the paper news-GEN *aN* buys the man *it* every morning
This is the newspaper that the man buys it every morning.

c. *Sin an fear, a mbuaileann Pól leis, sa bhus gach maidin.*
This-is the man *aN* hits Paul **with-him** on-the bus every morning
This is the man that Paul meets on the bus every morning.

The features of the resumptive pronoun are merged with the null operator (null *pro*) in the specifier of the CP. No movement has taken place, as these pronouns are base-generated. These clauses contain a resumptive pronoun: a bare accusative pronoun in (2.35b); a prepositional pronoun in (2.35c). In both cases there is agreement in number and in gender with the NP in the main clause.

McCloskey (2000) argues that when the specifier position of the CP ‘is filled by MERGE’ (2000:22) the complementizer is realized as *aN*, which triggers eclipsis of the first consonant of the verb. In (2.35b) ‘g’ is inserted (*gceannaíonn*). In (2.35c), ‘m’ is inserted (*mbuaileann*).

As mentioned above, there is evidence that L1 speakers of Irish prefer direct object clauses which contain a gap. The presence of the accusative resumptive pronoun in the direct object clause can, however, have a disambiguating role. Semantic ambiguities can result in direct object gap clauses. This is due to the VSO word order within the clause which causes the subject and the object NPs to be side by side. In some cases the semantics of the verbs and the nature of the NPs in the subject and object position can

lead to two interpretations. Lexical NPs are not marked for nominative or accusative case in Irish. On the surface, sentences (2.36a) and (2.36b) are homophonous.

(2.36)

- a. Sin an buachaill_i [_{CP} **a** phógann t_i an cailín.]
 That-is the boy **aL** kisses t the girl
That is the boy that kisses the girl. (Subject gap)
- b. Sin an buachaill_i [_{CP} **a** phógann an cailín t_i.]
 That-is the boy **aL** kisses the girl t
That is the boy that the girl kisses. (Direct Object :gap)
- c. Sin an buachaill_i [_{CP} **a** bpógann an cailín é_i.]
 That-is the boy **aN** kisses the girl **him**
That is the boy that the girl kisses him. (Direct
 object resumptive pronoun)

The NP and the gap in the clause can be interpreted as being the subject (2.36a) or the direct object (2.36b) of the verb. The ambiguity is resolved in (2.36c) with the insertion of the resumptive pronoun in the object position (the only position available to it).

Oblique clauses contain a verb with a PP argument. The PP must contain an obligatory NP complement of the prepositional head. In Irish, the NP and the P merge to form a prepositional pronoun, as seen in section 2.1.2.1 above. Prepositional stranding is not permitted in Irish. In addition to the pied-piping examples to form wh-questions seen earlier in (2.15), it is also possible to use pied-piping to create the clausal structures in (2.37). In (2.37) the prepositional pronoun *leis* is fused with the complementizer *a* resulting in the form *lena*. This structure, while common in the literature, is very rare in spoken Irish in all dialects.

(2.37)

Sin an fear, lena mbuaileann Pól sa bhus gach maidin.
 That-is the man with+aN hits Paul on-the bus every morning
 That is the man with whom Paul meets on the bus every morning.

In sum, McCloskey suggests that Irish resumptive pronoun clauses are formed *via* the merging of the features of the based-generated resumptive pronoun in the relativised site in the clause with the null operator in the specifier of the CP. There is therefore an absence of movement. The null operator of the specifier of the CP is not marked for [wh]. This lack of marking creates a requirement for the complementizer *aN*, an overt morphological marker on the C realized as eclipsis on the following verb. Resumptive pronoun clauses are optional in direct object relatives, often serving to disambiguate subject and direct object gap clauses. Resumptive pronouns are obligatory in oblique relative clauses.

While there are similarities with respect to the structure of Irish and English relative clauses under examination here (formed *via* movement, presence of invariant particle, cyclical binding of a gap over long distances), there are also significant differences. The table below summarizes the aspects of the simple clauses examined so far in this chapter.

Table 2.2

Summary of Structural Elements in Simple English and Irish Relative Clauses

	relativised site						complementizer from			
	movement			no movement			invariable [-wh]		wh-word [+wh]	null
	gap			resumptive pronoun.						
S	DO	Ob	S	DO	Ob	that	that	(who, which ...)	∅	
English	+	+	+	-	-	-	+	+	+	+
Irish	+	+	-	-	+	+	<i>aL</i>	<i>aN</i>	-	-
mutation	lenition			eclipsis						

S: subject relative clause; DO: Direct Object relative clause; Ob: Oblique clause

In this table, a plus sign (+) or minus sign (–) is used to indicate the admissibility or inadmissibility of the structures. For example, Table 2.2 tells us that in English, gaps are found in all of the three relative clause forms listed, and that resumptive pronouns are not permitted at all. The presence (+) or absence (–) of certain characteristics of the complementizer is also given in the table. It is seen that English makes use of an invariable complementizer, ‘that’; that wh-words such as ‘who’ and ‘which’ are acceptable; and the use of the complementizer in English is optional. The difference between gap constructions and resumptive constructions in cyclical and mixed chains as well as long distance dependencies is examined in the following three sections.

2.2.3 Cyclical Chains

The three-way distinction between the complementizers *go*, *aL* and *aN* can also account for cyclical chains, mixed chains (section 2.2.2) and long distance dependencies (section 2.2.3). The pattern for the cyclical \bar{A} -binding of a gap is given in (2.38).

(2.38)

$XP_i [{}_{CP} pro_i aL NP\dots] [{}_{CP} pro_i aL NP\dots t_i \dots]$


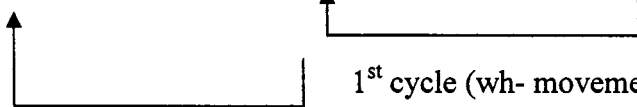
Sin í an luch_i a cheapann tú a mharóidh an cat t_i.

That-is the mouse_i *aL think* you *aL kill-FUT* the cat *t_i*.

That is the mouse that you think that the cat will kill.

The two-part derivation in (2.38) is broken down in (2.39) to illustrate the cyclical nature of the binding of the trace.

(2.39)

- a. *Sin í an luch_i [CP a cheapann tú [CP pro_i a mharóidh an cat t_i]].*

 1st cycle (wh-movement) → aL
- b. *Sin í an luch [CP pro_i a cheapann tú [CP pro_i a mharóidh an cat t_i]].*

 1st cycle (wh- movement) → aL
 2nd cycle (wh-movement) → aL

In (2.39a), movement has occurred to the first \bar{A} -position, the specifier of the lower complementizer *a*, where the wh-feature has been applied to the complementizer and the resultant mutation, lenition, is applied to the verb. In (2.39b), the second movement to the next \bar{A} -position, the specifier of the higher complementizer *a*, is performed and the wh-features are applied once again to the complementizer. The resultant mutation is again lenition.

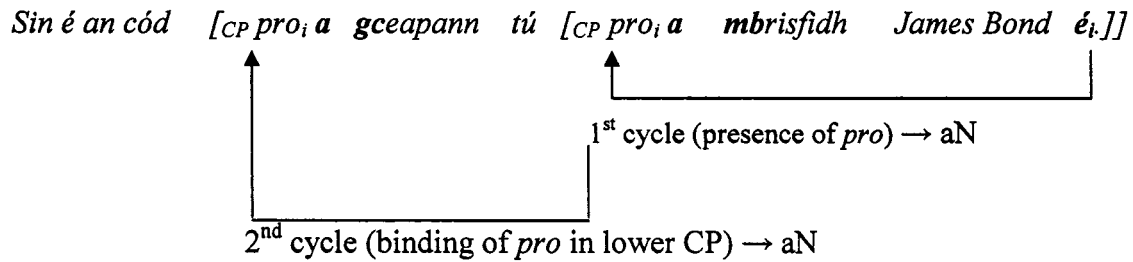
In the second attested cyclical pattern, *aN* is located in both C-positions of a cyclical \bar{A} -dependency. This pattern is not as common as the one containing the gap in (2.38) above. The pattern for the cyclical \bar{A} -binding of a resumptive pronoun is given in (2.40).

(2.40)

- a. XP_i [CP *pro_i aN*... [TP ... [CP *pro_i aN*... [TP resumptive pronoun_i ...]]]
- b. *Sin é an cód_i a gceapann tú a mbrisfidh James Bond é_i.*
 That-is the code *aN* thinks you *aN* break-FUT James Bond it.
 That is the code that you think that James Bond will break.

We know that the presence of the resumptive pronoun triggers the presence of the complementizer *aN* in the lower CP. McCloskey assumes that the specifier of CP of any clause containing a resumptive pronoun is occupied by null *pro*, the null operator. The derivation is presented in (2.41) below.

(2.41)



The null *pro* generated in the specifier of the lower CP binds the resumptive pronoun in the first cycle, the lower clause. This triggers the presence of the complementizer *aN* in the lower C. The second cycle involves the binding of the null *pro* in the specifier of the lower CP as a resumptive pronoun. This means that the null *pro* can serve as the binder for the occurrence of a resumptive pronoun in the lower clause and the bound element for a higher *aN* clause.

2.2.4 Mixed Chains

McCloskey (2000:16,18) presents evidence of constructions containing mixed chains. In some cases there is an *aN* complementizer in the higher CP and an *aL* complementizer in the lower clauses and a gap at the foot of the chain (aN_aL_{gap}), as seen in (2.42a). He argues that its mirror image structure is also possible where the higher CP contains an *aL* complementizer, and the lower CP contains an *aN* complementizer and

there is a resumptive pronoun at the foot of the chain (aLaNrep)¹¹. The examples are from McCloskey (2000: examples (30) and (34c) respectively).

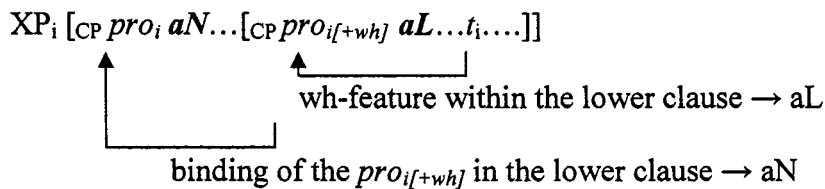
(2.42)

- a. $XP_i [{}_{CP} pro_i aN \dots [{}_{CP} pro_i aL \dots t_i \dots]]$
- b. $XP_i [{}_{CP} pro_i aL \dots [{}_{CP} pro_i aN \dots \text{resumptive pronoun}_i \dots]]$

McCloskey’s analysis of these types of construction is based on the assumption that complex NP constructions allow movement within NP islands without violating any constraints. This being the case, in (2.42a), the lower specifier of CP is marked by movement, hence *aL* and the specifier of the higher CP would undergo the binding of the element which underwent movement in the lower clause, the *pro*, hence it is realized as *aN*. The dependency is set out schematically in (2.43a) and an example from the thesis is given in (2.43b).

(2.43)

a.



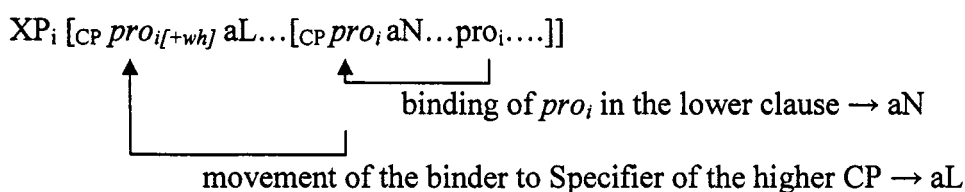
- b. *Sin é an breagán [a gceapann tú [a bhrisfidh na paistí.]]*
 This-is the toy [*aN* think you [*aL* break-FUT the children]]
 This is the toy that you think that the children will break.

¹¹ The abbreviation ‘rep’ for resumptive pronoun is used in the description of the patterns throughout the thesis.

In (2.42b) above, the specifier of the lower CP is not marked by movement because of the presence of the pronoun in the relativised site, hence the complementizer is *aN*. Movement of the binder into the specifier of the higher CP triggers the presence of the complementizer *aL*, which is associated with movement. This dependency is set out schematically in (2.44a) and an example is given in (2.44b).

(2.44)

a.



- b. *Sin é an teach [a cheapann tú [a dtógann an fear é.]]*
 This-is the house [*aL* think you [*aN* builds the man it]]
 This is the house that you think that the man builds it.

The fact that these patterns exist has interesting implications for the mechanisms governing the form of C. In (2.41), the null *pro* which binds the movement at the lower level triggering *aL*, can itself be the element that is bound. The null *pro* in the higher clause is treated as the resumptive pronoun, by the specifier of the higher CP, triggering the presence of the complementizer *aN*. In (2.43), the null *pro* in the specifier of the lower CP binds the resumptive pronoun, triggering the presence of *aN*. This null *pro* undergoes \bar{A} -movement to the next level, triggering the presence of *aL*.

“That is, the same [McCloskey’s emphasis] element determined one form of C in its lower position and a different form of C in its higher position.

Unless the raised element loses or acquires featural content as a

consequence of raising, this is incompatible with the view that intrinsic properties of the element in SPEC:CP determine the form of C.” (McCloskey 2000:19).

2.2.5 Long-distance \bar{A} -dependencies

Of the patterns considered thus far, the most productive \bar{A} -dependencies pattern that contains a gap is the one represented in (2.28b). The most productive pattern that contains a resumptive pronoun (McCloskey, 2000) is given below in (2.45a).

(2.45)

- a $XP_i [CP \dots aN \dots [CP go \dots [TP \dots pro_i \dots]]]$
- b. *Sin é an teach_i a gceapann tú go gceannóidh an fear é_i.*
 That-is the house_i aN think you go buy-FUT the man it_i.
 That is the house that you think that the man will buy.

In (2.45b), the complementizer *aN* is in the higher clause, signifying the presence of a resumptive pronoun in the relativised site, and the default complementizer *go* is in the lower clause, signaling an absence of binding. The binding relationship between the resumptive pronoun and the operator is given in (2.46).

(2.46)

Sin é an teach [_{CP} *pro_i a gcreideann tú* [_{CP} *go gceannóidh an fear é_i*]]

↑—————↓

binding of *pro_i* → *aN*

That- is the house [that think-PRES you [that buy-FUT the man it]]
 That is the house that you think that the man will buy it.

The use of the complementizer *aN* in the top clause signals the need to bind a pronoun later in the derivation. The default complementizer *go* at the head of the embedded clause does not play a role in between the higher complementizer and the pronoun at the foot of the chain. The binding relationship stretches from the top clause to the pronoun without violating any subjacency conditions, as the *go* complementizer is invisible to the operation. The *go* clause must contain a full sentence, the subject, the verb and its complement, either the full NP or a pronoun. It is this pronoun which is the resumptive pronoun when the *go* clause is the embedded clause. This explains why the pattern aLgogap is not grammatical in Irish.

The complementizer in verbal complement clauses is obligatory in Irish (2.47a), unlike English where it is optional (2.47b).

(2.47)

- a. *Creidim* [_{CP} Op[-wh] [_C *go* [_{IP} *gceannóidh mé páipéar nuachtáin*]]].
 Think-I [_{CP} Op[-wh] [_C *go* [_{IP} buy-FUT I paper news
 I think that I will buy a newspaper.
- b. **Creidim* [_{CP} Op[-wh] [_C \emptyset [_{IP} *gceannóidh mé páipéar nuachtáin*]]]
 Think-I [_{CP} Op[-wh] [_C \emptyset [_{IP} buy-FUT I paper news
 I think I will buy a newspaper.

A summary table comparing the differences between English and Irish complex relative clauses is provided in Table 2.3.

Table 2.3

Summary of Structural Elements in Multiple Clauses in English and Irish

		relativised site			
		movement	absence of movement		
		gap	resumptive pronoun		
English	that + that	that + that	–	–	–
Irish	aLaLgap	aNaLgap	aNgorep	aNaNrep	aLaNrep

gap: presence of gap in relativised site; rep: presence of resumptive pronoun in relativised site; go: complementizer signaling an absence of binding

It is shown in Table 2.3 that English makes use of an invariable complementizer, ‘that’ in all its multiple clauses whereas Irish can make use of various combinations of *aL*, *aN* or *go*. English does not normally contain resumptive pronouns and it does not have morphological marking on its verbs. In all cases where there is a gap in the relativised site in Irish, the *aL* complementizer is present in the lower CP. In all cases where there is a resumptive pronoun in the relativised site in Irish, the *aN* complementizer is present in the lower CP, unless it is used with the default complementizer *go*, in which case it is in the higher CP.

In sum, the three-way distinction, between *go*, *aL* and *aN* proposed by McCloskey for the simple clause constructions can account for the wide selection of multiple clause patterns possible in Irish. These clauses can contain either gaps or resumptive pronouns in the relativised site. The presence or absence of the [movement] feature in the specifier position of the CP is controlled cyclically, ensuring the appropriate binding relationships, i.e, bind a gap vs bind a resumptive pronoun. The long distance binding of the resumptive pronoun in verbal complement clauses is also accounted for.

The analysis in this chapter has shown that there is a direct morpho-syntactic association in Irish between the content of the relativised site in a clause, and the nature of the complementizer which is overtly realized as either lenition or eclipsis on the clausal verb. Resumptive pronoun constructions are present in Irish and would not normally be represented in the L1 grammar of the English speaker. This leads to the question of whether or not the L2 learners of Irish make use of this distinct morphology in acquiring the various simple and complex L2 clausal constructions, especially since the morphology occurs linearly in the sentence before the relativised site. In this study, we explore whether or not the L2 learners have acquired the distinct complementizers *aL* and *aN* via the overt morphology on the clausal verb and whether they have made the association between these complementizers and the content of the relativised site (gap vs resumptive pronoun) in both simple and complex constructions. We also want to discover if learners have developed a resumptive strategy for Irish based on the need for a distinct *aN* complementizer or whether a resumptive strategy has been acquired independently of the morphology.

A description of L2 acquisition models is given in the next chapter. These models differ on the basis of the acknowledged role overt L2 morphology plays in the development of the L2 syntax. First, however, a brief examination of the debate in first language acquisition concerning the presence of movement and complementizer forms in early relative clauses produced by children is presented in the following chapter.

Chapter 3

The Acquisition of Relative Clauses

3.0 Introduction

The innate knowledge which permits humans to learn languages is referred to as a Universal Grammar (UG). This Grammar consists of a set of invariant principles that are common to all languages and a set of parameters that vary from one language to another (Chomsky: 1981). Children learning their first language (L1) apply these universal principles and set the parametric options in a particular way to match the language in their environment. They are not taught to speak their L1, yet they are completely successful in a relatively short period of time regardless of affective features such as personality and socialization. Children rely on positive evidence, correction appears to have no beneficial impact (Morgan and Travis 1989; Marcus 1993). Children learning a second language (L2) can achieve native command of morphology and syntax before the age of 7 years (Johnson and Newport 1989), but may need to acquire the second language earlier in order to avoid speaking the L2 with a foreign accent (Flege, Yeni-Komshian and Liu 1999).

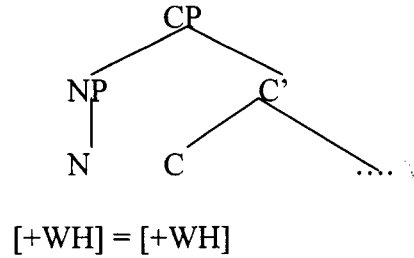
There are differences between the ability of children and adults to acquire a second language. The ability to acquire a language with native-like syntax, phonology, and morphology drops off dramatically before the critical age period, said to be roughly

around the onset of puberty (Lenneberg,1967; Curtiss 1977,; Johnson and Newport 1989; Flege, Yeni-Komshian and Liu 1999). With this in mind, it can be expected that structures which are not present in the L1, but are present in the L2, such as relative clauses which contain resumptive pronouns, will be more difficult for the adult learner to acquire. In addition, adult learners rarely attain full competence in the acquisition of their L2. There is wide variation in the level of success, and fossilization is common. Formal instruction is usually undertaken and negative evidence and correction are used as teaching tools. In addition, affective factors such as personality, motivation, socialization, and attitude play a role in the level of success attained. The reader is referred to Coppieters (1987) and Bley-Vroman (1989) for a list of systematic differences and deficiencies between L1 and L2 acquisition.

All language learners, be they child L1/L2 learners or adult L2 learners, have to acquire a lexicon and a syntactic representation for the language they are learning. In this thesis, the position adopted is that the L2 learner is guided by the general principles of UG and will (re)set the parameter for word order, for example, for a required grammatical structure: SVO for English and VSO for Irish. Another example of parametric variation between languages is whether a particular language allows only for the movement in relative clauses, as does English, or allows optional movement and a resumptive strategy or binding only as does Irish. These distinctions are reflected in the features within the functional categories.

The acquisition of functional categories is said to be a syntactic result of feature strength. The checking of features is done in a local domain, which is defined as the specifier head configuration. The following example is adapted from Carnie (2002:316)

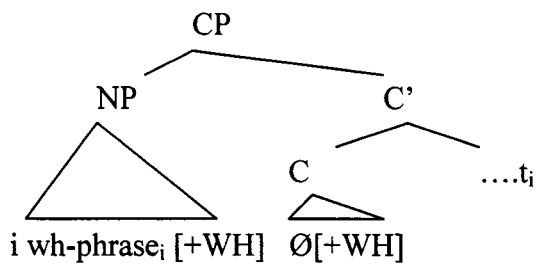
3.1



The wh-phrase must move to the specifier of the CP position when forming questions and relative clauses in many languages. The checking configuration illustrated in (3.1) shows that [+WH] features on the complementizer must be checked locally *via* the [+wh] features in the specifier position. If they agree, they cancel out; if they don't, the derivation is ungrammatical (Chomsky 1995).

In chapters 1 and 2, it was shown that the CPs for English and Irish are distinct. Their syntactic representations are compared below in 3.2.

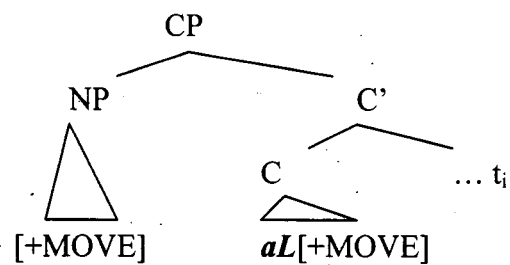
(3.2) a. English



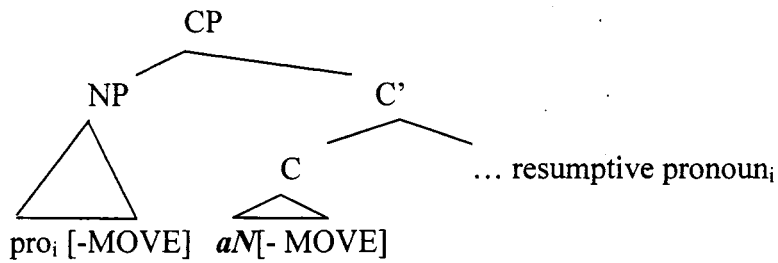
ii Op_i [WH] that [-WH]

iii Op_i [WH] ∅[+WH]

b. Irish *aL*



c. Irish *aN*



The structure in 3.2a shows that in English there are only two possible ‘relativizers’ (Hawkins 2001:157), a *wh*-word and a null operator (Op), and two possible complementizer heads, ‘that’ and ‘Ø’; The combination of these elements yields the three possible relative clause structures for English.

- i.: a relative clause that contains a *wh*-word or *wh*-phrase which has moved from the position in the clause to the specifier position of the CP
- ii.: a relative clause that contains the invariable complementizer ‘that’ in the head of the complementizer position and the null operator in the specifier of the CP
- iii: a relative clause with no overt complementizer and a null operator in the specifier of the CP

A CP containing a *wh*-word in the specifier position and ‘that’ in the complementizer head position is ungrammatical in English since the [+WH] feature of the former and [-WH] feature of the latter would crash (fail to check).

(3.3)

*I read the book which that you recommended.

The structures in (3.2b) and (3.2c) represent the two possible configurations for Irish relative clauses. The configuration in (3.2b) is of an *aL* relative clause, the type that binds a gap in the relativised position. The features [+MOVE] are present in the C to trigger the *aL* form and also in the specifier position, ensuring a grammatical sentence. The configuration in (3.2c) is of an *aN* relative clause, the type that binds a resumptive pronoun in the relativised position. The features [-MOVE] are present in the C to trigger the *aN* form and in the specifier position, ensuring a grammatical result. The specifier of the CP is occupied by the operator *pro*, which acts as the binder for the resumptive pronoun in the clause (McCloskey 2000:22)

This chapter looks at the impact of morphological variability on the development of first language (L1) and second language (L2) acquisition models/hypotheses. Section 1 provides a description of the debate concerning whether children apply a movement or a non-movement analysis to early L1 relative clauses. Variability in the use of complementizers and the development of the morpho-syntactic association between them and the type of relative clause required is examined. Section 2 focuses on L2 acquisition.

3.1 L1 Acquisition of Relative Clauses; Movement vs Non-movement

This section provides an overview of the debate concerning whether or not children initially produce relative clauses derived *via* the binding of a resumptive pronoun and subsequently develop wh-movement, or whether wh-movement is present in early relative constructions. A simplified standard view of relative clauses is that adult articulations which contain gaps suggest movement, while those which contain

resumptive pronouns do not. Goodluck and Stojanovic (1996) argue that this is too categorical a statement. This simplified view fails to recognize that there are a variety of types of resumptive pronouns. Suñer (1998) argues that there are two main classes of resumptive restrictive relative clauses. It is argued that the distinction is based on “the feature composition of the complementizer” (Suñer 1998:335).

In the first class, the conventional class, resumptive pronouns are used to avoid island violations, inserted to identify the ungrammatical trace. She refers to this as a ‘repair’ strategy, the use of a resumptive pronouns as last resort which operates before the split toward Phonetic Form and Logical Form (McCloskey 1990; Shlonsky 1992). The second class of resumptive restrictive relatives clauses, according to Suñer, are those which occur in the absence of wh-islands and are a part of Phonetic Form, “to make pronounceable the null relative pronoun in situ...” (Suñer 1998:336).

A controversy currently exists, however, as to whether or not the early relative clauses produced by children are derived *via* movement. Two approaches are considered. Labelle (1990) and Goodluck and Stojanovic (1996) argue that it is reasonable to conclude that children apply a non-movement analysis in the early production of relative clauses because children generally tend to overuse complementizers and avoid relative pronouns in early clause constructions. Guasti and Shlonsky (1995) argue that because children use wh-questions early in their multi-word combinations, it follows that they would also make use of movement rules early on in the acquisition of relative clauses. Research conducted on the acquisition of Irish relative clauses is also presented (Goodluck, Guilfoyle and Harrington 2001, 2003, 2005 *in press*).

3.1.1 Non-movement

Labelle (1990) proposed a non-movement analysis for children's early relative clauses. Her conclusion was based on the observation that children learning French do not use pied-piping in their relative clauses but that they do use resumptive pronouns abundantly. These results are significant for three reasons: i) it is generally assumed that pied-piping requires the overt wh-movement of a preposition and a wh-operator; ii) resumptive pronouns are generally overt indicators that wh-movement has not taken place; and finally, iii) these results are very different from the adult grammar of French.

In a production task, sentences containing both gaps and resumptive elements in the relativised site were obtained, as in (3.7). The examples are from Labelle (1996:69 and 73).

(3.7)

- a. *La balle_i qu'i(l) dessine _____i* (MJ 3;6)
la balle_i [Op [qu'i(l) dessine _____i]]
the ball_i [Op [that he draws _____i]]
- b. *Sur la balle_i qu'i(l) lance la balle_i* (M. 5;1)
sur la balle_i [Op [qu'i(l) lance la balle_i]]
on the ball_i [Op [that he throws the ball_i]]

In (3.7a) a gap construction is used while in (3.7b) a resumptive element is present. Labelle noted that resumptive pronouns are not attested in wh-questions in child language and so they must be base-generated. She also noted that children do consistently use the relative pronoun *qui* 'who' as opposed to *que* in subject relative clauses. She accounted for its presence without making reference to wh-movement by stating *qui* is due to a local rule of agreement of the complementizer with a base-generated empty category in subject position." (Labelle 1990:105).

Labelle (1990,1996) claimed that children do not make use of wh-movement in their use of relative clauses. An analysis which “treat[s] the predication index as a lambda operator” (Labelle1990:107) was proposed instead. This operator must be present in order to \bar{A} -bind the empty category (3.7a) or the resumptive element in (3.7b) above.

The claim was based on Chomsky’s (1982) analysis which suggests that resumptive clauses are derived *via* predication. The clause is taken to be “an open sentence predicated of the head” (Chomsky 1982:13). Furthermore, he claimed that it could be assumed that “this is a general property of relative clause interpretation, whatever the internal structure of the relative clause.” Predication itself occurs at LF and the resumptive pronoun is interpreted at LF as a bound \bar{A} -variable. In adopting this model, Labelle (1990, 1996) proposed the following structure as shown in (3.6) for early relative clauses produced by children.

(3.6)

[NP]_i [CP]_i

In this model, the head NP is co-indexed with the CP and the gap or the resumptive pronoun in the clause is bound to the matrix NP. Labelle proposed this model because the relative clauses in the data considered were not introduced by a wh-pronoun.

Labelle also accounted for the discontinuity between, on the one hand, the presence of pied-piping in questions of very young children and the complete absence of pied-piped forms in the relative clauses in her data, and on the other, the presence of wh-words such as *où* ‘where’ in the data. The presence of these elements usually suggests movement to the specifier of CP, which is contrary to Labelle’s position. The author

argued that the pied-piped forms such as *sur quelle balle* ‘on which ball’ (Labelle 1990: 109 example (32)) in questions and the question word *où* are not co-indexed to an antecedent, but that “the whole clause denotes a location, and this location is predicated of the antecedent...” (Labelle, 1990: 109) as in example (3.8) (Labelle 1990: 110 example (36)).

(3.8) [*La petite fille* _i [*où* _k *le garçon lui* _i *dit bonjour t* _k] _i

‘The little girl where the boy said hello to her.’

Labelle argued, based on Wexler (1991), that the absence of movement in pied-piped relative clauses “is related to the general unavailability before age 6 of ‘linking operators’ [author’s quotation marks] (operators that are coindexed with both an antecedent and a variable)...” (Labelle 1996: 67).

Labelle claimed that children begin using pseudo-relatives (3.9a) and clefts (3.9b,c) in French at an early age. These constructions are “predicative in nature ... [and] they are introduced by *que* ‘that’ or by *qui* ‘that’ and not by any wh-word...” (Labelle 1999: 113). The examples below are from Labelle (1990: 112-113, examples 41, 43a and 43c).

(3.9)

- a. (What’s this noise?)
C’est Marie qui arrive.
It’s Mary who is arriving
- b. *C’est le chien qui court.*
It’s the dog that is running.
- c. *C’est à Pierre que je veux parler.*
It’s to Peter that I want to talk.

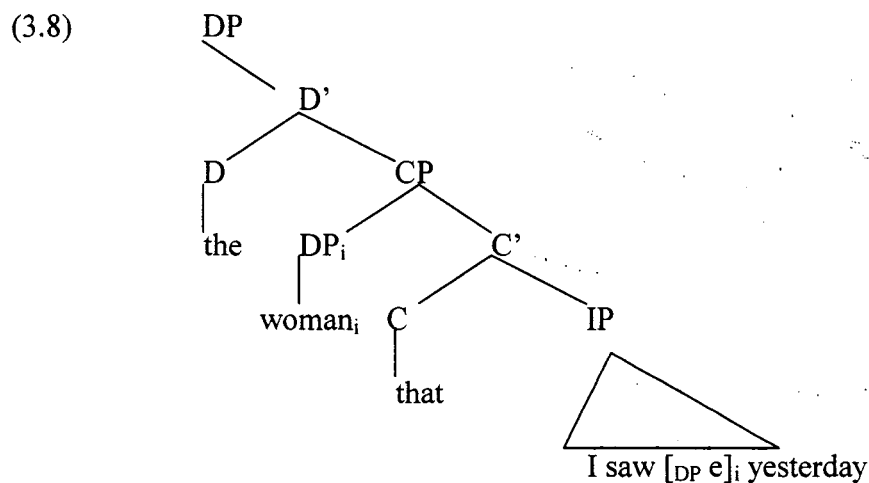
Labelle accounted for the lack of overt wh-movement in their early relative constructions by concluding that the children's early relative clauses are based on these familiar predicative constructions which are used to restrict an NP. Children transfer the grammar for pseudo-relatives and clefts to restrictive relative clauses.

Goodluck and Stojanović (1996) looked at the L1 acquisition of Serbo-Croatian's three distinct forms of relative clauses. They concluded that a non-movement analysis "is unmarked for relative clause formation (in comparison to wh-question formation)." (Goodluck and Stojanović 1996:285). Based on data for Serbo-Croatian and a crosslinguistic analysis, they concluded that this analysis may represent the common first stage in the development of L1 relative clauses. They found that 5-7 year-old children learning Serbo-Croatian could understand relative clauses introduced by pied-piping. A small number of pied-piped relative clauses were reported in older children in contrast to Labelle (1990).

Variability was seen in the use of the *što* relative, which is a complementizer similar to "that" in English and which implies movement and the use of a null operator to bind a gap in the clause. Many of the younger children favored it in non-movement constructions, where the form *za koga* is used in the adult grammar. Goodluck and Stojanović concluded that the use of *koji*, a wh-pronoun, therefore evidence of movement, had been acquired and was being used correctly. The complementizer *za koga* was acquired much later, around the age of 5 or 6.

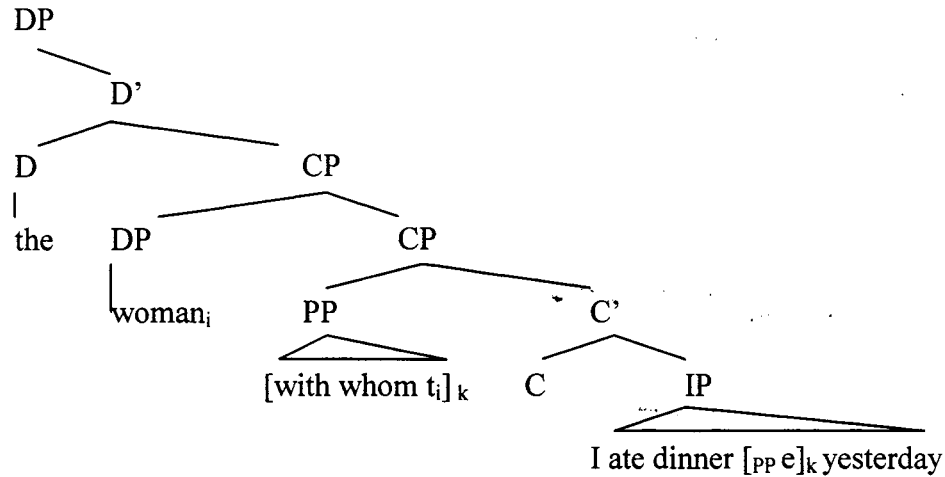
3.1.2 Movement

Guasti and Shlonsky (1995) rejected Labelle's conclusion of non-movement and hypothesized that children possess adult-like structures for the analysis of relative clauses. They claimed that children's early attempts at relative construction with gaps are produced by the movement of the head relative and not of an empty operator to the specifier position of CP. Following Kayne (1994), the authors take the relative clauses to "be a sister of the D⁰ and the DP to be moved to Spec CP." (Guasti and Shlonsky 1995:258). They proposed the following structure (Guasti and Shlonsky 1995:259 example (2)).



For relative clauses which included pied-piping, they proposed that children would have to have a structure similar to the one in (3.9) which contains an additional CP layer. The authors stated that the absence of the pied-piping in the relative clauses was because children were using the structure in 3.8 and in order for children to apply the structure in (3.9) their grammar must contain relative operators. Example taken from Guasti and Shlonsky (1995:261 example (5)).

(3.9)



In this example, the authors claimed “the relative head is first moved to Spec CP as a subconstituent of the pied-piped PP and then extracted from the PP and moved to a higher Spec position.” (Guasti and Shlonsky, 1995:220).

Guasti and Shlonsky (1995) disputed Labelle’s conclusion (1990) that children will shift from the predication strategy to a syntactic one involving movement. They argued that since movement is available in questions, the apparent contradiction is linked to the “the distribution and availability of operators in child grammar.” (Guasti and Shlonsky 1995: 264). They opted for a maturational approach to explain the acquisition of relative clauses in child language as per Borer and Wexler (1987).

The authors justified this position based on the fact that children exhibited a command of movement in the formulation of interrogatives. Movement for relative clauses is however based on the derivation in (3.8) by head raising and *via* a relative operator. The presence of the DP in the specifier of the CP, they argued, made it possible to account for the observed object gap clauses that make use of the complementizer *que*

(the object-relative) in the data obtained by Labelle (1990) in (3.10). According to the authors, the lack of relative operator in this derivation should have made these expressions easier to produce. Examples from Guasti and Shlonsky (1995:265-267 examples (9) and (12)).

(3.10)

- a. *Sur* [_{DP} [_D *la* [_{CP} [_{DP} *balle_i* [_C *que* [_{IP} *le petit garçon lance t_i*]]]]]
 ‘On the ball_i [C that [IP the boy throws t_i]]’
- c. *Sur* [_{DP} ... [_{CP} [_{PP} *à la fille_i* [_C *que* [_{IP} *le monsieur i(l) montre un dessin t_i*]]]]]
 on to the girl_i [C that [IP the man he shows the picture t_i]]

Guasti and Shlonsky (1995) claimed that for sentences containing resumptive elements, where no movement has occurred, but in which \bar{A} -binding has occurred as in (3.11), the rightmost occurrence of the DP is base generated. The authors argued that examples of the doubling of the relatives as in example (3.11) were similar to question formation with *wh-in situ*, where “the target of \bar{A} -movement is not affected until Logical Form (LF)” (Guasti and Shlonsky 1995: 269).

(3.11)

- a. [_{DP} [_D *la* [_{CP} [_{DP} *balle_i* ... [_C *que* ... [_{IP} DP VP DP_i]]]]]
- b. [_{DP} [_D *La* [_{CP} [_{DP} *balle_i* [_C *que* [_{IP} *le garçon lance la balle_i*]]]]]
 the ball that the boy throws the ball
 the ball which the boy throws the ball

Variability is observed in the overuse of inappropriate complementizers and the presence of non-adult resumptive elements is observed in the data described above.

There exist contrasting positions with respect to non-movement. The discussion in all of these cases rests on the acquisition of the [\pm movement] features of complementizer

and relative pronouns which are free morphemes. In Irish, the form of the complementizer is associated to a grammatical inflection on the verb as described in chapter 2. Zobl and Liceras (1994) found that in L1 the distinction in order of acquisition does not rely on whether morphemes are free or bound morphemes, but on the category of morpheme, i.e. DP or IP morphemes. They claimed, therefore, that there is a presumed order in the acquisition of these functional categories, where the DP would precede the acquisition of the IP. In the Irish examples below, free and bound CP morphemes, the complementizer and the mutations on the verb in the relative clause, are present. Acting together, both of these morpheme types should signal the acquisition of the CP.

3.1.3 L1 Acquisition of Irish Relative Clauses

Goodluck, Guilfoyle and Harrington (2001, 2002, 2005 in press) report on an experiment that looked at the L1 acquisition of Irish subject, direct object and oblique relative clauses by young children from Co. Kerry, Ireland. Results suggested that the children's grammar differs from adult grammar, but that 'they had adult-like control of both subject and object relatives' (Goodluck *et al.*: 2001:21). Contrary to their initial hypothesis that children would experience difficulty with the obligatory movement required for subject relatives, little difficulty was observed. They concluded that, in general, children as young as 4 years of age were using movement to construct subject relatives. Some innovative instances of subject and direct object relatives which contained gaps, but were introduced by *go*, a complementizer normally associated with the binding of a resumptive pronouns, were obtained. The authors suggested this use of *go* by some of the younger subjects could possibly indicate that an earlier instantiation

(possibly non-movement) of subject relatives may exist among younger children. Goodluck *et al.* argued that the use of the *go* complementizer may be a less mature structure. Children also produced a non-adult structure for subject relatives which did not contain any complementizers. The authors claimed that the children have innovated a distinct relationship for subject relatives in which they merge an NP with a TP and co-index them in a predication relation as in (3.11).

(3.11) [NP]_i [TP]_i

According to the authors, the children interpret the empty subject within the VP as a null pronoun. There were two additional instances in which children produced subject relatives without a complementizer but with a resumptive subject pronoun. The authors account for these by using the same approach, except that it is an IP that is merged with the NP. The direct object relatives produced by the children all contained gaps. The existence of these gaps implies movement to the CP. It follows that the mechanism used by the children for direct object relatives is the merging of NP with a CP.

As discussed above, children may, as a general rule, initially make use of an early non-movement stage in L1 acquisition and later make use of wh-movement as a mechanism for subject relative clauses. Goodluck *et al.* (2002) point out that if it is assumed that constructing relative clauses involves the operation Merge (Chomsky 1995), then the production cost of movement is greater than that for binding (McCloskey 2000). The authors argue that it follows that binding should be the mechanism of choice, by virtue of the fewer interpretational steps and the lower memory load. Such a conclusion is consistent with the preference for complementizer relatives in French. It is also consistent

with the erroneous use of the complementizer *go* by children in Irish, possibly reflecting their choice of a non-binding relationship.

For the majority of the children in this experiment, the free and bound CP morphemes have been acquired. Children who fail to mutate the verb may possibly be in an intermediate stage between the correct uses of the free morpheme but have not been fully linked to the bound morpheme, the mutation on the verb. These results also support the position taken by Borer and Rohrbacher (2002). As mentioned above in section 3.2, Borer and Rohrbacher argue that abstract functional categories can exist in the grammar even when the overt morphology is absent. While most of the children studied by Goodluck *et al.* have acquired the structures for subject and direct object relative clauses in Irish, the authors reported that some of the younger children did not use any mutated forms in some constructions even though they used the correct *aL* complementizer which signals a gap in the clause as opposed to the complementizers *aN* or *go* (Goodluck *et al.*, 2001:29)¹. It was noted that when the children used the mutated forms they were used correctly. This is similar to the case reported by Labelle (1990) where *qui* was only ever used in subject relative constructions.

There appears to be a type of evolution in the development of the use of the morpho-syntactic link between the form of the complementizer and the overt realization on the verb. Borer and Rohrbacher suggest the following as a starting point and progression toward the acquisition of functional projections (Borer and Rohrbacher 2002:130 example (7)):

¹ This assumption may need to be revised based on the results obtained in this thesis. It cannot be assumed that the L1 learners are consistently assigning *aL* to gap clauses and *aN* to resumptive pronoun clauses. The children have acquired the complementizer *a*, but it may be underspecified.

(3.13)

- a. FP absent
- b. FP present but no knowledge of the corresponding functional morpheme(s)
- c. Acquisition of morpheme(s), adult performance.

Applying this model to the acquisition of Irish L1 complementizers and their corresponding mutations would give us the progression outlined in (3.14).

(3.14)

- a. *go* (CP absent)
- b. *aL* indicating a gap, so CP present and marked [+movement] but no corresponding lenition of the verb in the relative clause.
- c. *aL* and *aN* and the corresponding mutations, so CP present and marked [\pm movement] and the morpho-syntactic link has been established.

The sequence in (3.14) predicts that Irish children begin at a non-binding stage and gradually develop the ability to use movement for subject and object clauses. However, they do not mark the verb morphologically until they attain the equivalent of an adult grammar with its clear morpho-syntactic associations.

3.1.4 Summary

Studies of the L1 acquisition of relative clauses suggest that the parameters for wh-movement and binding principles are already present in the language of 4-year-old learners. When children begin to form relative clauses, they appear to initially use general-purpose operators in constructing relative clauses, and when they begin to use

wh-movement, it is done in an adult-like fashion. The results for L1 acquisition of Irish show a similar pattern. Children appear to have the abstract structures, and when overt use of the corresponding morphology is present, it is correct. It is suggested that the acquisition of functional projections and corresponding morphology are acquired incrementally: the CP is initially absent; later it is (partially) present but without corresponding morphology; finally adult performance is acquired including all the relevant functional projections and corresponding morphology have been acquired. Research carried out on the ability of the L2 learner to (re)set distinct movement parameters in the acquisition of a second language is examined below.

3.2 L2 Acquisition

In this section the general differences pertaining to variability in performance which exist between L1 and L2 acquisition are examined. Section 3.2.1 provides a brief overview of the debate concerning whether or not L2 learners have access to UG. A definition of what is meant by morphological variability is provided in Section 3.2.2 and Section 3.2.2.3 looks at morphological variability and the relationship between the acquisition of morphology and the acquisition of syntax at three distinct levels: i) the saliency of bound vs free morphemes in L2 acquisition; ii) the distinction between weak continuity² and strong continuity, terms used to describe the initial state of L2 acquisition; and iii) two different approaches to account for L2 variability. In the first, it is argued that the IL grammar is impaired with respect to the type of functional categories available. In the second, it is argued that a mapping problem exists between the underlying abstract features to the surface form.

² Clahsen, Eisenbeiss and Penke (1996) use the term 'weak continuity' to refer to L1 acquisition. Its use in L2 is described in full in section 3.4.4.

3.2.1 Access to UG

The assumed existence of the innate mechanism for language learning, UG, in adult L2 acquisition is contradicted by the lack of guaranteed native-like proficiency among adult learners, the presence of fossilization, varying rates of success along with formalized teaching, and the influence of affective features. Currently of concern in the field of L2 acquisition is whether the acquisition of syntax is a fundamentally different process for adults than for children. What access if any, does the adult learner have to the principles and parameters of UG in building the syntax of the L2?

The role of UG in the L2 acquisition has been extensively examined and debated over the last 25 years. Bley-Vroman (1990) argues that adults acquiring an L2 do not have access to UG. If this is the case, the learner's initial state is that of their knowledge of their L1 grammar. The language spoken by the L2 learner will not be constrained by the rules of UG. In contrast, Clahsen and Muysken (1989) and Meisel (1991, 1997) state that UG is available in L1 acquisition only. The authors claims that non-UG learning strategies such as memorization are applied for completely distinct patterns which fall outside the UG parameters set in the L1. Hawkins and Chan (1997) and Hawkins (2001) claimed that UG is present *via* the L1 only meaning that the IL will be UG-defined in contrast to the previous positions. Hawkins and Chan (1997) and Hawkins (2001) stated that L2 learners were greatly influenced by their L1 and concluded that the learners applied L1 analyses to L2 data. Vainikka and Young-Scholten (1994, 1996a, 1996b); Eubank (1996); Beck (1998); Schwartz and Sprouse (1994, 1996); Haznadar and Schwartz (1997); Prévost and White (2000a, 2000b); Lardière (1998a 1998b) all argue

that the L2 learner has access to all of the components of UG, not simply what is contained within the L1 grammar. This means that the IL grammar is UG-constrained because UG learning strategies are present in the IL. These authors differ on the degree to which all or limited components of the L1 are transferred.

I assume that the learners have full access to UG in the acquisition of L2 and full access to their L1 grammar. This does not assume that L2 acquisition will be successful and error-free. As discussed in the introduction to this chapter, there are ranges in level of mastery, including morphology. In the following section, the problem of L2 morphological variability is described.

3.2.2 Morphological Variability

In section 3.1 the debate in the field of L1 acquisition concerning the relationship between overt morphology and the acquisition of syntactic structure was presented. A similar debate exists in the field of L2 acquisition. Second language learners are widely known to display variability in their use of inflectional morphology. This fact is uncontested. When adult learners begin to use morphology, it is not always used correctly; in some cases forms are over-used and in others, the morphology appears never to be acquired.

Research on IL during the 1970s (Bailey, Madden and Krashen 1974; Dulay and Burt 1974) looked at the order of acquisition of morphemes. The authors concluded that there is an invariant order in the acquisition of certain inflectional morphemes and function words (See Zobl and Liceras 1994 for an overview.) In these studies, when a morpheme was correctly supplied 90% of the time, it was said to have been acquired

(following Brown (1973) for L1). The variation and inconsistency in usage of the morphemes and function words was considered an acquisition failure. Meisel, Clahsen and Pienemann (1981) argued that there should be a distinction made between the acquisition of underlying knowledge and the use of this knowledge; in other words, achieving almost total accuracy in usage is not the same as acquisition. This distinction between accuracy of usage and the acquisition of abstract syntactic structures is the current dividing line between the studies of morphological variability. There is little agreement on how to account for this variation and what this variation implies. In the following section, three perspectives on the morphology/syntax interface within the IL grammar are presented.

3.4.2.1 Bound vs Free Morphemes

The first of the three levels of the investigation is that of the saliency of bound vs free morphemes in L2 acquisition. Irish relative clauses feature both types of morphemes. The resulting word-initial consonants after the application of lenition and eclipsis are bound morphemes; the complementizers *aL*, *aN* and *go* are free morphemes. In Irish there is a morpho-syntactic association between the morphemes and the content of the relativised site at the foot of the relative clause.

Zobl and Liceras (1994) conducted a review of the order of acquisition of morphemes which trigger the development of functional categories in L1 and L2 acquisition. They made two important discoveries. The first was that in L1 the acquisition of morphemes is done in a category-specific fashion, where IP inflections are learned separately from DP inflections, whereas in L2 acquisition, the acquisition of morphemes appears to be done cross-categorically. The second was that in L1 acquisition, affixes

trigger the development of functional categories, and “movement of lexical heads is implemented early, independently of affix movement” (Zobl and Liceras 1994:175), whereas in L2 acquisition, free morphemes trigger the implementation of functional categories and the late acquisition of affix movement influences the late development of inflectional morphemes.

Predictions

The morphology/syntax interface being investigated in this thesis can contribute toward examining whether the position of the bound morpheme, i.e. prefix *vs* suffix makes a difference. All of the bound morphemes which were analyzed by Zobl and Liceras (1994) were English suffixes used to indicate subject-verb third person singular agreement *V-s*, regular past tense *V-ed*, progressive *V-ing*, regular plural *N-s*, and possessive case *N's*. All of the bound morphemes used to distinguish between gap and resumptive pronoun binding relationships in Irish relative clauses occur in word-initial position.

L2 reliance on free morphemes over bound morphemes predicts that

- learners will have acquired the distinction between the binding complementizers *aL/aN* and the non-binding *go* complementizer
- learners will not be sensitive to the mutations difference on the verbs in the relative clause

Liceras and Zobl (1994) argue that functional categories are available in the initial stages of the L2 acquisition, and consequently inflectional morphemes do not play a role in their development. The authors stated that “L2 learners need not learn the categories as

such but rather their language specific exponents”(Zobl and Liceras 1994:175). This point provides the basis for the second level of investigation: whether or not the initial state does in fact involve all of the functional categories as claimed above, or whether a limited set of functional categories are present.

3.4.3.2 Weak vs Strong Continuity

What is the most advantageous initial state in L2 acquisition? Is there an advantage in L2 acquisition in having an initial grammar that contains fewer categories, for instance only lexical categories, or in having full access to all lexical and functional categories into which the morphemes can be incorporated? In answering this question, researchers have come down on both sides. The two approaches are referred to as the ‘weak continuity’ position and the ‘strong continuity’ position. The term ‘weak continuity’ is borrowed from the field of L1 acquisition research. Introduced by Clahsen, Eisenbeiss and Penke (1996), it reflects a position which states that “UG-components such as X'-theory constrain children's phrase structure trees from the beginning of acquisition, but that the full adult-like phrase-structure tree ...emerges gradually, based on the UG principles and the input data” (Clahsen *et al.* 1996:132-133).

Vainikka and Young-Scholten (1994) were the first to apply the position of weak continuity to L2 acquisition. With respect to L2 acquisition, weak continuity states that the initial grammar has full access to UG, and that while lexical categories are present, functional categories are not. Hawkins (2001) argued that learners initially focus (unconsciously) on identifying morphemes such as nouns, verbs and adverbs, which have the most “perceptual prominence” (Hawkins 2001:336). By isolating these items first, the learner's innate syntax constructs the derivations. It is argued that the development of

functional projections depends on the learner detecting L2 evidence of the often less prominent inflectional and often unstressed morphemes which encode grammatical relationships such as agreement and Case, or non-local dependencies such as tense and binding (Hawkins 2001).

Two theories have been put forward suggesting that the initial state may not involve functional categories; they are the Minimal Trees Hypothesis (MT) proposed by Vainikka and Young-Scholten (1996a,b) and the Modulated Structure Building Hypothesis (MSB) proposed by Hawkins (2001). There are differences between these theories.

Vainikka and Young-Scholten (1994, 1996) looked at the L2 acquisition of German by L1 speakers of Turkish, Korean, Italian and Spanish at different levels of L2 proficiency, and argued that the initial grammar of the L2 learner consists of “the smallest possible subtree consistent with the data” (Vainikka and Young-Scholten 1998:18). They argue that only lexical projections are transferred from the L1, thus transferred prior to exposure to the L2, as a sort of internal feature of the IL; in other words, “learners impose a VP analysis on L2, whether there is any evidence for functional categories in that [L2] input or not” (Hawkins 2001:338). The authors claim that L2 learners acquire X'-theory gradually, in the same way that children do. The acquisition of functional categories is done hierarchically, in the sense that CP cannot be created before IP. The result is that only L2 functional categories, and not L1 functional categories, in their original state or refashioned, will be present in the L2 grammar. Functional projections are considered to emerge gradually with exposure to the L2 input and develop independently of the L1. Acquisition is said to have taken place when the

required element has been supplied correctly 60% of the time in the obligatory contexts (Vainikka and Young-Scholten 1994:276). In the more advanced stage, the learner would have specified functional projections, where agreement and movement could be accounted for.

Based on their results, they concluded that free-morphemes appear to act as triggers in the L2 the development of functional projections, while functional elements, specifically suffixes, act as triggers in L1 acquisition (Vainikka and Young-Scholten 1994:297).

According to MSB proposed by Hawkins (2001), lexical categories are present in the initial stages of the IL grammar and functional projections are added based on positive evidence in the L2. MSB differs from MT described above in that the ‘modulated’ aspect of the proposal means that “structure building is influenced by properties of the L1 at the relevant point in the constructions of a grammar, not before”(Hawkins, 2001:74). This means that transfer from L1 is significant, but only once the syntactic development has reached a relatively advanced stage. Hawkins admits to not being very categorical about the initial syntactic analysis stating that functional projections “can be established early if there is appropriate evidence” (Hawkins 2001:338).

The ‘strong continuity’ account assumes that, not only are all lexical and functional categories available in the initial state, but that they are present in the IL grammar, either because they were transferred from the L1, as according to Schwartz and Sprouse (1994, 1996), which they refer to as ‘full transfer’ in their model or provided only by UG, as according to Epstein, Flynn and Mortohardjono (1998) or also by UG as

according to Schwartz and Sprouse (1994, 1996), which they refer to as ‘full transfer’ in their model.

Schwartz and Sprouse (1994, 1996) proposed the Full Transfer/Full Access model and, as the name implies, the starting point for the L2 learners is the entirety of the L1 grammar as well as all the components of UG. Contra Vainikka and Young-Scholten (1994, 1996a, b), Schwartz and Sprouse (1994, 1996) argued that the absence of verbal inflection and overt complementizers does not indicate that these functional categories are absent from the grammar. They claimed instead that “[i]t seems equally plausible to say that the functional categories are indeed there – and even fully specified as in the L1 grammar – but just not overtly filled ... initially”. (Schwartz and Sprouse 1998:44). Schwartz and Sprouse interpreted missing or incorrect morphemes as an indication that the functional categories were present. These missing or incorrect morphemes are what Vainikka and Young-Scholten and Hawkins considered as ‘noise’ in the data (Hawkins 2001:339), representing a failure in acquisition as mentioned above.

Epstein *et al.* (1998) proposed the No Transfer/Full Access model. As the name implies, transfer from the L1 is not instantiated at all. This position states that L2 development has access to the full complement of lexical and functional categories, features and feature strength made available through UG. This position is the most distinct of the four given here, because it does not assume that there is a developmental stage in the acquisition of morphemes and their role in the development of functional categories, since they are assumed to be already present.

Predictions

The morphology/syntax interface investigated in this thesis can contribute to this discussion by examining whether features of the weak or strong continuity positions are present in the performance of the learners.

A weak continuity position would predict that:

- advanced L2 learners who demonstrate a 60% correct rate of recognition of the appropriate complementizer (*aL* or *aN*) associated to the corresponding binding relationship (gap or resumptive pronoun) have reached stage III (Vainikka and Young-Scholten 1996), where acquisition of CP has occurred;
- less than a 60% correct rate of recognition would indicate that the learners had not yet acquired CP in their IL grammar.;
- CP features of the L1 are present as a result of transfer from L1, thus a preference for gaps will be observed and a rejection of resumptive pronouns is anticipated;
- CP features of L1 are present, hence no overt inflectional marking to signal the binding relationship will be incorporated into the IL.

A strong continuity position would predict that:

- acceptance of gap and resumptive pronoun structures indicates that the distinct binding relationship have been acquired, hence confirming the presence of the CP;
- variability in the use of the complementizers and the grammatical inflections on the verbs does not indicate that the CP has not been acquired;
- acceptance of the appropriate resumptive pronoun forms indicates that functional categories are present and these have been acquired independently of the morphology.

3.4.3.3 Impaired Representation vs Missing Surface Inflections

This third level of investigation takes up the distinctions highlighted between the weak and strong continuity approaches, and seeks to account for the variability observed in the L2 acquisition of inflectional morphology. The first position is referred to as the Impaired Representation Hypothesis (IRH) (Prévost and White 2000). According to the IRH, the IL grammar is impaired with respect to the type of functional categories available. This impairment may simply be a developmental phenomenon, in which case variation is expected only in the early stages, or else the IL grammar may be permanently impaired because the morphology was never acquired. The absence of use or recognition of overt inflectional morphology signifies that the underlying syntactic properties are not available. An example of impaired representation is the Minimal Trees Hypothesis (MT) proposed by Vainikka and Young-Scholten (1994, 1996) because functional categories are not assumed to be present in the initial state of L2 acquisition.

A brief summary of the MT Hypothesis highlighting the ‘impairment’ is given here. Vainikka and Young-Scholten (1994, 1996) propose that the IL state is the L1 grammar but that only lexical categories (NP, VP, PP, AP) and not the functional categories (DP, TP, IP, CP) of the L1 are transferred. Increased exposure to the L2 and acquisition of inflectional morphemes trigger the development of UG-constrained functional categories. The trigger for the acquisition of the L2 functional categories is positive evidence in the L2 input such as case, subject/verb agreement and tense morphology. The authors judge that a construction has been acquired if it is used correctly at least 60% of the time.

Vainikka and Young-Scholten (1994, 1996a, 1996b) offered two explanations to account for the observed variability in the use of inflectional morphology. First of all, while the learners may use particular inflected forms, it is not the case that the affix has been analyzed as being a distinct morpheme, or that the morpheme has a distinct significance in a particular structure. Secondly, the authors observed a form of regression or “stage seepage” (Vainikka and Young-Scholten 1994:296) to an earlier instantiation of the IL grammar (without the functional categories and related morphology). They admit that this last type of variability is not easily accounted for in their model.

Clahsen (1988, 1990) and Meisel (1991, 1997) argued that L2 grammars, and by association IL grammars, are defective in that they lack the triggering relationship between the morphology and the abstract feature strength. This triggering relationship is required to construct the syntactic representation. This conclusion is based on the observed variability in the L2 acquisition of German of the position of finite and non-finite verbs (Clahsen 1988) and person and number agreement (Meisel 1991). They concluded that the acquisition of word order must be due to some non-UG strategy such as pattern matching or memorization.

The critical element in the accounts above is that the acquisition of overt morphology is a required precursor to the acquisition of functional categories in the syntactic representation. What happens in case of languages that are not morphologically rich? White (2003:161) cites numerous documented accounts of languages that allow verb movement in the absence of rich verbal inflection. Bobaljik (2002) argues that since “syntactic variation occurs in the absence of morphological variation” (Bobaljik 2002:158), it is not possible for the morphology to trigger the acquisition of the syntax.

He argues that the richness of the syntactic structure, for example, the levels of articulation with the IP, can influence the rate of acquisition of the syntax. Stating that there is a partial correspondence such that syntax “puts abstract morphemes together, morphology spells them out”, Bobaljik (2002:160) claims that relying solely on overt morphology to trigger syntactic variation is not enough.

The following section looks at empirical results which support the dissociation between morphology and syntax.

3.4.3.4 Dissociation between Morphology and Syntax

At issue here is not whether the learners are correctly using the surface morphology, but whether or not the abstract morpho-syntactic features of the L2 and the corresponding syntactic representation are present in the IL. This position has been called the Missing Surface Inflection Hypothesis (MSIH) (Prévost and White,2000).

MSIH states that abstract morpho-syntactic features are present in the early stages of IL development and that the underlying syntactic structures are not impaired. L2 learners have unconscious knowledge of functional projections and the features for tense and agreement but they have a problem manifesting them at the surface level. Variability in the use of surface inflections, or the complete absence of them is said to be due to a mapping problem between the one part of the grammar and another. This problem results in an inability on the part of the learner to access the morphology consistently, even if it has been acquired (Haznadar and Schwartz 1997; Prévost and White 1999, 2000; Lardière 1998a, 1998b). Results from three related studies are given below.

Haznadar and Schwartz (1997) and Haznadar (2001) report on a case study based on spontaneous production data of a Turkish-speaking child, Edem, learning English as an L2. Over the course of the 18-month observation period, they observed that Edem rarely used verbal inflections for tense or for third person agreement. He was further observed to consistently supply subject NPs and subject pronouns were used correctly in the nominative case. They conclude that Edem had to have an unconscious knowledge that English requires obligatory overt subjects and nominative case for pronominal subjects. They concluded that the development of his IL syntax, namely the TP, was not triggered by the acquisition of surface morphology.

Lardière (1998a, 1998b) reported on the L2 English of an adult speaker of Chinese, Patti, who has spent approximately 20 years living in North-America. While no longer considered a learner of the language, her end-state grammar contained several non-native features. Despite this limitation, she is fluent in her use of the language. Although her language lacks verbal inflections and third person subject-verb agreement morphology, she has a command of several syntactic structures requiring the use of Tense and Agreement. While one might initially infer an absence of knowledge of the English IP, this is not the case. Patti uses nominative and accusative Case assignment appropriately, supplies obligatory subjects, and is sensitive to the word order for verbs with respect to adverbs and negation. Lardière (1998a) concluded that there is a dissociation between surface morphology and the development of the syntactic representation of functional categories, projections and features. It was further suggested that the mapping between the syntax and the morphology “may be imperfectly

acquired” ... “a lack of functional categories or extended phrase structure development may not be inferred”(Lardière 1998a:1).

Prévost and White (2000) looked at the L2 acquisition of four adults, two Moroccan Arabic speakers learning French and two Romance language speakers (Spanish and Portuguese) learning German. Their results show that the learners alternate between non-finite and finite forms, indicating that an abstract structure is present. They claim that even when the learners have acquired the appropriate inflected forms, “they [these forms] do not necessarily always ‘win’ in the competition for lexical insertion, so that underspecified forms continue to surface”(Prévost and White 2000:129). The problem relates to “the mapping of specific morphological forms to the abstract categories ... and that there is no impairment at an abstract level” (Prévost and White 2000:129-130).

In the accounts described above, it is argued that the learner can have acquired the abstract underlying structures of the L2, but the required overt morphology may not be present in the production of the L2. This position means that it is not appropriate to judge acquisition of a structure based on the production of the required morphology. In other words, production cannot be the sole indicator of acquisition. Parameter resetting may not be at the level of syntactic knowledge, *i.e.* syntactic competence, but at the performance level. The authors have argued that L2 learners demonstrate target-like competence but they have difficulty accessing the appropriate knowledge in real-time.

Predictions

The IRH predicts that :

- variable levels of acceptance in the use of the resumptive pronoun and gaps can be expected in all clause types (simple subject, direct object and oblique relative clauses as well as cyclical and mixed chains and long distance \bar{A} -dependencies) because the CP is impaired,
- variability in the morphology signaling errors in agreement between the *aL* and the *aN* complementizers, the verb in the relative clause and the relativised site should exist because the checking can't take place and there is no mechanism to reject the mismatches.

The MSIH predicts that:

- the distinct relative clause structures, binding of a gap, binding of a resumptive pronoun are present: gaps in subject and direct object clauses and resumptive pronouns in the direct object and oblique clauses,
- appropriate use of gaps and resumptive pronouns is also expected in the cyclical and mixed chains and for long-distance \bar{A} -dependencies,
- variability in the use of the complementizers is not expected because MSIH predicts that when agreement is established, it should be used correctly since agreement features and the feature checking mechanism are not impaired.

Table 3.2 summarizes the positions of the main models/hypotheses described in the previous sections.

Table 3.2

Summary of contrasting models based on L1 transfer and role of morphology of trigger in acquisition of functional categories

		access to UG	partial transfer from L1	full transfer from L1	morphology required	morphology not required
morphologically driven	MT	√	√		√	
	MSB	√	√		√	
not morphologically driven	IRS	√		√		√
	MSIH	√		√		√

3.6 Summary

Research in the field of L1 acquisition of relative clauses reveals that universals such as the wh-movement and binding principles are present in the language of learners as young as 4 years of age. In apparent contradiction to the assumption that acquisition is guided by innate universal principles, the integration of language specific aspects appears to take time. This time requirement is reflected in the early deviations from the target language. These deviations are temporary, however, and all L1 acquisition, barring extreme circumstances, is successful.

The success rate in adult L2 acquisition is, in general, lower. Adult learners rarely attain full competence in the acquisition of their L2. The variability in the inflectional morphology was examined from three perspectives: i) the difference in rate of acquisition between bound and free morphemes; ii) the differences between the weak and strong continuity positions with respect to the role of morphemes in the development of the syntactic representation; and, iii) the differences between the IRH and the MSIH. The former states that the structural representation is impaired and use of the morphology will be variable. The representation is built incrementally once the morpho-syntactic associations have been established. The latter states that the representation is not

impaired. The absence of surface morphology is due to a mapping difficulty between levels in the language and that, if the overt morphology is present, it is used correctly, confirming the presence of the syntactic representation.

This thesis seeks to determine whether the L2 learners have acquired the distinct binding relationships for Irish CPs. The thesis also wants to determine if the learners have reset the featural setting of the Irish specifier of CP to allow both [+ movement] and [-movement]. Evidence of this will be seen in their ability to correctly identify the distinct complementizers *aL*, [+movement], and *aN*, [-movement]. This ability to distinguish between the complementizers will be determined by demonstrating a sensitivity to the distinct mutations on the clausal verbs, lenition (*aL*) and eclipsis (*aN*). In the following chapter the parameters of the experiment are discussed.

Chapter 4

The Experiment

4.0 Introduction

The experiment designed to evaluate the ability of L2 learners of Irish to anticipate the nature of the syntactic structure of Irish relative clauses by using morphological cues included four separate components: i) a Cloze Test to evaluate overall linguistic competence in Irish, ii) a Listening Test, iii) a Written Test, and iv) a Paired Comparison Test. The last three components were specifically designed to determine if the learners had acquired the morpho-syntactic link between the mutation and the content of the relativised site in various types of relative clauses. The Listening and the Written Tests were identical in content and in order of presentation. The Paired Comparison Test used some of the same sentences as the Listening and Written Tests, but the order varied since each grammatical sentence was paired with an ungrammatical one which differed on the basis of a single feature. Nineteen different structures were tested in the Listening and Written Tests. An additional item was included in the Paired Comparison Test in order to have a contrastive element for each of the 19 original items. The various structures will be discussed individually in Section 4.2.

4.1 Subjects

Thirty-four subjects participated in the experiment. These included twenty-five adult learners of the language and 9 adult native speakers of Irish.

4.1.1 Learner Groups

The adult learners were divided into two groups: 18 young adult learners between the ages of 15 and 25 years who were currently enrolled in Irish language training at the Police Academy in Templemore (T), Co. Tipperary, Ireland, and 7 older adult learners between the ages of 35 and 50 years who were attending a conversational Irish evening class in Baile Gibb, Co. Meath, Ireland. All participants completed a profile sheet in which they were asked to indicate the age at which they began learning Irish, their daily use of the language, the dialect which they were learning or spoke. A copy of the profile sheet is in Appendix C.

The young adults included twenty 2nd year cadets from the Police Academy in Templemore, Ireland. Irish language training is an obligatory component of the training the cadets receive, since they may be posted to Irish-speaking areas in the country. The cadets receive daily language classes and would have completed 4 semesters of Irish and considered to have attained a high intermediate to advanced level of proficiency. Eight of these cadets began learning Irish between the ages of five and ten years of age and are referred to in the results section as subjects 'T5-10'. Ten cadets began learning Irish between the ages of ten to fifteen years of age and are referred to in the results section as subjects 'T10-15'.

The other group of adult learners attended an adult evening advanced conversational Irish class. This group indicated that they had taken Irish as an obligatory subject in primary school, but that it was not the medium of instruction, through to the age of 13 years.¹ They had not used Irish since leaving school. They indicated that they had decided to take up Irish again either because they had retired or because they now had a need to be able to converse in the language as part of their responsibilities at work. All indicated on the profile sheet that they had begun learning the language this second time after the age of 30. All were considerably older than the cadets at the Police Academy, ranging in age between 35 and 50 years. In the reporting of the results, they are referred to as the adult group.

4.1.2 Control Group

A control group of native speakers also completed the test. Seven of the nine subjects in this group are residents of the Baile Gibb *Gaeltacht* in Navan, County Meath. Five of the seven are the members of one family; the father aged 82, a native speaker originally from Dingle, Co. Kerry, two of his adult children and their spouses who still live in Baile Gibb. They ranged in age between 35-45. Two others were adult friends of the family, currently residing in the *Gaeltacht*. One was an older woman over the age of 65 years; the other was a gentleman who indicated that he was between the ages of 45 and 50. The two remaining native speakers were cadets at the Police Academy.

¹ Fluency was not the objective of the course. Students were required to translate short stories. Rules of Irish grammar were not taught in these classes. Teachers who had a poor command of the language sometimes taught these classes.

4.2 Description of Test Items

The test items can be divided into 6 general categories: i) subject relative clauses; ii) direct object clauses; iii) oblique clauses; iv) cyclical and mixed \bar{A} -dependencies; v) long distance \bar{A} -dependencies; vi) filler items. The labels used for each test item are introduced here. They are accompanied by a description highlighting the key features of the test item. The labels are used throughout the subsequent chapters. A description of these labels is also found in the Table of Abbreviations. All of the examples given here are actual tokens from the experiment. It is important to note that lexical items do not affect the grammaticality of the sentences. The grammaticality of the sentences is determined by the use of the correct complementizer and the presence or absence of a resumptive pronoun in the relativised site.

4.2.1 Subject Relative Clauses

There is only one possible grammatical construction for subject relatives in Irish. It contains a gap in the subject position of the clause and the *aL* complementizer must be present.

(4.1)

a.

SaLgap: Subject relative clause contains an *aL* complementizer and a **gap** in the relativised position

Sin í an cailín a théann abhaile ar a naoi a chlog.
This-is-FEM the girl_i aL goes t_i home at nine o'clock
This is the girl that goes home at nine o'clock.

b.

***SaNgap:** Subject relative clause contains an ***aN** complementizer and a **gap** in the relativised position

**Sin é an cailín a mbreathnaíonn ar an teilifís gach oíche.*
That-is-MASC the girl_i **aN** watches **t_i** on the television every night
That is the girl that watches television every night.

c.

***SaLrep:** Subject relative clause contains an **aL** complementizer and a ***resumptive pronoun** in the relativised position

Sin é an buachaill a théann sé ar scoil gach maidin.
This-is-MASC the boy_i **aL** goes **he_i** to school every maidin
This is the boy that he goes to school every morning.

The ungrammatical items (4.1b) and (4.1c) were included to determine if the learners were sensitive to the appropriate mutation required to signal that movement has taken place. Although both (4.1a) and (4.1b) contain gaps, only (4.1a) is grammatical because it contains the complementizer **aL**, indicating that movement has taken place. Item (4.1b) is ungrammatical because the complementizer **aN** is inappropriate since it signals an absence of movement. The ungrammatical use of the pronoun in (4.1c) was included to verify that learners were aware that gap constructions are obligatory in subject relatives.

An acceptance of SaLgap and *SaNgap but a rejection of *SaLrep, indicates the learners have recognized that Irish subject relatives contain a gap in the same way that English subject relatives do, indicating transfer from L1, but they are not aware of the distinct forms of the complementizers. If subjects accept *SaLrep, they are violating the Highest Subject Constraint. An acceptance of *SaLrep is considered to reflect UG

influence in the IL, since neither English nor Irish permits resumptive pronouns in the subject position of a relative clause.

The structure *SaNrep was not included because at the time, because there are two elements which are ungrammatical here, the form of the mutation and the presence of the pronoun. The structure *SaLrep contains only one ungrammatical feature, the resumptive pronoun. Only sentences which contained one ungrammatical feature, either the form of the mutation or the presence or absence of a gap, but not both, were included in the experiment. This was done in order to better determine the basis on which a particular sentence was accepted or rejected.

4.2.2 Direct Object Clauses

There are two types of direct object clauses in Irish, one which contains a gap in the relativised site and one which contains a resumptive pronoun in the relativised site. The grammatical direct object clauses are DOaLgap (4.2a) and DOaNrep (4.3a). The latter is not an option in English. The direct object clause which contains a gap was presented to the students in two forms: one with the correct complementizer *aL* (4.2a), signaling a gap, and one with the incorrect complementizer *aN* (4.2b), which should not occur in gap constructions.

(4.2)

a.

DOaLgap: Direct Object clause contains an *aL* complementizer and a **gap** in the relativised position

Sin í riail **a bhriseann** an tiománaí i gcónaí
This-is-FEM rule; **aL** breaks the driver t_i always
This is a rule that the driver always breaks.

b.

***DOaNgap:** Direct Object clause contains an *aN* complementizer and a **gap** in the relativised position

**Sin é an nuachtán a gceanníonn mo dheirfiúr t_i gach tráthnóna.*
That-is-MASC the newspaper_i aN buys my brother t_i every evening
That is the newspaper that my brother buys every evening.

Acceptance of DOaLgap is indicative of a direct adaptation from English (L1 influence). Acceptance of the **DOaNgap* would also suggest an L1 influence, specifically a preference for gap structures as dictated by the LI, even though it is ungrammatical in the L2. Acceptance of both gap items in (4.2) might suggest that morphology is not playing a role in the development of the syntax. A rejection of **DOaNgap* would hint that a morphological link to the syntax has been developed by the learner *i.e.* the learner is aware that an *aN* complementizer is linked to a resumptive pronoun.

The second type of direct object clause, the one which contains a resumptive pronoun in the relativised site, is given in (4.3). This clause type is not found in English.

(4.3)

a.

DOaNrep: Direct Object clause contains an *aN* complementizer and a **resumptive pronoun** in the relativised position

Sin é an fear a bhfeiceann Seán go minic é sa bhus.
That-is-MASC the man_i aN sees Sean always him_i on-the bus
That is the man that Sean always sees (him) on the bus.

b.

***DOaLrep:** Direct Object clause contains an *aL* complementizer and a ***resumptive pronoun** in the relativised position

**Sin é an leabhar a cheannaíonn gach scoláire nua é.*
That-is-MASC the book_i aL buys every student new it_i
That is the book that every new student buys it.

These items were included to determine if the learners were aware that both the gap and the resumptive pronoun forms were grammatical in Irish direct object relative clauses. The items also contrasted the use of the appropriate mutation, *aN*, vs the inappropriate mutation, *aL*, in each of the constructions.

DOaNrep patterns are admittedly rare in spoken and written Irish (McCloskey 1990, 2000), and not an available structure in the L1. Acceptance of this structure would reveal that a restructuring of the IL has occurred, and more interestingly that it may be based on UG principles and not based on L2 input since it is so rarely used in the L2 input. A finding of this nature would support the argument that UG is available in the construction of the L2 beyond the L1. A rejection of DOaNrep, but an acceptance of DOaLgap would suggest an absence of UG influence with respect to the binding of resumptive pronouns at this stage of the learner's development; the IL has not been restructured to accommodate the UG principle of binding.

The acceptance of *DOaLrep may suggest that a resetting of the L1 'gap only' parameter in the IL has taken place, in order to be able to account for a resumptive construction. The acceptance of the incorrect complementizer would signal that the resetting was not driven by the morphology. Insensitivity to the DOaNrep and *DOaLrep distinction results in the acceptance of both. This would also indicate an emergence of a resumptive strategy but that this strategy is not yet linked to the morpho-syntax. This is because the learners are demonstrating that they are not sensitive to the *aL* /*aN* distinctions.

4.2.3 Oblique Clauses

These items were included for two reasons. The first was to determine if the learners were aware of the obligatory use of *aN* as the complementizer given the obligatory use of a resumptive pronoun contained within the prepositional pronoun. The second was to see if frequency effects were playing a role in the acquisition of a resumptive structure because oblique clauses are very common in Irish whereas the direct object clauses containing resumptive pronouns DOaNrep (Section 4.3.2 above) are not. The inclusion of oblique structures provided an opportunity to better determine if a resumptive strategy is being developed. The oblique clause construction, which contains the binding of a resumptive pronoun, the prepositional pronoun in this case, is not available in the L1 grammar of our learners. It is assumed, therefore, that it would not be present in the initial state of IL grammar in the same way the accusative resumptive pronoun was not. If the UG principle of pronominal binding of resumptive pronouns is available to the learners *via* access to UG principles beyond those present in the L1 grammar, then an increased frequency in exposure to oblique clauses in the L2 input may trigger an adjustment of the IL grammar to accommodate this new binding strategy. The patterns tested are given in (4.4).

(4.4)

a.

ObaNprep: Oblique clause contains an *aN* complementizer and a **prepositional pronoun** in the relativised position

Sin é an stáisiún raidió a n-éisteann na daoine óga leis i gcónaí.
That-is-MASC the station radio_i *aN* listens the people young **with-it**_i always
That is the radio station that the young people always listen to it.

b.

***ObaLprep:** Oblique clause contains an ***aL** complementizer and a **prepositional pronoun** in the relativised position

**Sin é an fhaclóir a fhanann Úna leis.*
That-is-MASC the dentist; **aL** waits Una **with-him**;
This is the dentist that Una waits for him.

An acceptance of ObaNprep and a rejection of *ObaLprep may suggest that L2 input has developed a morpho-syntactic association between the form of the complementizer and the prepositional pronoun. It may also simply be interpreted as a case of prepositional stranding which is allowed in L1 speech. This would mean therefore, that no resumptive strategy has been developed and that instead, any acceptance of the prepositional pronoun is a direct result of L1 transfer. For this to happen, the learners would have to be interpreting the prepositional pronoun as a bare preposition analogous to English prepositions.

An acceptance of both ObaNprep and *ObaLprep may also suggest i) that L2 input has either triggered the development of a resumptive strategy as a result of L2 influence, but without associating the form of the complementizer to the prepositional pronoun or ii) that prepositional stranding is occurring as a direct result of L1 transfer and that the morpho-syntactic link between the relativised site and the form of the complementizers has not yet been acquired.

A lack of acceptance of DOaNrep but an acceptance of ObaNprep would also support the fact that learners may be applying an L1 analysis which allows for prepositional stranding. It could suggest that the resumptive strategy in the IL is emerging, given the obligatory presence of the prepositional pronoun and the need to develop a structure to accommodate this overt element. An emerging, but incomplete,

resumptive strategy would be clearly suggested by the acceptance of DOaNrep and *DOaLrep along with an acceptance of ObaNprep and *ObaLprep.

4.2.4 Cyclical \bar{A} -Dependencies

These items were included to determine whether the learners would apply UG principles of the cyclical binding of gaps and resumptive pronouns in the determination of the acceptability of these items. It is perhaps reasonable to assume that the cyclical binding of a gap, which is also permitted in the L1, would not be problematic for the learners based on transfer from L1. The acceptance of cyclical binding of a resumptive pronoun, would, however, be dependent on the development of this binding relationship in the IL to account for the simpler direct object (DOaNrep) and oblique (ObaNprep) clauses seen above.

As mentioned in Chapter 2, aLaLgap, given below in (4.5), is one of the most productive patterns which contains \bar{A} -dependencies which contains a gap. The second most productive pattern contains the long-distance \bar{A} -binding of a resumptive pronoun contained within an embedded verbal complement clause. It will be examined in Section 4.5 below.

(4.5)

aLaLgap: Cyclical structure contains *aL* complementizers in both CPs and a **gap** in the relativised position at the foot of the chain

Sin í an luch a cheapann tú a mharóidh an cat.
 That-is-FEM the mouse_i *aL* think you *aL* kill-FUT the cat **t_i**
 That is the mouse that you believe that the cat will kill.

An acceptance of this pattern would suggest that transfer from L1 has taken place and that the learner has been able to process the longer sentences. A rejection of aLaLgap

but an acceptance of the simpler subject relative (SaLgap) and direct object (DOaLgap) constructions would indicate that the learner is experiencing difficulty with the longer sentences at this stage of development in the IL.

In addition to the common aLaLgap pattern seen above, an additional pattern, one which contains the cyclical \bar{A} -binding of a resumptive pronouns, was also included in the experiment. This pattern aNaNrep, given below in (4.6), is rare in the L2 input (McCloskey 2000). This means that learner will not have been exposed to it either *via* classroom instruction or *via* frequency of occurrence in the L2 environment (radio, print media, and television). It was included in the experiment to test whether or not learners are accessing UG knowledge.

(4.6)

aNaNrep: Cyclical structure contains *aN* complementizers in both CPs and a **resumptive pronoun** in the relativised position at the foot of the chain

Sin é an cód a gceapann tú a mbrisfidh James Bond é.
That-is-MASC the code_i *aN* think you *aN* break-FUT James Bond *it_i*
That is the code that you believe that James Bond will break.

Acceptance of aNaNrep would suggest that the binding of a pronoun has been integrated into the IL grammar of the learner. Access to UG principles would be suspected due to the unlikelihood of previous exposure to the structure in the L2 input. The complexity of this structure, however, may be confusing to learners who are reasonably secure in their morpho-syntactic sensitivity in the case of single clauses, those who accepted the direct object (DoaNrep) and the oblique (ObaNprep) constructions. It would not be surprising therefore to see learners accepting these simple clause structures but not accepting aNaNrep.

In the Paired Comparison Test, the pattern * aLaLrep is included as a contrasting item for aNaNrep. This was done to determine if the learners identified the aN complementizer as the only grammatical option given the presence of the resumptive pronoun at the foot of the chain. An acceptance of aLaLrep would indicate that the learners are unaware of the different role of the *aL* and *aN* complementizer.

4.2.5 Mixed \bar{A} -Dependencies

Attested mixed \bar{A} -dependency patterns are also rare (McCloskey 2000). The term ‘mixed’ refers to the fact that the complementizers are distinct because the \bar{A} -dependencies are distinct. An example is given in (4.7) below.

(4.7)

aNaLgap: Cyclical structure contains an *aN* complementizer in the top CP and an *aL* complementizers in the lower CP and a **gap** in the relativised position at the foot of the chain

Sin é an bréagán a gcreideann tú a cheannóidh na tuismitheoirí.
 That-is-MASC the toy_i *aN* believe you *aL* buy-FUT the parents _{t_i}
 That is the toy that you believe that the parents will buy.

This item was included for two reasons: to determine the learners’ ability to apply the UG principles of binding in a cyclical fashion, and to test whether the learners are sensitive to the requirement for distinct types of binding at different CP levels. Acceptance of aNaLgap provides evidence of UG principles: binding of a gap in the lower clause; and binding a pronoun in the upper clause. In the upper clause, the null operator, *pro*, (section 2. XX) in the specifier of the lower CP is taken to be the resumptive pronoun required by the *aN* complementizer in the higher CP.

4.2.6 Long Distance \bar{A} -dependencies

As mentioned in Chapter 2, aNgorep is the second pattern most frequently found in publications and in both formal and informal speech. It is the most common construction in Irish in which the relativised site contains a resumptive pronoun (McCloskey 2000). Because it is used for indirect speech constructions in Irish, learners would have been exposed to this pattern in the media, and would have seen it in the L2 classroom.

It is referred to as a long distance \bar{A} -dependency because the default complementizer *go* signals that there is no \bar{A} -binding in the CP in which it is located. The result is that the binding relationship of the relative clause reaches down through this complement clause to the resumptive pronoun at the foot of the chain. The presence of the resumptive pronoun requires the *aN* complementizer in the topmost CP. Examples of the grammatical pattern (4.8a) and the ungrammatical pattern (4.8b) are given below.

(4.8)

a.

aNgorep: contains *aN* complementizer in the top CP and the default complementizer *go* in the lower CP and a resumptive pronoun in the relativised position at the foot of the chain

Sin é an teach a gcreideann tú go gceannóidh an fear é.
That-is-MASC the house_i *aN* believe you *go* buy-FUT the man *it_i*
That is the house that you believe that the man will buy it.

b.

***aLgorep:** contains **aL* complementizer in the top CP and the default complementizer *go* in the lower CP and a resumptive pronoun in the relativised position at the foot of the chain

Sin í an táille a cheapann tú go n-íocann na ceoltóirí í.
That-is -FEM the fee_i *aL* think you *go* charge the musicians *it_i*
That is the fee that you think that the musicians charge it.

The pattern aNgorep was included to determine the learners' knowledge of the obligatory use of *aN* as the complementizer when a verbal complement is inserted in the relative clause and where a resumptive pronoun is present at the foot of the clause. Acceptance of aNgorep and a rejection of *aLgorep would indicate that the learners have acquired the distinction between the complementizer forms and that they are aware of the morpho-syntactic link between them and the resumptive pronoun in the relativised site. The acceptance of both aNgorep and *aLgorep would indicate that the learners are not highly sensitive to the morpho-syntactic link between the form of the complementizer and the resumptive pronoun.

4.3 Filler Items

Filler sentences were included to verify subject's mastery of Irish word order, which is distinct from English. Two word order patterns were examined. The first was the Irish VSO vs the English *SVO pattern for simple sentences which is not acceptable in Irish. Examples are given in (4.9).

(4.9)

a.

VSO: the correct Verb Subject Object word order of simple sentences and relative clauses

Ceannaíonn mamaí bainne sa siopa.

Buys mom milk in-the shop

Mom buys milk in the shop.

b.

***SVO:** the Subject Verb Object word of English, the L1 of the learners; unacceptable in Irish

Na buachaillí imríonn peil.

The boys play soccer

The boys play soccer.

An acceptance of VSO sentences and a rejection of *SVO would indicate that the learners have reset the word order parameter, reflecting an access to UG and a knowledge of the fact that the Irish verb raises to the specifier position of the TP. It is expected that all the participants in the experiment have acquired this feature of the language. Subjects who are not aware of this feature would be eliminated because it was deemed that they would not have had adequate knowledge of the language to provide useful data on the more complex sentences containing relative clauses.

The second filler pattern involved Irish sentences with non-finite constructions. The NP_aL pattern is very common in Irish and learners would have been exposed to it in the L2 input in the environment and in the classroom. This pattern was included for two reasons. The first reason was to verify the acquisition of the Irish word order in the placement of NP complements with non-finite verbs. The NP complement precedes the verb because it is raised to the specifier of an AspP to receive accusative case, as seen in (2.9a). In English, the NP complement is assigned accusative case by the verb and remains in the complement position after the verb as illustrated in (2.7a), a pattern which is ungrammatical in Irish. The verbal noun (VN) form is used in infinitival structures in Irish. As with the sentence level word order pattern above, subjects who are not aware of word order for non-finite clauses would be eliminated because it was deemed that they would not have had adequate knowledge of the language to provide useful data. Examples are given in (4.10) below.

(4.10)

a.

NPaL: non-finite clause structure where the **NP** has obligatorily raised to the specifier of AspP to get case and the obligatory mutation **aL**

Is feidir leis an imreoir an liathróid a bhualadh.
Is able with-him the player **the ball** **aL** hit-VN
The player is able to hit the ball.

b.

***aLNP:** non-finite clause structure where the **NP** failed to raise to the specifier of AspP to get case, yielding the surface form which is similar to English non-finite clauses; and the obligatory mutation **aL**

Ba mhaith liom a cheannach teach níos mó.
Is-COND good with-me **aL** buy-VN **house** more big
I would like to buy a bigger house.

The second reason for including the Irish non-finite clause was to determine the level of sensitivity to the verbal mutation. For example, the ungrammatical use of eclipsis as in (4.11) was used in items rather than lenition.

(4.11)

***NPaN:** non-finite clause structure where the **NP** has obligatorily raised to the specifier of AspP to get case and the ungrammatical mutation **aN**

Níor mhaith liom fear bocht a bpósadh.
Is-not good with-me **man poor** **aN** marry-VN
I do not want to marry a poor man.

An acceptance of NPaL over *NPaN would indicate that the learners are sensitive to the mutation distinctions for this structure while an acceptance of both indicates that they are not. An acceptance of *NPaN over NPaL would on the one hand indicate a sensitivity to the mutations, but on the other be difficult to explain grammatically since

there is no dialectal evidence of the *NP_aN variation. It would be unclear why the learner had indicated such a preference.

An extension of McCloskey (1990) with respect to the link between movement and mutation may be applicable to this construction in the sense that movement has taken place from the NP within the Verbal Noun Phrase to the specifier of the Aspect Phrase as seen in section 2.1.2. Movement, according to McCloskey, triggers lenition in finite verbs in relative clauses. The word *a* in this construction is not a complementizer, but a verbal particle indicating aspect. Eclipsis is ungrammatical in non-finite clauses. This too would be expected within McCloskey's analysis because movement triggers lenition and not eclipsis.

This completes the description of each of the 19 items in the experiment. In the following section a description of the individual tests is provided.

4.4 The Experiment

All four groups, the young cadets, the T5-10 and the T10-15 groups, the older adult learners and the control group of native speakers, completed the Cloze Test and three distinct acceptability judgment tasks: a Listening Test, a Paired Comparison Test and Written Test. Control measures recommended by Cowan and Hatasa (1994) were incorporated into the design of the experiments. These included a minimum of three tokens of each structure; a high number of sentences; pilot testing the sentences with native speakers; and, inclusion of native speaker controls. As per Sorace (1996), absolute and relative judgment tasks were included in the experiment, the former being a rating-type task and the second a ranking-type task. For all three tests (excluding the Cloze

Test), a 6-point scale was used to increase the statistical reliability. Another advantage of the 6-point scale is that it pre-empts the tendency to completely reject a structure when uncertain of its acceptability; participants were instructed to use the full range of the scale, rather than simply the extremities 'acceptable' vs 'unacceptable' (Bley-Vroman 1988).

The Listening and the Written Tests were absolute judgements tasks that required the learner to rate isolated grammatical and ungrammatical sentences, presented in random order, using the 6-point scale. The Paired Comparison Test was a ranking-type task. It was a judgment-by-contrast task, where learners were asked to rank a pair of sentences which differed either on the type of mutation or the presence or absence of a gap. This ranking was done using the same 6-point scale for both sentences. Examples are given below in sections 4.4.3 to 4.4.5 when discussing the different test types in greater detail.

Care was taken to include sentences containing highly plausible images and real situations, as opposed to images which were implausible or abstract. It has been shown by Levelt, Haans and Meijers (1977) that faster and more positive judgements were awarded to the former.

Time limits were imposed on the Cloze Test, the Listening Test and the Paired Comparison Test. Subjects were allowed to take as long as they felt necessary to complete the Written Test. For the Paired Comparison and the Written Tests, subjects were instructed that once they had turned a page, they could not go back. The entire testing session lasted approximately 90 minutes.

4.4.1 Procedure

A description of each of the four test types is provided below. The tests are described in the order in which they were completed by the subjects.

4.4.2 Cloze Test

The text for the 25-item Cloze Test was adapted from an advanced level Irish language teaching manual used in the high schools². Subjects were instructed to fill the gaps with a word (noun, verb, prepositional pronoun, relative marker) which best completed the sentence. No choice of possible answers was provided. A time limit of 20 minutes was imposed.

4.4.3 Listening Test

After completing the Cloze Test, the subjects were asked to judge the acceptability of 57 sentences, presented to them aurally. The test was digitally recorded by a local teacher of Irish, in Kingston, Ontario,³ on to compact disk using Sound Forge version 7.0a Build 262. Sound Forge is produced by Sony Digital Pictures Inc. The C.D. was played through only once during the test. A 3-second time lapse separated each sentence. Subjects used the 6-point scale, as shown below, to rate the level of acceptability.

(4.12)

0 1 2 3 4 5 not sure

² Diograis Cúrsa Gaeilge don Ardteist Gnáthleibhéal. Diarmaid Ó Tuama C.J. Fallon

³ Neil McEvoy is a fluent speaker of Irish. Originally from Dublin, he completed his university education through Irish at University College Galway. He has been teaching Irish in Kingston for the last two years.

Subjects rated the sentences by placing an 'X' above the numbers on the scale to indicate to which degree a sentence was an acceptable sentence of Irish. They were instructed that '0' meant unacceptable and '5' meant acceptable. They were encouraged to make full use of the scale and were permitted to select points on the line between the numbers on the scale to indicate more distinctively the level of acceptability. In other words, subjects could place the 'X' between the 3 and 4 to indicate '3.5' as a level of acceptability, not quite as good as a '4' but not quite as unacceptable as a '3'. If the subjects were not sure of the acceptability of the sentence, they had the option to indicate this by ticking the 'not sure' box to the right of the scale.

4.4.4 Paired Comparison Test

In the Paired Comparison Test, subjects were presented with 39 pairs of sentences (3 tokens of 13 distinct pairs) which differed on the basis of a single element, either a mutation, or the presence or absence of a resumptive pronoun. The sentences were presented in written format. Subjects had 20 minutes to complete the test.

Subjects were asked to compare these pairs of sentences and judge them against each other. This format has the advantage that subjects are asked only to make comparative judgements rather than absolute judgements, which can often be affected by irrelevant factors such as vocabulary choice, or sentence length for example. For example, subjects were presented with sentence pairs as in (4.13) and (4.14) where differences were either in the form of the mutation (4.13a,b) or the presence or absence of a resumptive pronoun (4.14a,b) The order of presentation of the unacceptable vs acceptable sentences in each pair varied randomly.

4.4.5 Written Test

The sentences used in the Written Test were the same sentences used in the Listening Test. They were also presented in the same order as in the Listening Test. The same 6-point scale and 'NOT SURE' box as used in the Listening test were used. Subjects were given as long as they needed to complete this section of the test because they were invited to make changes to the sentences to make them more acceptable to them either by moving elements of the sentence, adding or deleting others, or changing the appearance of certain words. Subjects were told that once that had turned the page, they could not go back and check their answers.

There were two main differences between the Listening and Written Test. The first was that the subjects had the benefit of time to read and digest the sentence for longer than 3 seconds before making a decision. The second was the presence of orthographic cues to indicate which type of mutation has occurred on the verb, the insertion of the letter 'h' for lenition, and the insertion of the eclipsis consonant in front of the initial consonant of the word. It was anticipated that these two differences would facilitate the learners' task in distinguishing between the complementizers. It is also possible that the better scores in the Written Test could be due to a learning effect as the subjects will have heard the same sentences in the Listening Test.

The next chapter looks at the results for the four tests for all four groups.

Chapter 5

Results and Discussion

5.0 Introduction

The results of the Cloze Test are reported first. The 25-item Cloze Test was a competency test used to distinguish between the learners and the native speakers and to determine minimum competency for taking the tests. The results obtained in the Listening Test (L), the Written Test (W), and the Paired Comparison Test (PC) are presented in this order. The results for each item, for all three test formats, are presented together to facilitate comparison. Within the discussion of the Written test results I also refer to the changes suggested by the subjects. 'NOT SURE' results are presented separately following the reporting of the different items. The results for the 19 test items are reported according to structure in the following order: filler items (5.2), subject relative clauses (5.3), direct object clauses (5.4), oblique clauses (5.5), sentences which contained cyclical (5.6) and mixed \bar{A} -dependencies and sentences which contained long distance \bar{A} -dependencies (5.7).

The Listening Test took approximately 17 minutes to complete. All subjects completed the test. Subjects did not appear to have any difficulty following the instructions as none of the test items were left unanswered.

For each of the 19 items in the Written Test, there was the possibility of a minimum of 102 changes (3 tokens per item multiplied by the number of subjects, 34). Six of the 34 subjects did not provide any written changes at all. The distribution of these individual by group is given in Table 5.1.

Table 5.1

Distribution of Subjects Who did not Provide Written Comments			
Control	T5-10	T10-15	Older Adults
2	1	2	1

All changes were included in the calculations whether or not they were valid. In some cases, subjects made changes where none were required. Other perceived errors concerned the choice of vocabulary items. Subjects for instance suggested a different choice in prepositional pronoun, or a spurious inflection on a particular vocabulary item (e.g. removing the lenition of a feminine noun thought to be masculine noun). Other types of corrections included changes to the choice of verb tense (e.g. replacing the present tense by the future tense or the past tense). These latter examples occurred only in the cyclical and mixed chain constructions.

There was no indication that interest in making comments waned towards the ends of the test. Subjects seem to have been diligent through the 57 items. Sensitivity to the mutation was more apparent for the non-finite clauses, subject clauses, direct object clauses containing a gap and cyclical and mixed chains containing gaps. Resumptive pronouns tended to be accepted in the oblique constructions but rejected in the direct object clauses, cyclical \bar{A} -dependencies, and long distance \bar{A} -dependencies. Table 5.2 provides a summary of the number of corrections made for each of the conditions tested. Numbers given are percentages (number of corrections out of the total 102 possible

opportunities to do so for each item). Items which were changed $\leq 25\%$ of the time are highlighted.

Table 5.2

Percentage of changes in Written Test made for each condition for all subjects

word order contrast		gap vs pronoun contrast		mutation contrast	
item	%	item	%	item	%
VSO	02	SaLgap	05	NPaL	09
*SVO	61	SaLrep	58	*NPaN	36
*aLNP	54	DOaLgap	09	*SaNgap	33
		*DOaNgap	33	ObaNprep	30
		DOaNrep	54	*ObaLprep	22
		*DOaLrep	54	aNgorep	41
		aLaLgap	14	*aLgorep	39
		aNaNrep	51	aNaLgap	25

The main difference between the Listening and Written Tests was that the subjects had the benefit of time to read and to observe the orthographic mutations on the verb. For this reason, it was expected that greater sensitivity to the mutations would be apparent in the Written Test.

In the Paired Comparison Test, subjects were presented with 39 pairs of sentences (3 tokens of 13 distinct pairs) which differed on the basis of a single element, either a mutation, or the presence or absence of a resumptive pronoun. The sentences were presented in written format. Subjects had 20 minutes to complete the test. Two subjects in the T5-10 group did not complete the test and so their results are not included for this test.

Each of these three tests made use of a 6-point numerical scale. When a numerical scale is used in acceptability judgements instead of a binary choice of 'acceptable' vs 'unacceptable', the extremities of the scale reflect a confident positive or negative assessment of the condition. A number of answers are also found in the mid-range zone.

The results show that the Cloze Test clearly distinguished the native speakers from the L2 learners. Results for native speakers were near perfect, while those of the learners hovered around the mid-point. The results also show a similar level of proficiency among the learners groups.

5.2 Filler Sentences Results

The filler sentences as mentioned previously in chapter 4 were used to test whether the learner has acquired Irish word order patterns for declarative sentences and non-finite constructions and is sensitive to the *aL/aN* distinction. Three cases were considered for comparison: VSO vs *SVO, NPaL vs *aLNP and NPaL vs *NPaN.

5.2.1 Word Order: VSO vs *SVO

The results for the word order condition VSO vs *SVO for each of the test types ((L) for Listening, (W) for Written, (PC) for Paired Comparison) are given in Table 5.4. The error margins are given in italics.

Table 5.4

	Filler Sentences VSO vs *SVO Mean Rates of Acceptability			
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
VSO (L)	4.9 ± 0.2	4.7 ± 0.5	4.4 ± 0.7	4.5 ± 0.4
*SVO (L)	0.4 ± 0.8	0.9 ± 1.0	1.1 ± 0.7	0.9 ± 0.8
VSO (W)	4.9 ± 0.2	4.7 ± 0.5	4.4 ± 0.6	5.0 ± 0.01
*SVO (W)	0.4 ± 0.5	0.9 ± 0.9	1.3 ± 1.1	0.5 ± 0.8
VSO (PC)	4.8 ± 0.6	5.0 ± 0.0	4.4 ± 1.0	4.8 ± 0.5
*SVO (PC)	0.4 ± 0.6	0.6 ± 0.7	0.8 ± 0.9	0.6 ± 0.9

An ANOVA comparing the rate of acceptability for the condition VSO vs *SVO sentences in the Listening Test was highly significant for both the control and learner

groups, ($F(1,8) = 267.720$ $p < .001$) and ($F(2,22) = 247.642$ $p < .001$) respectively. There was no significant effect of group for the learners nor was there a significant condition by group interaction.

An ANOVA comparing the rate of acceptability for the same VSO and *SVO sentences in the Written Test was also highly significant for both the control and the learner groups, ($F(1,8) = 326.775$ $p < .001$) and ($F(2,22) = 245.639$ $p < .001$) respectively. There was no significant effect of group. There was a marginally significant group by condition interaction, ($F(2,22) = 3.103$ $p = .065$).

Acceptability of the VSO pattern was unanimous and no subjects suggested changing the word order to the SVO order of English. Two individuals suggested removing the lenition from the word *mhonarcha* 'factory'. This is a reflection of their incomplete knowledge of the gender of nouns, as *monarcha* is a feminine noun. Nouns which end in vowels are more frequently masculine, and would therefore not be lenited.

Suggested changes to the *SVO pattern unanimously indicated that the word order was unacceptable with subjects providing written changes for 61% of the cases, more than for any other item.

An ANOVA comparing the rate of acceptability for VSO and *SVO sentences in the Paired Comparison Test was again highly significant for both the control and the learner groups, ($F(1,8) = 184.205$ $p < 0.001$) and ($F(2,18) = 39.266$ $p < 0.000$) respectively. As with the Listening Test, there was no significant effect of group nor was there any group by condition interaction.

5.2.2 Word Order: Non-finite sentences: NPaL vs *aLNP

The results for the word order for the non-finite construction patterns NPaL vs *aLNP (section 4.4 examples (4.10a and b)) are given in Table 5.5.

Table 5.5

Filler Sentences: NPaL vs *aLNP				
Mean Rates of Acceptability				
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
NPaL (L)	4.5 ± 0.5	4.0 ± 0.7	3.7 ± 1.5	4.2 ± 0.4
*aLNP (L)	0.5 ± 0.7	1.4 ± 1.2	2.5 ± 1.3	3.3 ± 0.6
NPaL (W)	4.6 ± 0.7	3.6 ± 1.2	3.5 ± 1.3	4.9 ± 0.3
*aL NP (W)	0.8 ± 1.0	1.8 ± 0.9	3.2 ± 1.7	1.4 ± 1.3
NPaL (PC)	4.9 ± 0.2	4.8 ± 0.6	4.1 ± 1.4	4.9 ± 0.2
*aL NP (PC)	0.3 ± 0.7	1.1 ± 1.2	1.7 ± 1.7	1.2 ± 1.7

An ANOVA comparing the rate of acceptability for the condition NPaL vs *aLNP sentences in the Listening Test was highly significant for both the control and learner groups, ($F(1,8) = 177.545$ $p < 0.001$) and ($F(2,22) = 24.368$ $p < 0.001$) respectively. There was also a significant group effect among the learners, ($F(2,22) = 3.568$ $p = .045$). It is with the T 5-10 that we see the greatest sensitivity to the two structures. The grammatical NPaL pattern was consistently rated more acceptable than the ungrammatical *aLNP pattern by all 4 groups.

An ANOVA comparing the rate of acceptability for the same sentences containing NPaL vs *aLNP in the Written Test also revealed a highly significant effect of condition for both the Control and the learner groups, ($F(1,8) = 116.581$ $p < 0.001$) and ($F(2,18) = 41.536$ $p < 0.001$) respectively. There was no significant effect of group among the learner groups. There was a significant group by condition interaction ($F(2,18) = 11.188$ $p < 0.001$).

A total of nine suggested changes were made. Five of these were to change the prepositional pronoun *leis* (with-him) to the prepositional pronoun *chun* (towards-it)¹. In actual fact, both prepositions can occur in standard usage. Two other suggested changes involved changing the standard NP_aL word order to the non-standard word order, *aLNP *i.e.* placing the verb ahead of the noun. The remaining two suggested changes were to remove a definite article and to incorrectly mutate the subject NP² in a non-standard way.

An ANOVA comparing the rate of acceptability for the condition NP_aL vs *aLNP sentences in the Paired Comparison Test again revealed a highly significant effect of condition for both the control and the learner groups, (F(1,8) = 116.581 p.< 0.001) and (F(2,18) = 39.266 p.<0.000) respectively. There was no significant effect of group among the learner groups. There was no significant group by condition interaction. These results confirm that the subjects are aware of the distinct word order for non-finite clauses.

5.2.3 Sensitivity to Mutation: Non-finite Clauses: NP_aL vs *NP_aN

The results for the sensitivity to the mutation which occurs in the non-finite constructions NP_aL vs *NP_aN in section 4 examples 4.10a and 4.11 are given in Table 5.6.

¹ Sentence was *Táim anseo leis an phictiúr sin a fheiceáil*. “I am here to see the picture (movie)”.

² In fact the item in question appeared incorrectly in the test. The noun ‘*imreoir*’ (player) is a masculine noun beginning with a vowel and should have been written ‘*t-imreoir*’ when used with the definite article. None of the other 33 subjects, including the native speakers, made note of the error except the subject who wanted the form ‘*an h-imreoir*’ which would be highly irregular in this context. The prefix h- is most commonly used as a mutation following the feminine possessive adjective *a hathair* (her father).

Table 5.6

Filler Sentences: Mutation Effects in Non-finite Clauses
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
NPaL (L)	4.5 ± 0.5	4.0 ± 0.7	3.7 ± 1.5	4.2 ± 0.4
*NPaN (L)	2.9 ± 1.7	3.3 ± 1.1	3.4 ± 1.0	4.1 ± 0.9
NPaL (W)	4.6 ± 0.7	3.6 ± 1.2	3.5 ± 1.3	4.9 ± 0.3
*NPaN (W)	2.5 ± 2.0	3.3 ± 1.01	3.2 ± 1.6	3.9 ± 0.3
NPaL (PC)	5.0 ± 0.1	4.4 ± 0.7	4.1 ± 0.7	4.6 ± 0.6
*NPaN (PC)	0.6 ± 1.0	1.6 ± 1.2	1.3 ± 1.0	0.8 ± 1.0

With respect to the choice of mutation in non-finite clauses in the Listening Test, an ANOVA indicated that there was a significant main effect of condition, ($F(1,8) = 6.811$ $p = .031$) for the control group. Among the learners, there was no main effect of condition or group nor was there a condition by group interaction.

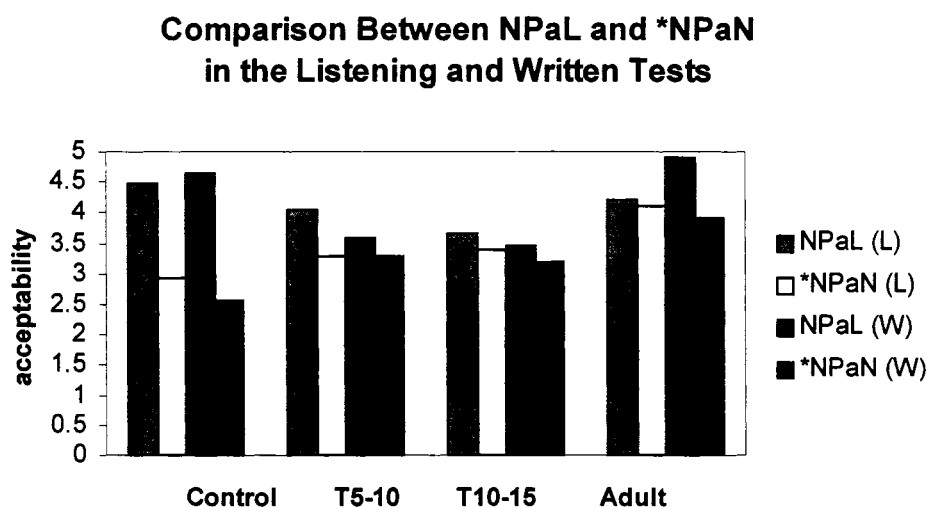
An ANOVA for these same sentences in the Written Test reveals a highly significant effect of condition among the control group ($F(1,8) = 12.009$ $p = .008$). Sensitivity to the distinct mutation is greatest among the native speakers; however, the standard deviations are unusually large. Among the learners, there was no main effect of condition yet there was an effect of group, ($F(2,22) = 3.625$ $p = .044$). The T5-10 and T10-15 are not showing that they distinguish between the mutated forms. There was no group by condition interaction.

Of the total 37 suggested changes to *NPaN (out of a possible 102), 31 were to correct the mutation on the verb. This indicates that subjects were using orthographic cues to identify the non-standard mutations in these non-finite constructions. Six other individuals suggested reversing the word order, to obtain the *aNNP. They did not

correct the mutation. Three of these individuals were members of the control group: two native speaker cadets, and one a middle aged native speaker.

A comparison between the results for NPaL vs *NPaN across subjects for the Listening and the Written Tests is shown in Figure 5.1.

Figure 5.1



In comparing the Listening to the Written Test results in Figure 5.1, we observe that the control group was the only group that consistently distinguished between the two patterns in both tests. The older adult group was the only learner group that clearly identified aNaL as being acceptable. All learners assigned similar ratings to the ungrammatical *NPaN as to the grammatical NPaL .

An ANOVA for these conditions in the Paired Comparison Test reveals a highly significant main effect of condition among the control group, ($F(1,8) = 116.581$ $p = .001$). The standard deviations in the responses of the Control group are smaller in these results than for the previous two test formats. Among the learners, there was a significant main effect of condition, ($F(2,18) = 103.707$ $p = .000$). This was not the case in the Listening

or the Written Tests. There was no effect of group among the learners. The ratings assigned to the incorrect mutated forms are higher among the learners than for the native speakers within the control group. This concludes the section on the filler items.

5.3 Subject Relatives

5.3.1 Distinction Between the Mutations: SaLgap vs *SaNgap

The results for the two contrasting items in this category that were structurally grammatical (containing gaps) but morphologically distinct (*aL* vs *aN*) (section 4.2.1 examples (4.1a and b) are shown below in Table 5.7.

Table 5.7

Subject Relatives: SaLgap vs *SaNgap				
Mean Rates of Acceptability				
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
SaLgap (L)	4.8 ± 0.4	4.2 ± 0.75	4.0 ± 0.7	4.4 ± 0.3
*SaNgap (L)	3.2 ± 1.7	3.3 ± 0.7	3.4 ± 0.6	4.3 ± 0.6
SaLgap (W)	4.8 ± 0.3	4.5 ± 0.7	4.5 ± 0.7	5.0 ± 0.03
*SaNgap (W)	3.1 ± 1.7	3.4 ± 1.3	3.2 ± 1.7	4.2 ± 0.7
SaLgap (PC)	4.7 ± 0.6	3.3 ± 1.8	3.4 ± 1.2	3.2 ± 1.6
*SaNgap (PC)	1.3 ± 1.2	2.5 ± 1.8	2.1 ± 0.9	2.5 ± 1.9

An ANOVA for sentences in the Listening Test containing SaLgap vs *SaNgap revealed a significant effect of condition in the rate of acceptability for both the control and the learner groups, ($F(1,8) = 8.285$ $p = .021$) and ($F(2,22) = 15.00$ $p < 0.001$) respectively. A barely significant effect of group among the learners was also revealed, ($F(2,22) = 3.095$ $p = .065$). All subjects, except the older adult learner group, distinguished between *aL* and *aN* effects on the clausal verbs.

In the Written Test, the SaLgap structure was consistently rated more acceptable than the *SaNgap structure. This is supported by an ANOVA comparing the rate of acceptability for SaLgap vs *SaNgap, which revealed highly significant effects of condition among the control group and the learner groups, ($F(1,8) = 8.569$ $p = .019$) and ($F(2,22) = 15.670$ $p < .001$) respectively. Among the learners, there was no effect of group nor any group by condition interaction.

Of the 35 comments received, 29 were to correct the mutation on the verb. The scores for the corrected verb forms range from '4' to '0' indicating a wide variation in the perceived gravity of the error.

An ANOVA for these conditions in the Paired Comparison Test revealed a highly significant effect of condition among the control group, ($F(1,8) = 51.306$ $p < 0.000$). Sensitivity to the distinct complementizers is present among the native speakers. This distinction is not present among the learner groups. The standard deviations in the results obtained for the learners are greater in these results than for the other test formats. The ANOVA revealed no significant effect of condition or of group. There was no condition by group interaction among the learners.

5.3.2 Distinction between presence of a gap vs a resumptive pronoun: SaLgap vs *SaLrep

The results for contrasting structural grammaticality (gaps vs *rep) but morphologically grammatical (*aL* in both cases) (section 4.2.1 examples 4.1a and c) are shown below in Table 5.8.

Table 5.8

Subject Relatives: SaLgap vs *SaLrep
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
SaLgap (L)	4.8 ± 0.4	4.2 ± 0.75	4.0 ± 0.7	4.4 ± 0.3
*SaLrep (L)	1.2 ± 1.1	1.7 ± 0.9	1.9 ± 1.3	2.9 ± 1.0
SaLgap (W)	4.8 ± 0.3	4.5 ± 0.7	4.5 ± 0.7	5.0 ± 0.03
*SaLrep (W)	1.9 ± 1.7	2.9 ± 0.7	3.0 ± 1.3	3.0 ± 1.3
SaLgap (PC)	5.0 ± 0.0	5.0 ± 0.0	4.4 ± 0.7	4.6 ± 0.9
*SaLrep (PC)	0.5 ± 0.7	0.7 ± 0.7	1.0 ± 0.8	0.9 ± 1.1

In the Listening Test, all groups recognized the ungrammaticality of the *SaLrep structure which contained an overt resumptive pronoun in the subject position of the subject relative clause. An ANOVA for the SaLgap vs *SaLrep condition in the Listening Test revealed a highly significant main effect in the rate of acceptability of both the control and the learner groups, ($F(1,8) = 80.559$ $p < 0.001$) and ($F(2,22) = 51.179$ $p < 0.001$) respectively. There was a significant effect of group, ($F(2,22) = 3.608$ $p = .044$) among the learners suggesting that groups differ in their judgments concerning the rate of acceptance of the standard SaLgap vs the non-standard *SaLrep. There was no condition by group interaction.

An ANOVA for these same sentences in the Written Test also showed a significant effect in the rate of acceptability for SaLgap vs *SaLrep among the control group and the learner groups, ($F(1,8) = 28.259$ $p = .001$) and ($F(2,22) = 42.004$ $p < .001$) respectively. Both the T5-10 and the T10-15 disliked the presence of the pronoun to the same degree that they disliked the *aN* complementizer in *SaNgap. There was no significant effect of group nor was there a group by condition interaction among the learner groups. This is reflected in the consistency of the responses for each condition for

each of the groups. The *SaLrep sentences were rated on average lower by all groups except the adults learners, for whom the two conditions were virtually rated the same. It is interesting that the intrusive pronouns were perceived to be more nefarious in the Listening Test than in the Written Test.

The results from the analysis of the suggested changes made by the subjects shed some light on the wide error margins. Of the 61 suggested changes, 58 were to remove the subject pronoun in the clause. The other three suggested changes resulted in an unusual mutation on a noun and the eclipsis rather than lenition on a verb³. Where the suggested change was to remove the pronoun, the scores ranged from '4.2' to '0' again indicating a tremendous range in (subjects') acceptability.

An ANOVA for these sentences in the Paired Comparison Test showed a highly significant effect in the rate of acceptability for SaLgap vs *SaLrep among the control group and the learner groups ($F(1,8) = 51.306$ p. <0.000 and $F(2,18) = 112.401$ p. <0.000). The T5-10 results were native-like in the rejection of the *SaLrep pattern. There was no significant effect of group nor was there a group by condition interaction among the learner groups. The learners groups were also more accepting of SaLgap when it appeared in a sentence pair with *SaLrep than when it appeared in the sentence pair with *SaNgap, which targeted the *aL/aN* distinction. The orthographic cues of the *aL/aN* distinction do not appear to have been salient to the learners.

³ Interestingly, one of the learners who suggested eclipsing the verb was also one who preferred the use of the accusative pronoun in the direct object and the cyclical and long-distance dependencies. This learner did not reject the sentences containing the intrusive subject pronoun in this condition, awarding '5' to these sentences.

5.4 Direct Object Relatives

5.4.1 Direct Object Clauses Containing a Gap

The results for the contrasting two items (section 4.2.2) that were structurally grammatical (containing gaps) but morphologically distinct (*aL* vs *aN*) (section 4.2.2 examples (4.2a and b) are shown below in Table 5.9.

Table 5.9

	Direct Object Gap Clauses: DOaLgap vs *DOaNgap Mean Rates of Acceptability			
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
DOaLgap (L)	3.9 ± 1.3	2.7 ± 1.1	3.8 ± 1.0	4.2 ± 0.4
*DOaNgap (L)	3.1 ± 1.3	3.0 ± 1.3	4.0 ± 0.7	3.8 ± 0.7
DOaLgap (W)	4.1 ± 0.7	4.1 ± 0.9	3.6 ± 0.9	4.6 ± 0.3
*DOaNgap (W)	3.1 ± 0.6	3.5 ± 1.1	4.2 ± 0.8	3.9 ± 1.0
DOaLgap (PC)	4.7 ± 0.6	3.9 ± 1.0	3.2 ± 1.1	4.3 ± 0.9
*DOaNgap (PC)	1.3 ± 1.3	2.3 ± 2.0	2.8 ± 1.3	1.6 ± 1.2

An ANOVA for the sentences containing DOaLgap vs *DOaNgap in the Listening Test revealed no main effect of condition for either the control group or the learner groups. There was a highly significant effect of group among the learners ($F(2,22) = 5.863$ $p = .009$). There was no condition by group interaction.

For the same sentences in the Written Test, there is no effect of condition for either the control or the learner groups. There is no effect of group among the learners. There is a borderline significant condition by group interaction ($(F(2,22) = 3.089$ $p = .066)$

With respect to the nine suggested changes received for the DOaLgap constructions, four subjects suggested the non-standard eclipsed form of the verb, *i.e.* *DOaNgap; two suggested including a definite article; one mistook a noun to be in plural form and suggested the plural determiner; and the other suggested a different

prepositional pronoun. This alternative prepositional pronoun would also have conformed with standard usage in this sentence. All of the individuals who suggested changes awarded very low scores ranging from '0' to '3'.

Of the 35 suggested changes to the *DOaNgap pattern, 31 were to change the mutation on the verb to lenition to reflect the standard form DOaLgap. The scores awarded to the *DOaNgap pattern with the non-standard mutation, reflecting a range in perceived gravity of the mutation error ranging from '4' to '0'. This conflicting behavior suggests that the non-standard mutation does not appear to greatly disturb the subjects when it occurs, but that they appear to be aware of the standard form. The four remaining suggested changes included an incorrect change in gender; an incorrect change in case; a change in determiner, from a definite article to a possessive adjective; and the insertion of an accusative pronoun in the relativised site. This last suggested change was contributed by a subject who appears to have made the link between eclipsis and the binding of a pronoun because he or she did not reject the intrusive pronoun in the subject relative clause and even suggested eclipsis of the verb to obtain *SaNpro.

The orthographic cues appear to have assisted the learners in identifying the ungrammatical eclipsed verbs. The ungrammatical eclipsed vowel in, *n-itheann* 'eat' was rejected more often (13 times) than the other two ungrammatical verbs *gceanníonn* 'buy' and *ndéanfaidh* 'will do', which were only changed 9 times each. The presence of the letter 'n' and the hyphen at the left edge of the word appears to be more salient to the learners than the addition of a single consonant ('g' or 'n') without hyphens in the other two examples, thus triggering a closer inspection on the part of the learner.

An ANOVA comparing the two conditions in the Paired Comparison revealed that there was a highly significant main effect of condition for both the control and the learner groups, ($F(1,8) = 42.504$ $p < 0.000$ and ($F(2,18) = 9.864$ $p = .005$) respectively. There was no effect of group among the learners. There was no condition by group interaction among the learner groups.

5.4.2 Direct Object Clauses Containing a Resumptive Pronoun

The results for the structurally grammatical items containing resumptive pronouns but morphologically distinct complementizers (**aL* vs *aN*) (section 4.2.2 examples (4.3a and b) are shown below in Table 5.10.

Table 5.10

Direct Object Clauses with Resumptive Pronoun: DOaNrep vs *DOaLrep
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
DOaNrep (L)	2.0 ± 1.2	2.8 ± 0.5	2.9 ± 0.8	3.1 ± 1.3
*DOaLrep (L)	1.8 ± 1.4	2.5 ± 0.5	2.4 ± 1.6	2.5 ± 1.4
DOaNrep (W)	2.0 ± 1.6	2.8 ± 1.3	2.9 ± 1.3	2.7 ± 1.4
*DOaLrep (W)	2.3 ± 1.9	2.8 ± 1.2	2.0 ± 1.4	3.3 ± 1.2
DOaNrep (PC)	1.4 ± 1.4	0.9 ± 0.7	1.3 ± 1.0	3.2 ± 1.6
*DOaLrep (PC)	3.4 ± 1.5	4.4 ± 1.0	3.7 ± 1.1	2.9 ± 1.3

An ANOVA for the sentences in the Listening Test containing DOaNrep vs *DOaLrep revealed that there was no effect of condition for the control group but that there was a marginally significant effect of condition among the learners ($F(2,22) = 3.422$ $p = .078$). There was no main effect of group nor was there a condition by group interaction. The level of acceptance of these direct object constructions is lower overall when compared to the direct object clauses containing a gap.

An ANOVA for the same sentences in the Written Test comparing DOaNrep vs *DOaLrep revealed no effect for condition for either the control or the learner groups. There was also no effect of group and no condition by group interaction among the learner groups. A comparison of the results for all for direct object clause structures tested reveals that the results are consistently lower for the resumptive pronoun constructions.

Both of these structures received 55 suggested corrections each. The majority of the suggested changes were to remove the final accusative pronoun, but often the corresponding change to the mutation was not made by either the learners or the control group.

For the DOaNrep construction, the learners made 40/55 changes while the control made 15/55 changes. Of the 40 changes, the learners either removed the pronoun (23/40 times) or changed the mutation from eclipsis to lenition (6/40 times). Neither of these changes individually yielded a standard construction. In other words for the 29/40 changes, the learners showed that they have not made the link between the form of the mutation and the presence or absence of a resumptive pronoun in the relativised site. The remaining 11/40 changes included removing the pronoun and changing the mutation to lenition, thus yielding a standard DOaLgap construction. The distribution of the suggested changes for the control group produced similar results. Of the 15 changes, 11/15 yielded non-standard forms where 6/15 were to remove the pronoun only and 5/15 were to change only the mutation. A standard form was produced 4/11 times when both the pronoun was removed and the mutation was changed to lenition.

For *DOaLrep, the most common suggestion was to remove the pronoun, yielding the grammatical DOaLgap pattern. The learners made this suggestion 35/40 times. While this might lead us to conclude that the learners are aware of the standard DOaLgap form, this result is tempered by the high number of non-standard forms obtained in the previous example where we observed that the link between the mutation and the presence or absence of a resumptive pronoun was clearly not made. The standard DOaNrep was obtained when 3/40 suggested changes were to change the mutation form lenition to eclipsis. The remaining 2/40 suggested changes were to remove the pronoun and change the mutation from lenition to eclipsis, yielding the non-standard *DOaNgap. With respect to the control group, 14/15 changes were to remove the pronoun, yielding the standard DOaLgap and 1/15 was to change the mutation form lenition to eclipsis, yielding the standard DOaNrep.

Of the 15 cases where the change on the verb was suggested along with the deletion of the pronoun in the DOaNrep condition, the majority of these (12/15) were made for the verb *n-itheann*, ‘eat’ where the letter ‘n’ stands out more given the presence of the hyphen. The three other cases were with the verb *gcanann* ‘sing’, where the ‘g’ is attached directly to the left edge of the word. Once more, the orthographic cue at the left edge of the ‘n’ + hyphen as opposed to the insertion of the single consonant ‘g’ inserted may have played a role.

An ANOVA comparing the two conditions in the Paired Comparison Test revealed that there was a marginally significant main effect of condition for the Control group, ($F(1,8) = 4.181$ $p = .075$). There was a highly significant main effect of condition with the learner groups, ($F(2,18) = 22.107$ $p = .000$). There was no effect of group among

the learners. There was a highly significant condition by group interaction among the learner groups, ($F(2,18) = 7.666$ $p = .003$). The T5-10 and T10-15 groups are not distinguishing between the patterns, as evidenced by the preference for the *aL* complementizer. The older adult learners did not demonstrate any preference of complementizer form.

This concludes the section on the direct relative clauses. The second type of clause that can contain resumptive pronouns at the foot of a chain will now be examined.

5.5 Oblique Clauses

5.5.1 ObaNprep vs *ObaLprep

The results contrasting two items that were structurally grammatical (containing resumptive pronouns) but morphologically distinct (*aL* vs *aN*) are shown below in Table

5.11

Table 5.11

Oblique Clauses: ObaNprep vs *ObaLprep
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
ObaNprep (L)	4.1 ± 1.2	3.2 ± 0.7	3.1 ± 1.6	4.4 ± 0.4
*ObaLprep (L)	4.2 ± 0.8	3.2 ± 0.8	2.8 ± 1.1	4.3 ± 0.4
ObaNprep (W)	3.7 ± 1.6	3.4 ± 1.2	3.4 ± 0.8	4.4 ± 0.8
*ObaLprep (W)	3.9 ± 1.6	3.6 ± 0.9	3.4 ± 1.1	4.3 ± 0.8
ObaNprep (PC)	2.6 ± 1.5	2.8 ± 1.7	3.0 ± 1.5	2.8 ± 1.7
*ObaLprep (PC)	3.5 ± 1.4	3.0 ± 1.2	2.5 ± 1.1	3.2 ± 2.0

An ANOVA for the sentences in the Listening Test containing ObaNprep vs *ObaLprep revealed that there was no main effect of condition for either the control group or the learners. There was a highly significant effect of group indicating a

difference in performance between them, ($F(2,22) = 7.549$ $p = .003$). This effect of group probably arises from systematically lower results for the T5-10 and the T10-15 groups. There was no condition by group interaction.

An ANOVA comparing the same two conditions in the Written Test also revealed no main effect of condition for either the control or the learner groups. There was also a significant effect of group among the learners, ($F(2,22) = 3.948$ $p = .034$). There was no condition by group interaction among the learner groups.

Fewer changes were suggested for the oblique clauses than for the direct object clauses containing the accusative pronoun form in the previous section. A total of 49 suggested changes were made for the oblique clauses, 30 for ObaNprep and 19 for *ObaLprep as opposed to the total of 110 for direct object patterns (55 for the DOaNrep and 55 for *DOaLrep).

For ObaNprep, there were 10/32 suggestions to delete the prepositional pronoun. This resulted in ungrammatical sentences because of the semantic link between the verbs and the prepositions: *eist le* 'listen to' vs *eist* the intransitive 'listen'; *buail le* 'meet' vs *buail* 'hit'; and *fan le* 'wait for' vs *fan* the intransitive 'wait' or 'stay'. This suggested change is made only by the learners. There were 18/32 suggested changes to lenite the verb; 7 of these by members of the control group. This is a reflection of a dialectal feature, since Munster Irish lenites the verb in this context instead of eclipsing it, as in the standard form. An additional suggestion to incorrectly lenite a noun was unrelated to the relative clause construction. A native speaker indicated a preference for the *go* complementizer instead of the *aL*. The complementizer *go* is often used to replace *aN* in relative clauses containing a resumptive pronoun in Munster Irish.

For the *ObaLprep construction, 11/19 suggestions were to delete the prepositional pronoun with the verb and preposition combinations seen in the ObaNprep condition, *eist le* ‘listen to’ and *fan le* ‘wait for’ above. Two suggestions were made to delete the prepositional pronoun in verb and preposition combination *cuir chun* ‘give to’ vs *cuir* ‘put’. Two additional suggestions were to replace it by either the preposition *ag* ‘at’ or by the third person plural form *chucu* instead of the grammatical 3rd person singular, *chun*. There were only two suggestions to eclipse the verb, indicating a strong dialectal preference for the *aL* form in indirect clauses. One native speaker indicated a preference for the complementizer *go* instead of *aL* in two of the three tokens of this condition. This same person made the same suggestion in the ObaNprep. In both instances, the subject also suggested that the verb be eclipsed when used with the complementizer *go*. This use of eclipsis is the standard form with this complementizer.

An ANOVA comparing the two conditions in the Paired Comparison Test revealed that there was no main effect of condition for either the control or the learner groups. There was no effect of group among the learners. There was no condition by group interaction among the learner groups.

5.5.2 Oblique vs Direct Object Clauses

The results for the items that were structurally grammatical (containing distinct types of resumptive pronouns) and morphologically grammatical (*aN* in both cases) are shown below in Table 5.12. There was no Paired Comparison Test for this given the grammaticality of both structures.

Table 5.12

Oblique vs Direct Object Clauses: ObaNprep vs DOaNrep
Mean Rates of Acceptability (Listening Test)

	L1		L2	
	Control	T 5-10	T 10-15	Adult
ObaNprep (L)	4.1 ± 1.2	3.2 ± 0.7	3.1 ± 1.6	4.4 ± 0.4
DOaNrep (L)	2.0 ± 1.2	2.8 ± 0.5	2.9 ± 0.8	3.1 ± 1.3
ObaNprep (W)	3.7 ± 1.6	3.4 ± 1.2	3.4 ± 0.8	4.4 ± 0.8
DOaNrep (W)	1.9 ± 1.7	2.8 ± 1.3	2.9 ± 1.3	2.7 ± 1.4

An ANOVA comparing ObaNprep vs DOaNrep in the Listening Test revealed that the control group shows the greatest distinction in preference between the direct and indirect clauses, with a highly significant preference for the latter ($F(1,8) = 17.67$ $p = .003$). The analysis also revealed borderline main effects of condition and of group among the learner groups, ($F(2,22) = 4.21$ $p = .052$) and ($F(2,22) = 3.549$ $p = .049$) respectively. Among the learners, only the older adult group clearly distinguished between the two types of clauses by using the appropriate resumptive pronouns. There was no significant condition by group interaction among the learners.

An ANOVA comparing the results for these two conditions in the Written Test also revealed a significant main effect of condition among the control group and a highly significant main effect of condition among the learner groups, ($F(1,8) = 4.986$ $p = .056$) and ($F(2,22) = 10.286$ $p = .004$) respectively. There was no significant effect of group nor was there a significant condition by group interaction among the learner groups. The preference for the prepositional resumptive pronoun over the accusative pronoun was greatest among the native speakers. This is contrasted with the fact that the rates of acceptability for the indirect clause forms ObaNprep and *ObaLprep are quite similar, as seen in Table 5.13 below.

Given the lack of sensitivity to the *aL/aN* distinction which was obtained in separate analyses for the direct object clauses (DOaNrep vs *DoaLrep) and the indirect clauses (ObaNprep vs *ObaLprep), the patterns *ObaLprep and *DOaLrep were also compared. The mean scores for the non-standard indirect and direct object structures with lenition are given in Table 5.13.

Table 5.13

Oblique vs Direct Object Clauses: *ObaLprep vs *DOaLrep
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Adult
*ObaLprep (L)	4.2 ± 0.8	3.2 ± 0.8	2.8 ± 1.1	4.3 ± 0.4
*DOaLrep (L)	1.8 ± 1.4	2.5 ± 0.5	2.4 ± 1.6	2.5 ± 1.4
*ObaLprep (W)	4.0 ± 1.6	3.6 ± 0.9	3.4 ± 1.1	4.3 ± 0.8
*DOaLrep (W)	2.3 ± 1.9	2.8 ± 1.2	2.0 ± 1.4	3.3 ± 1.2

An ANOVA comparing *ObaLprep to *DOaLrep results in the Listening Test showed a highly significant effect of condition among the control group ($F(1,8) = 16.938$ $p = .003$). This is similar to the result obtained for the previous pair of conditions (ObaNprep and DOaNrep). The control group clearly recognizes the differences between the accusative pronoun and the prepositional pronoun, clearly accepting the latter. Among the learner groups, ANOVA results indicate a significant effect of condition, ($F(2,22) = 8.979$ $p = .007$), one which is more significant than for the previous structure. There was no effect of group this time. There was no condition by group interaction. The control group and older adult learners are distinguishing between the two resumptive pronoun structures while T5-10 and T10-15 are not.

5.6 Cyclical \bar{A} -dependencies

The results for the contrast of two complex \bar{A} -dependency items that were structurally grammatical (one containing a gap and the other a resumptive pronoun) and morphologically distinct complementizer (*aLaL* vs *aNaN*) are shown below in Table 5.14. There are no results for the Paired Comparison Test since these were not a contrastive pair, both being correct structures, and they differed on the basis of two contrasts, the form of the complementizers and the content of the relativised site.

Table 5.14

	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
aLaLgap (L)	3.6 ± 1.7	2.9 ± 1.2	3.1 ± 1.5	4.2 ± 0.6
aNaNrep (L)	2.4 ± 1.7	3.0 ± 0.7	1.7 ± 1.7	3.1 ± 1.0
aLaLgap (W)	3.8 ± 1.2	3.2 ± 1.7	3.0 ± 1.2	4.6 ± 0.4
aNaNrep (W)	1.8 ± 1.3	2.4 ± 0.7	2.0 ± 1.4	3.0 ± 1.1

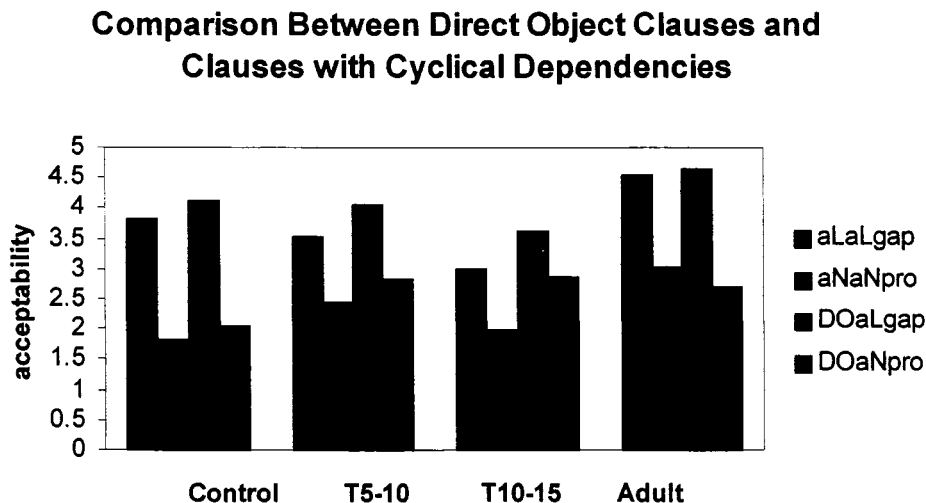
An ANOVA comparing aLaLgap to aNaNrep for the Listening Test did not produce a significant effect of condition among the control group. Among the learner groups, ANOVA results indicate a significant effect of condition, ($F(2,22) = 5.579$ $p = .027$). This is seen in the preference for the aLaLgap pattern. There was a marginal significant effect of group ($F(2,22) = 3.289$ $p = .056$). There was no condition by group interaction. Unlike the control group, the learners are distinguishing between the two patterns, and indicating a clear preference for the aLaLgap construction. With the exception of the T10-15 group, the rates of acceptability for the aNaNrep pattern are found mostly in the ‘works for me’ zone.

An ANOVA of the Written test results for the same sentences revealed a significant main effect of condition among the control group and a highly significant main effect of condition among the learner groups, ($F(1,8) = 9.763$ $p = .014$ and ($F(2,22) = 13.268$ $p = .001$) respectively.

There is a consistent preference for the construction containing the gap over the construction containing the resumptive pronoun. A significant effect of group was obtained among the learners ($F(2,22) = 5.293$ $p = .013$). The results show a clear preference for the aLaLgap construction among all three learner group and by the native speakers in our control group. The attested form aNaNrep was found to be unacceptable.

Support for a strong preference for gap constructions over resumptive pronoun ones can be seen in Figure 5.2 which compares the Written Test results for simple direct object clauses, DOaLgap and DOaNrep to the long distance \bar{A} -dependencies aLaLgap and aNaNrep.

Figure 5.2



All of the structures presented in Figure 5.2 are attested grammatical constructions yet there is a significant difference in the rates of acceptability assigned to the gap and the resumptive pronoun constructions. Again, with the exception of the T10-15 group, the rates of acceptability for the long distances relatives echo the acceptability patterns seen in the direct object clauses containing either a gap or a resumptive pronoun.

Of the 47 suggested changes for aNaNrep, 31 were to delete the pronoun but not change the mutation on the verb. A T5-10 and a control subject suggested changing the second *aN* complementizer to *go*. Other suggestions yielded five unattested *aLaLrep patterns; three unattested *aNalrep patterns; and, six attested aLaNrep patterns. Learners reject the resumptive constructions. They delete the pronoun, but they are unsure of the appropriate complementizer form.

As mentioned above, the cyclical dependencies aLaLgap and aNaNrep were not treated as a contrasting pair in the Paired Comparison Test as these two items differed with respect to complementizer and to the content of the relativised site. Instead, two distinct contrasts were set up where the items differed on the basis of a single element: aNaNrep vs *aLaLrep, where both contained presumptive pronouns but contrasting complementizers, and aLaLgap vs aNaLgap, where both contained gaps comparing two grammatical forms but contrasting complementizer. Results for aNaNrep vs *aLaLrep are given in Table 5.16 and the results for aLaLgap vs aNaLgap are given in Table 5.17 in the following sections.

5.6.1 Cyclical Patterns: aNaNrep vs *aLaLrep

The reader is reminded that an unattested pattern (McCloskey 2000), *aLaLrep, was included among the items in this test, but was not used in the previous two tests. This was done to create a pair of relative chains containing a resumptive pronoun. Results from the comparison between aNaNrep vs *aLaLrep are given in Table 5.15

Table 5.15

Cyclical \bar{A} -Dependencies: Mean Rates of Acceptability				
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
aNaNrep (PC)	1.6 ± 1.4	2.0 ± 1.5	2.3 ± 1.5	3.0 ± 1.1
*aLaLrep (PC)	2.7 ± 1.6	3.4 ± 1.4	2.9 ± 1.5	3.0 ± 1.8

An ANOVA comparing the two conditions revealed that there was no main effect of condition for either the control or the learner groups. There was no condition by group interaction among the learner groups. The results are virtually identical to the results obtained for the ObaNprep and *ObaLprep patterns. There was no effect of group among the learners.

5.6.2 Cyclical Patterns: aNaLgap vs aLaLgap

The results for the contrasting two items that were structurally grammatical (containing gaps) and morphologically grammatical (*aNaL* and *aLaL*) are shown below in Table 5.16.

Table 5.16

Mixed Chains: aNaLgap vs aLaLgap Mean Rates of Acceptability				
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
aNaLgap (L)	2.7 ± 1.6	2.4 ± 1.2	3.0 ± 1.3	3.6 ± 1.0
aLaLgap (L)	3.6 ± 1.7	2.9 ± 1.2	3.1 ± 1.5	4.2 ± 1.0
aNaLgap (W)	3.7 ± 0.9	3.0 ± 0.9	3.7 ± 1.1	4.6 ± 0.6
aLaLgap (W)	2.9 ± 1.7	3.5 ± 1.6	3.0 ± 1.2	4.6 ± 0.4
aLaNgap (PC)	1.2 ± 1.4	2.2 ± 1.5	2.2 ± 0.2	2.6 ± 1.9
aLaLgap (PC)	4.1 ± 0.7	3.5 ± 1.3	3.3 ± 1.1	3.7 ± 1.8

An ANOVA comparing these conditions in the Listening Test revealed no main effect of condition among the native speakers but a marginally significant effect of condition among the learner groups, ($F(2,22) = 3.934$ $p = .060$). No significant main effect of group was obtained nor was there any condition by group interaction. The wide error margins for both native speakers and learner groups make it impossible to state that there is evidence of a preference of one structure over another.

An ANOVA for the same sentences in the Written Test revealed that there was no significant main effect of condition among the control or the learner groups. There was a highly significant main effect of group among the learners ($F(2,22) = 5.940$ $p = .009$). There was no observed significant condition by group interaction among the learners. The suggested corrections for the gap conditions aLaLgap and aNaLgap totaled 11 and 28 respectively. Once again the comments reveal that the learners are not associating the mutation to the presence or absence of a gap.

Of the 11 suggested changes for the aLaLgap pattern, 7 were made by the learners. 3/7 were to create the aNaLgap pattern, 3/7 were to insert a resumptive pronoun at the

foot of the chain and one was change the verb tense. The remaining three suggested changes by members of the control group were as follows: one to create the aNaLgap pattern and two to change the verb tense.

The 25 suggested changes for the aNaLgap pattern were divided almost evenly among the learners and the control group. Of the 11 suggested changes made by the learners, 5 were to create the aLaLgap pattern, three were to change the verb tense and three were to insert a resumptive pronoun. Of the 14 suggested changes by the control group, seven were to create the aLaLgap pattern, two were to change the verb tense, three were to replace the second complementizer by *go*, yielding the non-standard *aN_gogap pattern and two were to replace the second complementizer by *aN*, yielding the non-standard aNaNgap pattern. The last two changes just described would have been considered standard had a resumptive pronoun also been inserted at the foot of the chain. The fact that the resumptive pronoun was not inserted appears to indicate that some members of the control group are not associating the form of the complementizer with the presence or absence of a resumptive pronoun in the relativised site. The eight suggested verb tense changes were to insert either the past tense or the conditional form.

An ANOVA comparing the rate of acceptability for aLaLgap vs aNaLgap patterns in the Paired Comparison Test revealed a highly significant main effect of condition for the control group, ($F(1,8) = 20.584$ $p = .002$) and a significant main effect for the learner groups, ($F(2,18) = 5.379$ $p = .031$). There was no significant effect of group among the learner groups. There was no significant group by condition interaction.

Another attested mixed chain pattern, aLaNrep, was included to provide a contrasting pair for the mixed chain aNaLgap. Results from the comparison between aLaNgap and aLaNrep are given in Table 5.17

Table 5.17

Mixed Chains: Mean Rates of Acceptability				
	L1	L2		
	Control	T 5-10	T 10-15	Older Adults
aNaLgap (PC)	2.8 ± 1.6	3.2 ± 1.2	3.7 ± 1.3	3.4 ± 1.0
aLaNrep (PC)	1.9 ± 1.5	2.3 ± 1.2	2.2 ± 1.7	1.9 ± 1.6

An ANOVA comparing the rate of acceptability for aNaLgap vs aLaNpro patterns revealed no significant main effect of condition for the control group but a significant main effect for the learner groups, ($F(2,18) = 6.440$ $p=.020$). There was no significant effect of group among the learner groups. There was no significant group by condition interaction. All the subjects preferred the aNaLgap pattern over the aLaNrep pattern. The scores for aNaLgap pattern are higher in this comparison, than when paired against the cyclical aLaLgap pattern in the previous section.

5.7 Long Distance \bar{A} -dependencies

The results for the contrasting two items that were structurally grammatical (containing resumptive pronouns) but morphologically distinct (*aL* vs *aN*) and containing the default complementizer *go* in the lower clause are shown below in Table 5.18.

Table 5.18

Long Distance \bar{A} -dependencies with *go*:
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Adult
aNgorep (L)	2.1 ± 1.2	2.1 ± 0.8	2.3 ± 1.6	3.6 ± 0.6
*aLgorep (L)	2.7 ± 1.9	2.5 ± 1.2	1.9 ± 1.0	3.6 ± 1.1
aNgorep (W)	1.9 ± 1.2	2.3 ± 1.1	2.7 ± 1.1	3.7 ± 0.7
*aLgorep (W)	1.8 ± 1.2	3.0 ± 1.4	3.1 ± 1.2	2.7 ± 1.3
aNgorep (PC)	1.1 ± 1.0	2.0 ± 1.4	2.6 ± 1.2	4.3 ± 0.8
*aLgorep (PC)	3.8 ± 0.7	2.9 ± 1.7	2.5 ± 1.4	2.1 ± 1.5

An ANOVA for the Listening Test results revealed no main effect of condition for either the control group or the learners groups. The native speakers and the learners are not distinguishing between the two patterns. There was a significant main effect of group among the learners indicating a difference in performance between the groups ($F(2,22) = 7.863$ $p = .003$). There was no condition by group interaction.

ANOVAs for the same sentences in the Written Test results revealed no main effect of condition among either the control or the learner groups. No effect of group was obtained among the learners. As above, a significant condition by group interaction was obtained ($F(2,22) = 3.878$ $p = .036$). This indicates that subjects were distinguishing between the complementizer forms to different degrees. All three learner groups show little ability to distinguish between aNgorep and *aLgorep and accepted them within the ‘works for me’ zone. The native speakers in the control group found both the aNgorep and *aLgorep structures to be unacceptable.

In the aNgorep tokens (Appendix A, nos. 55, 56, 57) sentence 55 contained a prepositional pronoun and sentences 56 and 57 contained an accusative pronoun. Out of a total of 43 suggested changes, the accusative pronoun was deleted 21 times, and the

prepositional pronoun five times. 14 other suggestions involved the lenition of the first verb indicating a dialectal preference for the non-standard *aLgorep. Additionally, the prepositional pronoun *leo* (with-them) was incorrectly changed to the accusative pronoun *iad* (them); and a demonstrative adjective was removed. The final suggestion is more a comment than a change. The subject indicated that the verbs ‘seem mixed up’ in sentence number 55.

An ANOVA comparing the rate of acceptability for aNgorep vs *aLgorep sentences in the Paired Comparison Test revealed a highly significant main effect of condition for the control group, ($F(1,8) = 36.228$ $p < 0.001$) and a significant main effect for the learner groups ($F(2,18) = 1.136$ $p = .020$). There was no significant effect of group among the learner groups. There was a significant group by condition interaction for the learners. The dialectal preference for the *aLgorep over the standard aNgorep form is again evident in the responses by the control group. The control group and the older adult learners demonstrated that they were sensitive to the form of the complementizer in the top clause. This sensitivity can be seen to a lesser degree among the T5-10 and not at all among the T10-15.

5.8 Comparison Between \bar{A} -dependencies Containing Resumptive Pronouns

A comparison between the long-distance dependency pattern aNgorep and the cyclical \bar{A} -dependency binding chain aNaNrep was conducted. Both of these are grammatical structures. The aNgorep is the most common and least marked of the patterns containing a resumptive pronoun (McCloskey 2000). The results are given here in Table 5.19.

Table 5.19

Ā-dependencies Containing resumptive pronouns: aNgorep vs aNaNrep
Mean Rates of Acceptability

	L1	L2		
	Control	T 5-10	T 10-15	Adult
aNgorep (L)	2.1 ± 1.2	2.1 ± 0.8	2.3 ± 1.6	3.6 ± 0.6
aNaNrep (L)	2.4 ± 1.0	3.0 ± 0.7	1.7 ± 1.7	3.1 ± 1.0
aNgorep (W)	2.0 ± 1.2	2.4 ± 1.1	2.7 ± 1.1	3.8 ± 0.8
aNaNrep (W)	1.7 ± 1.4	2.4 ± 0.7	2.0 ± 1.4	3.0 ± 1.1

ANOVA results for the Listening Test and Written scores yielded no significant main effect of condition for either the control group or the learner groups. No significant effect of group was obtained for the learners. There was a highly significant condition by group interaction among the learners, ($F(2,22) = 6.378$ $p = .007$) in the Listening Test and ($F(2,22) = 6.378$ $p = .005$) in the Written Test. This concludes the reporting of the results obtained using the 6-point scale and suggested changes for items for all three test formats. The following section looks at the ‘NOT SURE’ responses obtained.

5.9 ‘NOT SURE’ Responses

Subjects were instructed to choose the ‘NOT SURE’ box for the Listening and the Written Test when they really did not know whether the sentences were acceptable or not. The full use of the scale was encouraged, and the mid point on the scale was explained as being for cases where the error with the sentence was not so grievous as to warrant a ‘0’ nor was it completely acceptable, thus warranting a ‘5’. The distribution of the ‘NOT SURE’ answers is given in Table 5. 20

Table 5.20

Distribution of 'NOT SURE' answers in the Listening and Written Tests

Test	% of total number of items	control	T 5-10	T10-15	older adults	total 'NOT SURE' responses
(L)	4.1%	0%	0.09%	78%	11%	79
(W)	3.6%	0.01%	0.2%	71%	9%	69

A total of 1,938⁴ 'NOT SURE' responses were possible. The number of 'NOT SURE' responses represents 4.1% of the possible total number of responses in the Listening Test, 79/1,938 and only 3.6% of the total number of responses for the Written Test 69/1,938.

The distribution of the 'NOT SURE' responses for the filler items for both the Listening and the Written Tests is given in Table 5.21

Table 5.21

Test	Total per Test		Distribution per subject groups, per test type			
	(L)	(W)	control	T5-10	T10-15	older adults
*SVO	0	0				
VSO	2	4			2(L) 3(W)	1(W)
NPaL	1	3			1(L) 3(W)	
*NPaN	1	3		1(W)	1(L) 2(W)	
aLNP	0	0				

The overall number of 'NOT SURE' for the Filler Items is low, 14/1938 or 0.7%. The greatest number of 'NOT SURE' responses was attributed by the T10-15. This is consistent with the other test items.

Simple relative clause patterns and cyclical and long distance dependencies containing the accusative and prepositional resumptive pronouns stand out as being rated

⁴ The number 1,938 is the product of 19 items multiplied by the number of tokens, 3, multiplied by the total number of subjects, 34.

'NOT SURE' more often than clauses containing gaps. This is seen clearly in figures 5.3 and 5.4 below.

Figure 5.3

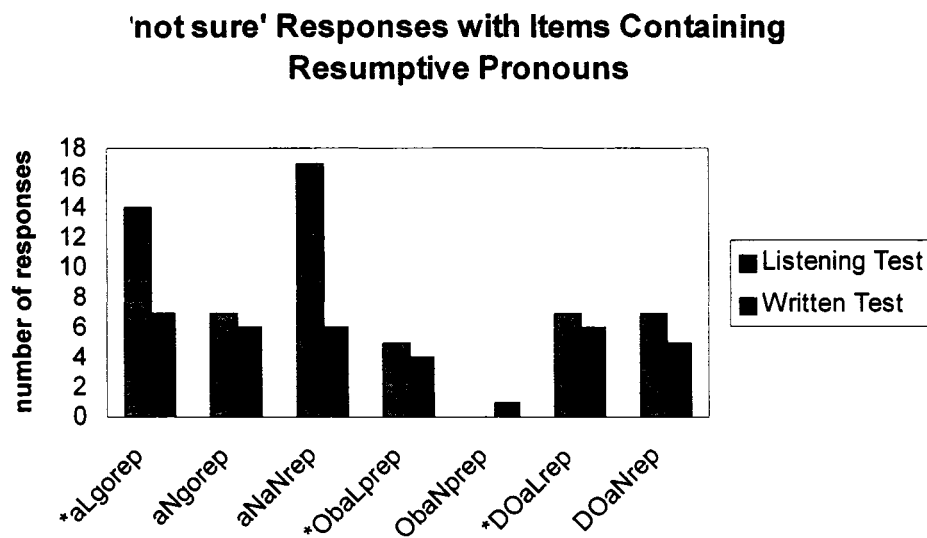


Figure 5.3 shows that overall the Listening Test produced more 'NOT SURE' responses than the Written Test. This is most significant in the *aLgorep and aNaNrep patterns. All of the structures containing resumptive pronouns in the accusative pronoun form were awarded more 'NOT SURE' responses than the structures containing the prepositional pronoun forms (ObaNprep and *ObaLprep). The grammatical ObaNprep form was awarded no 'NOT SURE' response in the Listening Test. The consistency in the number of 'NOT SURE' responses attributed to the two direct object constructions containing a resumptive pronoun (DOaNrep and *DOaLrep) indicates that the learners are not sensitive to the mutation and are unsure about the presence of the resumptive pronoun.

Figure 5.4

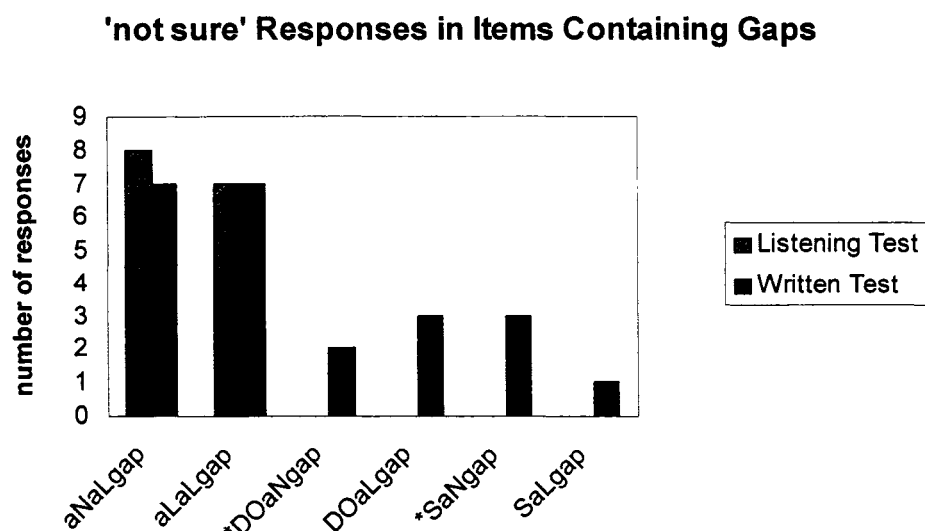


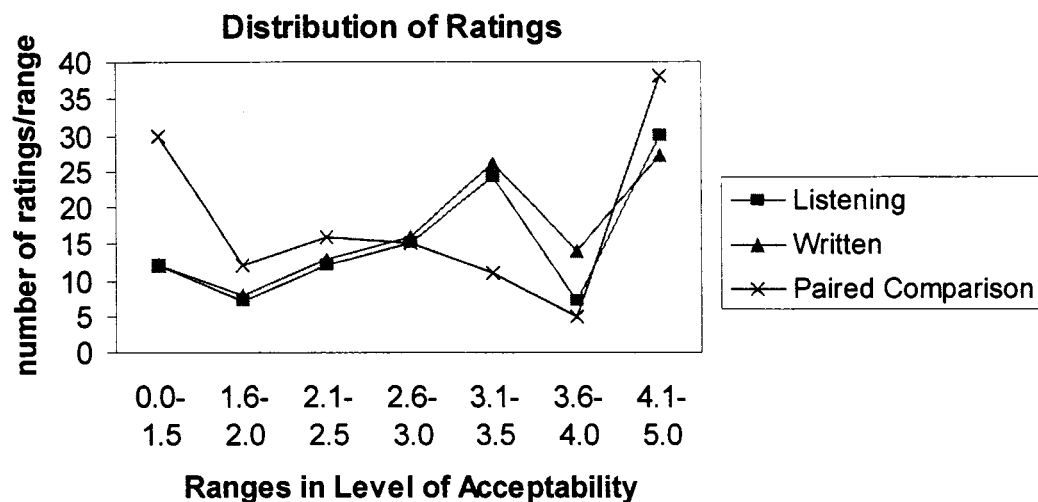
Figure 5.4 reveals that the distribution of 'NOT SURE' responses for sentences containing gaps. 'NOT SURE' responses were awarded in the Listening Test only to the cyclical and mixed chain patterns. These gap patterns also received the highest number of 'NOT SURE' responses in both the Listening and the Written Tests. In the Written Test, there were far less 'NOT SURE' responses for the subject and direct object structures than for those containing cyclical \bar{A} -dependencies.

5.10 Discussion of Results

5.10.1 General Observations: Test Scores

All subjects (control and learner groups) made use of the full range (0–5) provided in the scale to show their level of acceptability for these structures. The distribution of the scores differs between the rating task (Listening and Written Tests) as opposed to the ranking task (Paired Comparison Test), is shown below in Figure 5.5.

Figure 5.5



The distribution of the scores is similar in the Listening and Written where the items were rated as individual items. The distribution of the scores in the Paired Comparison Test exhibits more use of the extreme ranges of the scale and less use of the mid-range 3.1-3.5 ‘works for me’ zone. Answers in this range for the Listening and Written Tests, represent 32% and 37% respectively, of the total number of responses. Answers in the ‘works for me’ band only represented 23% of the responses in the Paired Comparison Test. The range of scores for the three test formats is given in Table 5.22

Table 5.22

Ranges in Level of Acceptability

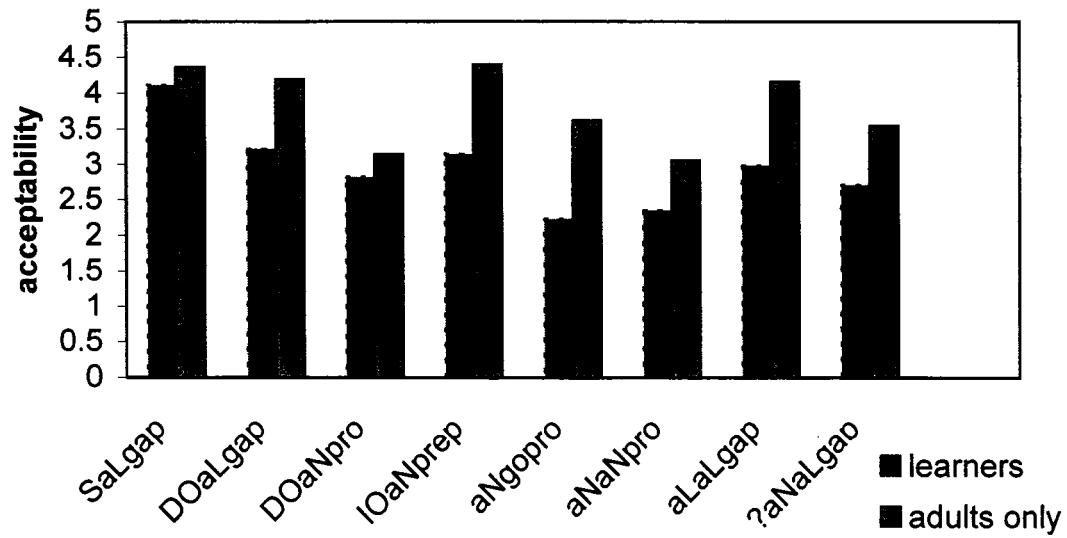
modality	0.0 to 1.5	1.6 – 2.0	2.1 – 2.5	2.6-3.0	3.1-3.5	3.6-4.0	4.1 –5.0
Listening	12	7	12	15	24	7	30
				n= 39			
Written	12	8	13	16	26	14	27
				n= 42			
Paired Comparisons	30	12	16	15	11	5	38
				n= 26			

The shaded is the range for the 'works for me' band. The number of responses in the 'works for me' range was considerably higher for the Listening and Written Tests than for the Paired Comparison Test. The results indicate a wider distribution of scores in the paired Comparison Test than in the Listening and Written Tests. The increase in the number of responses in the 0.0 –0.5 range in the Paired Comparison Test could be due to two factors: i) the lack of a 'NOT SURE' option, and so any answer where the subjects felt could have been awarded a 'NOT SURE' designation, may have been awarded the lowest possible score or, ii) when ranking pairs of sentences, subjects may have a greater tendency to rank them as acceptable and unacceptable using the extremities of the scale as opposed to the mid ranges.

The older adult learners gave higher ratings than the other learner groups for 80% (15/19) of the conditions. When we omit the filler items and look at the relative clause structures we see that with respect to the 8 grammatical structures, the adult learners rated 8/8 conditions higher than the other groups did. Figure 5.6 illustrates this clearly.

Figure 5.6

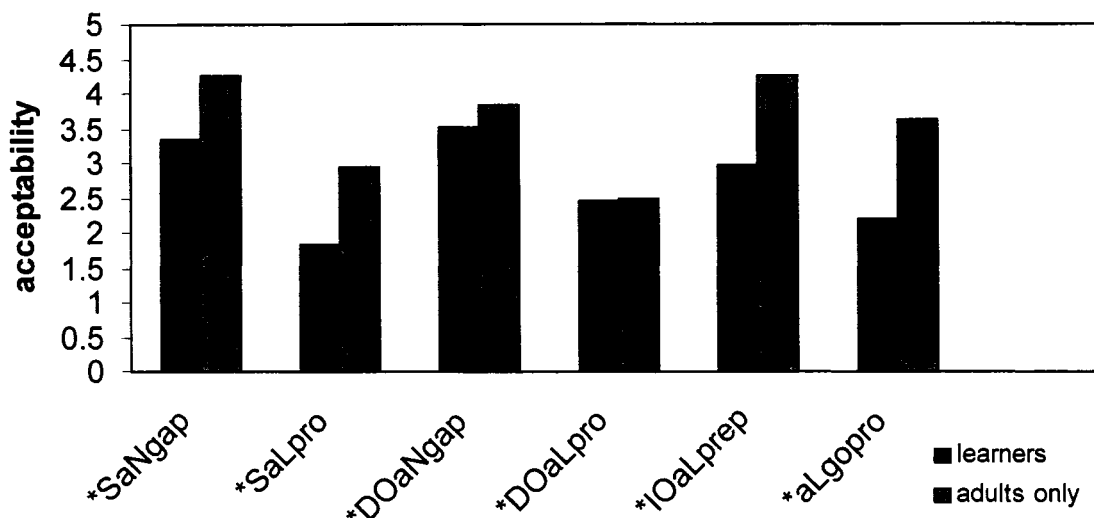
**Adult Learner Responses vs Average Responses of the Other
2 Learner Groups for Grammatical Clause Structures
(Listening Test)**



With respect to the six ungrammatical structures, the adult learners rated all conditions equal or higher than the other responses given by the other groups. These results are shown in Figure 5.7.

Figure 5.7

Adult Learner Responses vs Average Responses of the Other 2 Learner Groups for Ungrammatical Clause Structures (Listening Test)



In both Figures 5.6 and 5.7 the average rates of acceptability for most of the conditions hover in the ‘works for me’ zone, between 1.5 and 3.5. However, the adult learners used the scale above the 3.5 range, and in sentences containing word order violations, they made full use of the scale. The older adult learners appear to be less sensitive to the mutation distinctions than the other learner groups. They are also more accepting of the oblique clauses, regardless of the mutations, than the younger learners. The difference in results may be due to the learning and test environments. The cadets, the T5-10 and T10-15 groups, for whom Irish is a required course in their training program, were tested at the Police Academy on the final day of examination period. They had the benefit of recent exposure to regular grammar classes and treated this experiment as another test of their ability. Although the adult learners were tested in the classroom of their Irish course, it was a non-credit class in which there were no achievement standards.

The adults also had less recent exposure to the rules of Irish as they had been away from school for a longer time.

5.10.2 Responses in the ‘works for me’ Zone

The high number of the responses in the ‘works for me’ zone may be indicative of a combination of three phenomena:

1. Subjects accept sentences containing both lenition and eclipsis which do not violate general UG constraints such as word order.
2. Given that mutations in Irish have a variety of grammatical functions on nouns (case, gender, number) and verbs (tense, negative and interrogative forms), subjects may not be confident about which mutation is grammatical for a given structure.
3. Subjects may be familiar with other dialects where mutation rules for a given grammatical role differ from their own. This is quite possible since the language teachers from the different dialect regions are teaching outside their *Gealtacht*. With the advent of Irish radio and television, the learners will have been exposed to many dialectal variations. It is also the case that some of the recent language teaching material purposefully incorporates dialectal variation, so that learners are exposed to them⁵.

5.10.3 Native Speakers Results

Another trend observed in the Listening and Written Tests is that the standard deviations for the acceptability ratings for the native speaker control group are wider than might be expected. These results, however, are pervasive across test formats and across structures. They will be discussed further in chapter 6.

⁵ e.g. *An Turas Teanga*, by Éamon Ó Donnail, 2004

5.10.4 'NOT SURE' Results

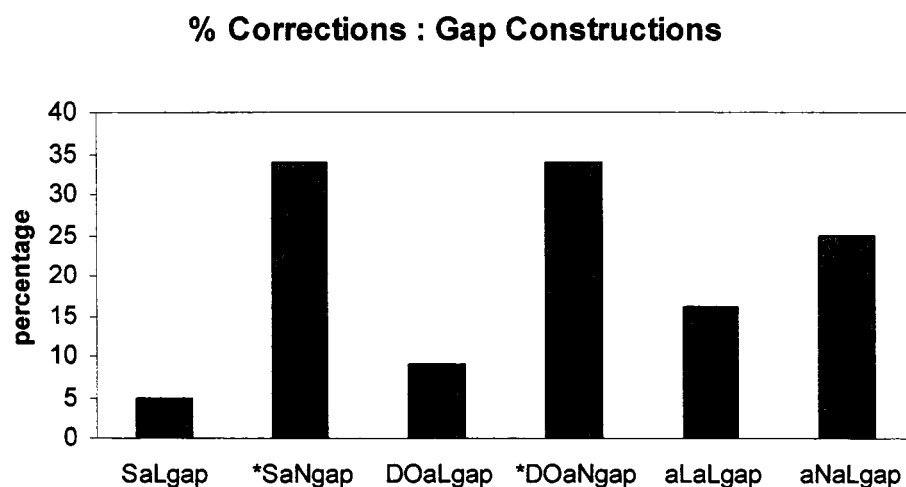
The number of 'NOT SURE' answers is clustered mainly around the sentences containing multiple chains, and within this group, to a higher degree for those conditions containing a resumptive pronoun⁶. Learners who had difficulty with simple clauses containing resumptive pronouns had the most difficulty with the multi-chain constructions. The teachers for all the learner groups indicated that the learners would not have been formally taught simple sentences containing accusative resumptive pronouns nor cyclical and mixed chain clauses in the classroom setting.

5.10.5 Suggested Changes in the Written Test

There were fewer suggested changes for structures containing gaps with the *aL* complementizer in the subject and direct object classes than for structures containing the complementizer *aN*. In the cyclical patterns, the same effect is observed; however, the distinction is not as large. These results are plotted in Figure 5.8 below.

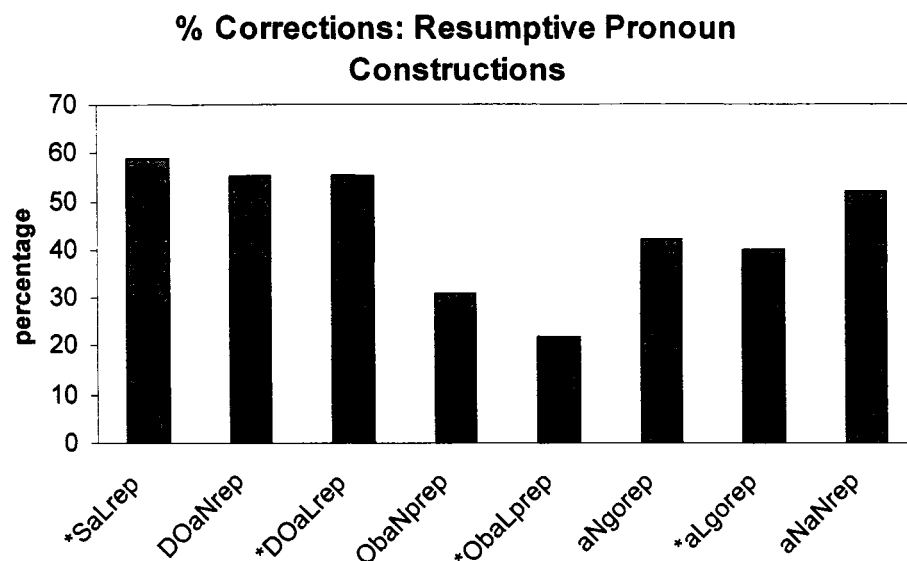
⁶ On average the sentences which contained cyclical chains and long-distance dependencies were somewhat longer than the filler sentences and sentences which contained only one relative clause. An analysis of sentence length for all items revealed that it is difficult to argue that syllable length played any role in the rate of rejection of certain sentence types or the number of 'NOT SURE' responses.

Figure 5.8



There were more suggested changes for structures containing resumptive pronouns than gaps with either the *aL* or the *aN* complementizer. This is especially evident in the subject and direct object clause and cyclical constructions. There is a significantly lower percentage of corrections for the oblique clauses. The types of corrections made for the oblique clauses indicate that the pronoun was accepted, or modified, but in most cases it was the form of the mutation which was deemed problematic. While the sensitivity to the mutation was weak there was a consistent preference for the construction containing the prepositional resumptive pronoun over the accusative resumptive pronoun. These results are plotted in Figure 5.9 below.

Figure 5.9



5.10.6 Test Predictions

5.10.6.1 Word Order

Learners rejection of the ungrammatical *SVO English word order pattern for simple declarative sentences in all three test formats overwhelmingly confirms that the learners are aware of the VSO word order for Irish sentences and clauses and have reset the word order parameter accordingly. The results for the word order of the non-finite constructions differed according to test type. In the Listening and Written Tests the learners were sensitive to the distinct word order pattern for non-finite clauses, although the level of acquisition of this structure did not appear as solid as for the VSO pattern. The results for the non-finite constructions were more categorical in the Paired Comparison Test for the non-finite clause NP_aL vs *aLNP pattern. The learners are aware of the distinct word order patterns for Irish non-finite clauses and this distinction is part of their IL grammar. The L1 and L2 word orders for non-finite clauses may be

competing structures within the IL at this point of development. This would justify the high number of ‘works for me’ responses. The NP_aL pattern has not yet been unequivocally identified as the L2 pattern while the VSO word order has.

5.10.6.2 Results for the Relative Clause Structures

The experiment highlighted two different types of contrasts in the relative clause constructions: the contrast based on the *aL/aN* distinction, and the contrast based on the element in the relativised site, i.e., gap vs resumptive pronoun. These results are summarized in Table 23 below.

Table 23

Summary of rates of acceptability (mean scores) and ability to distinguish between complementizers for all subjects

	acceptability of:		<i>aL/aN</i> distinction
	gap	resumptive pronoun	
non-finite	n/a	n/a	X
subject	+√	-√ (L)(PC) X (W)	X
direct object	+√	-√	X
oblique clauses	n/a	-√	X
cyclical chain	√	-√	X
mixed chain	√	-√	X
long distance	n/a	-√	X

+√ : mean scores above 4.0, √: mean scores between 3.0 and 3.9 ; -√: mean scores between 2.0 and 2.9; X : difference between mean scores below 1.5.

5.10.6.3 Sensitivity to the Mutations

The learners and the native speakers are generally insensitive to the *aL/aN* distinction. They are not rejecting the ungrammatical complementizers when there is lack of congruency between them and the content of the foot of the chain (gap vs resumptive pronoun). They appear oblivious to the fact that the absence of movement should signal

the use of the *aN* complementizer not the *aL*. This same result is found among the native speakers and will be investigated in Chapter 6. The overall ability for both groups to consistently distinguish between the *aL* and *aN* varies according to the structure. It also appeared that the sensitivity to the mutation depended on the orthographic form of the mutation.

The predictions based on the fact that free morphemes are more salient and bound morphemes are less salient to the L2 learners (Liceras and Zobl 1994) are confirmed on both points. In the first case, the learners never changed the binding morpheme *go* for either *aL* or *aN* in the long distance dependencies. Also *go* was never suggested as a replacement for *aL* or *aN* in subject, direct object and oblique relative clauses, suggesting that the distinction between them, no binding with *go* and binding with *aL/aN*, has been acquired. There were only two occasions where the *aN* complementizer was changed to *go* in the *aNaNrep* pattern and three occasions where the second *aN* in **aNaNgap* was replaced by *go*. It is suggested that this was probably due to the influence from the standard *aN+go* combination for long distance dependencies.

In the second case, the insensitivity to the bound morphemes, the mutations are not salient to the learners. The lack of sensitivity could also reflect the fact that the learners are aware of the poly-functionality of these mutations as described in chapter 2 but have not attributed the correct mutation to the appropriate clause type yet.

The predictions concerning the application of a weak continuity analysis to the results are not borne out. The advanced L2 learners in this experiment would not have been classified as having reached stage III where acquisition of CP has occurred (Vainikka and Young-Scholten 1996). Our learners did not consistently demonstrate a

60% correct rate of recognition (rating of 3.6 on our scale) of the appropriate complementizer (*aL* or *aN*) associated to the corresponding binding relationship (gap or resumptive pronoun). The learners did demonstrate a certain degree of consistency in distinguishing between *aL* and *aN* in subject relative clauses, but it is not sustained across the other clause types tested. Such variability was described as stage ‘seepage’ and was difficult to account for in MT. According to MT, we would have to conclude that learners have not acquired a CP.

From the point of view of transfer from L1, the transfer of the English CP features could be said to be present. They would explain the lack of sensitivity to the overt inflections in the IL as these are not required markings in the L1 to signal the binding relationship. This conclusion would contradict the MT position which says that L1 features are not transferred to the IL.

The predictions concerning the application of a strong continuity analysis to the results do not have much to say about the variability of the mutations on their own other than to say that they do not reflect an absence of the CP. Proof of the presence of the CP is given below in the section concerning structural contrasts.

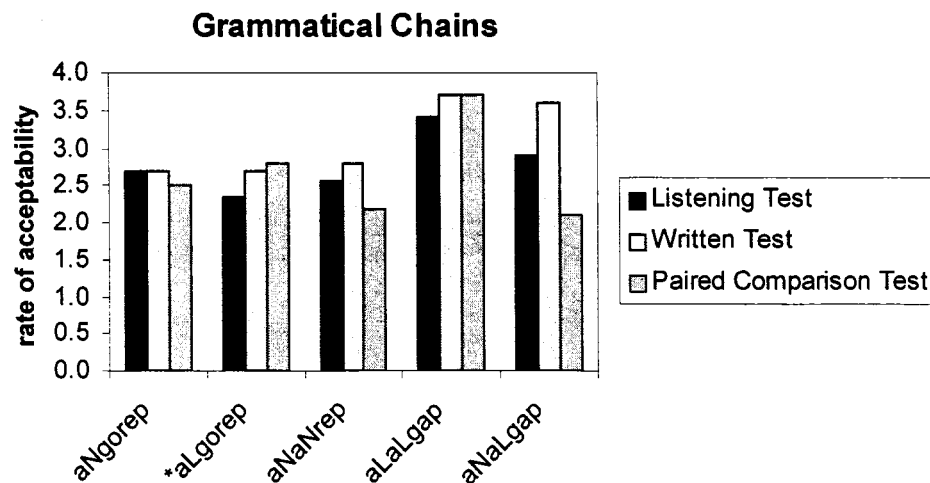
The predictions concerning the IRH anticipate the variability in the morphology that is observed in the results. This hypothesis states that the syntactic structure of the L2 learners is impaired. The errors in agreement between the *aL* and the *aN* complementizers, the verb in the relative clause, and the relativised site exist because the checking can't take place and there is no mechanism to reject the mismatches. The IRH would conclude that the syntactic representation available to the learners is impaired.

The predictions concerning the MSIH are not borne out. According to the MSIH hypothesis, the variability in the use of the complementizers should not be present in advanced learners of the language because it predicts that when agreement is established, it should be used correctly.

5.10.6.4 Structural Contrasts

Overall, the results suggest that gap constructions are preferred over the resumptive pronoun constructions. Structures containing a resumptive pronoun are consistently in the ‘works for me’ zone, possibly indicative of a high level of indeterminacy with respect to the constructions containing a resumptive pronoun. These results also reveal that the orthographic cues to the mutations are not salient to the subjects. The preference for gap structures over resumptive pronoun structures is clear also in the sentences containing cyclical, mixed and long-distance dependencies. The results for all learners, taken together are shown in figure 5.10.

Figure 5.10



Once again the learners appeared to be guided by the [+ movement] features of the complementizers in the IL, based on transfer from L1 where gap structures prevail. This explains the overall higher rate of acceptance of the gap over the resumptive pronoun structures. The level of acceptance of the latter in both the cyclical chain and long-distance constructions located in the ‘works for me’ zones could indicate that the learners are developing an L2 resumptive strategy but using an L1 gap strategy also.

The predictions according to the weak continuity analysis are not borne out. While the learners did not demonstrate greater than a 60% correct rate of recognition of the distinct complementizers, it cannot be argued that the learners had not yet acquired CP in their IL grammar. The learners demonstrated that they could distinguish between gap and resumptive clauses, as the latter were not rejected. A level of acceptance in the ‘works for me’ zone suggests that the learners recognize them as possible in the language but that they are not as preferred as the gap constructions.

The predictions concerning the application of a strong continuity analysis to the results are borne out. Gap and resumptive pronoun structures are accepted by our learners, indicating that the distinct binding relationships have been acquired, thus confirming the presence of the CP. The acceptance by the learners of the appropriate resumptive pronoun forms in the appropriate constructions, direct object vs oblique clauses, indicates that functional categories are present and these have been acquired independently of the morphology of the verb.

The predictions made by the IRH are also borne out. The learners demonstrated variable levels of acceptance in the use of the resumptive pronoun and gaps can be expected in all clause types (simple subject, direct object and oblique relative clauses as

well as cyclical and mixed chains and long distance \bar{A} -dependencies) because the CP is impaired. It is suggested that the impairment is the recognition that the distinct binding relationships are associated with a distinct complementizer. In other words, the learners have not acquired the additional step of associating the distinct [+movement] with the *aL* complementizer and the [-movement] with the *aN* complementizer because this mechanism to reject the mismatches does not exist.

In the first instance, it may be the case that learners have developed an early resumptive strategy for simple relatives (direct object and oblique relatives) while they have not yet established a morpho-syntactic association to the form of the complementizer. The learners are possibly still uncertain of their judgements for these patterns, which is why they are ranked consistently lower than the gap clauses. This burgeoning resumptive strategy cannot fully account for the cyclical and long distance dependencies that contain resumptive pronouns. This explains the high number of ‘not sure’ responses for these patterns. It could be argued that the IL is divergent (White and Genesee 1996; Prévost and White 2000; and Lardièrè 1998a, 1998b). It could also be argued that there are competing grammars (Zobl and Liceras 2004), one which accepts only gaps, and one which accepts the resumptive pronouns, because the learners are accepting the resumptive pronouns on the one hand, but when given the opportunity to change the sentence, they remove them so that the sentence conforms to their ‘stronger’ grammar which only accepts gaps.

In the second instance, it could be the case that the learners feel that the cyclical and long distance dependencies containing resumptive pronouns are neither acceptable

nor unacceptable, their status is indeterminate. In this case, the learner does not have a representation for these structures and so their IL grammar is incomplete (Sorace 1996).

The predictions made by MSIH concerning the presence of the distinct relative clause structures, the binding of a gap and the binding of a resumptive pronoun are borne out. Learners associate gaps with subject and direct object clauses and resumptive pronouns in the direct object and oblique clauses. Learners also reject the resumptive pronoun in the subjects.

With respect to the subject clauses where the ungrammatical resumptive pronoun was inserted in to the subject position, the results reveal that native speakers reject the intrusive pronouns more than the learner groups do. All three learners groups attributed high levels of acceptability to the pattern in the Written Test. There are two other possible explanations, given that all subjects reject the *SaLrep convincingly in the Paired Comparison Test.

Learners either might not have noticed the pronoun while reading the sentences during the Written Test, in which case the sentence was interpreted as SaLgap, the standard form; or the subjects noticed the pronoun but assumed it signaled a separate sentence where an overt subject would be required, as illustrated in (5.2).

(5.2)

a. **Sin é an fear a labhrann sé Spáinnis.*
This-is cl.-MASC the man_i aL speaks he_i Spanish
This is the man that he speaks Spanish.

b. *Sin é an fear*
This-is cl.-MASC the man_i
This is the man.

- c. *Labhrann sé Spáinnis.*
 speaks he_i Spanish
 He speaks Spanish.

These explanations are put forward for two reasons. In the first instance, pronouns and complementizers in Irish are short, in this case only two letters *sé* or *sí* (he or she) and *aL*, and could easily have been overlooked in the course of reading the sentences. In the second instance, the subjects would have noticed the pronoun (still overlooking the *aL* complementizer) and would have parsed the matrix clause as a complete sentence (5.5b) and read the relative clause and interpreted it as a complete sentence also (5.5c). In the latter case the subject pronoun would not be erroneous and moreover it would be appearing in the correct position.

In the example above, there is no lenition or eclipsis on the clausal verb since the letter ‘l’ does not change. In (5.3a) an *SaLrep sentence from the Listening Test is presented which is marked for lenition.

(5.3)

- a. *Sin é an buachaill a théann sé ar scoil gach maidin.*
 This-is cl.-MASC the boy_i aL goes he_i to school every maidin
 This is the boy that he goes to school every morning.
- b. *Sin é an buachaill. *Théann sé ar scoil gach maidin.*
 This-is cl.-MASC the boy_i Goes he_i to school every maidin
 This is the boy. He goes to school every morning.

In the example in (5.3b) the second sentence is marked ungrammatical because the verb is not lenited in the declarative sentence in the present tense. This could be explained by the fact that sensitivity to the sound changes are weak as we have seen with *aL/aN* distinctions, and so the distinction between the non-lenited ‘t’ [č] versus the lenited form [h] would also be weak.

Learners would also have to be insensitive to prosodic cues in the language for this argument to hold. While the complementizer *aL* is reduced to schwa phonetically, the lack of falling intonation on the word *buachail*, which would be expected if it occurred at a sentential juncture, is absent at the clausal juncture. Prosody was not a consideration in the design of the experiment and so it is difficult to say what sensitivities the learners have to Irish prosody.

The majority of the responses for the direct object clauses containing a resumptive pronoun were found in the ‘works for me’ zone. This may be due to three reasons. In the first instance, native speakers did not produce any direct object clauses containing resumptive pronouns in the results obtained by Goodluck, Guilfoyle and Harrington (2000) as mentioned in Chapter 2. The native speakers in their experiment also preferred gap constructions.

Secondly, McCloskey (2000) states that direct object pronouns are usually present only when there is the need to resolve an ambiguity of reference within the clause. In these cases the pronoun occupies the object position, indicating that the overt noun is the subject and not the object in a subject relative where the subject is null. None of the direct object clause sentences used in the experiment contained the type of subject/object ambiguity described above. The design of the experiment eliminated this possibility. The semantics of the verb and its arguments were such that the roles of agent and patient/experiencer could never be reversed. The presence of the resumptive pronoun is not used in the experiment to disambiguate any sentence.

In contrast to the low rates of acceptability for the accusative resumptive pronoun is the consistently higher level of acceptance attributed to the oblique relatives which

contain a prepositional pronoun. All the prepositional pronouns in these clauses are obligatory in order to complete the meaning intended by the verb. The sentences (5.4,b) are ungrammatical in English in the same way as they are in Irish (5.4 e.f.).

(5.4)

- a. *That is the doctor that Una waits.
- b. *That is the radio station that young people listen.
- c. That is the doctor that Una waits for.
- d. That is the radio station that young people listen to.

- e. *Sin é an doctúir a bhfanann Úna.
- f. *Sin é an stáisiún ráidíó a n-éisteann na daoine óga.
- g. Sin é an doctúir a bhfanann Úna leis.
- h. Sin é an stáisiún ráidíó a n-éisteann na daoine óga leis.

The semantically dictated use of these prepositional pronouns, as opposed to the optional use of the direct object accusative pronoun, yielded higher levels of acceptability. This result suggests that it is not the case that all resumptive pronouns are perceived as equal by the L2 learners or by the native speakers. There are three possible reasons why the prepositional pronouns were accepted. In the first instance, resumptive pronouns are more acceptable cross-linguistically when they are located in oblique clauses as opposed to non-oblique relatives and in genitive constructions (Suñer 1998). Secondly, it may be the case that the prepositional pronoun and the direct object pronoun are perceived as distinct by the native speakers for one reason and perceived as distinct for different reasons by the learners. For the native speaker, the direct object pronoun may not be considered necessary in the direct object clauses because it is not disambiguating the sentence. For the learners, the direct object pronoun may not appear to have any grammatical function in the language, while the prepositional pronoun does. This would

imply that, given the higher acceptability rates for the prepositional pronouns over the accusative pronouns, binding is seen as required in the former (prepositional pronouns) and potentially available in the latter (accusative pronouns).

A third explanation may be that the learners are treating the prepositional pronouns as simply prepositional forms instead of pronominal forms. Since a PP is required based on the semantics of the verb and that preposition stranding is allowed in the L1, the learners may be applying an L1 analysis onto the L2 oblique clause structure. This would be similar to the results observed by Hawkins and Chan (1997) for L2 acquisition of English clauses by L1 speakers of Chinese.

With respect to relative clauses containing resumptive pronouns and the fact that responses were found in the low end of the 'works for zone' (accusative pronouns) and in the higher end of the 'works for me' zone (prepositional pronouns) suggests that both accounts are possible.

In sum, the learners are not demonstrating any sensitivity to the mutations in the relative clauses and consequently there is no association between the form of the complementizers and the presence or absence of a gap in the relativised site. Learners are accepting of the resumptive pronoun constructions to a limited degree, indicating the beginning of a resumptive strategy.

As mentioned in section 5.10.3, the results for the control group of native speakers seemed to be more in line with the learners' responses than what would normally have been expected. A subsequent analysis of this group was performed in order to attempt to explain these divergent responses. This analysis is included in the following chapter.

Chapter 6

Changes in the Irish of L1 Speakers

6.0 Introduction

Observed variation among the native speaker group was highly unexpected given the general assumptions of L1 stability among adult speakers. However a closer examination of the results revealed that the expected L1 stability was found within a select subgroup, the oldest members of the control group who were monolingual speakers of the language as children.

6.1 The Effect of Age

Two of the members of this groups, one aged 82 and the other 'over 65 years' grew up in monolingual Irish-speaking homes and had no contact with English until they left home to attend high school in the larger, urban, English-speaking centers. As children, they both were exposed to the Munster dialect only, and had no need to learn or to speak English during these formative years.

The seven younger members of the native speaker control were exposed to both English and Irish as children in the home. Two are the adult children of the 82 year-old

subject, two others are their spouses. The remaining three included a family friend of the 82 year-old and two cadets from the Police Academy. All did their elementary and secondary schooling in Irish and would have been exposed to a variety of dialects in the school setting. The advent of *Raidió na Gaeltachata* and TG4 (Ireland-wide Irish-only radio and television stations) in the 1980s brought the distinct dialects of Irish into the home. The predominant language of everyday life for this younger group is English since Irish is no longer the dominant language in any community or workplace today¹.

The complete isolation from English during the acquisition of L1 Irish by the two older members of the control group may account for their ability to discriminate between the *aL* and *aN* complementizers

6.2 Reanalysis of Control Group Results

The results obtained for the control group in the Listening, Written and Paired Comparison Tests were reanalyzed to distinguish the older L1 speakers (+65 years) and the younger L1 speakers (less than 65 years), who grew up in bilingual homes. While it is understood that a sample of two individuals is a very low number for statistical purposes, the results indicate such an examination was warranted. The following section provides two summary tables of the results. Table 6.1 highlights the results for the Listening and Written Tests for each of the test items. The second Table 6.2 highlights the results for the Paired Comparison Test.

¹ One of the members of this group is, however, running an Irish-language pre-school for children preparing to enter the *Gaelscoil* (all-Irish language school) in the area.

6.2.1 Listening and Written Test Results

Table 6.1

Distribution of Listening and Written Test Results for Older and Younger L1 speakers

test items	Listening Test Results		Written Test Results	
	Older L1s	Younger L1s	Older L1s	Younger L1s
VSO	5.0 ± 0.0	4.9 ± 0.3	5.0 ± 0.0	4.9 ± 0.3
*SVO	0.0 ± 0.0	0.6 ± 0.9	0.0 ± 0.0	0.5 ± 0.6
NPaL	5.0 ± 0.0	4.3 ± 0.5	4.2 ± 1.2	4.8 ± 0.6
*aLNP	0.0 ± 0.0	0.6 ± 0.7	0.0 ± 0.0	1.1 ± 1.0
*NPaN	0.8 ± 1.6	3.5 ± 1.3	0.0 ± 0.0	3.3 ± 3.6
SaLgap	5.0 ± 0.0	4.7 ± 0.4	5.0 ± 0.0	4.8 ± 0.3
*SaNgap	0.8 ± 1.2	3.9 ± 1.2	0.8 ± 1.2	3.7 ± 1.3
*SaLrep	0.0 ± 0.0	1.6 ± 1.0	0.0 ± 0.0	2.4 ± 1.5
DOaLgap	5.0 ± 0.0	3.5 ± 1.3	4.2 ± 1.2	4.0 ± 0.7
*DOaNgap	0.3 ± 0.5	3.8 ± 1.1	0.8 ± 1.2	3.7 ± 1.1
DOaNrep	0.5 ± 0.7	2.5 ± 0.9	0.0 ± 0.0	2.5 ± 1.5
*DOaLrep	1.0 ± 1.4	2.1 ± 1.4	0.0 ± 0.0	2.7 ± 1.6
OBaNprep	3.2 ± 2.6	4.4 ± 0.5	2.5 ± 3.5	4.0 ± 0.9
*OBaLprep	4.5 ± 0.7	4.1 ± 0.9	2.5 ± 3.5	4.3 ± 0.8
aLaLgap	5.0 ± 0.0	3.1 ± 1.8	4.2 ± 1.2	3.5 ± 0.9
aNaLgap	0.7 ± 0.0	3.2 ± 1.3	0.0 ± 0.0	3.5 ± 0.7
aNaNrep	2.2 ± 1.6	2.5 ± 0.9	0.0 ± 0.0	2.5 ± 1.1
aNgorep	0.5 ± 0.2	2.6 ± 1.0	0.0 ± 0.0	2.5 ± 0.7
*aLgorep	4.7 ± 0.5	2.2 ± 1.8	0.8 ± 1.9	2.1 ± 1.1

Highly significant effects of condition were obtained for all of the filler items, all the subject items, the direct object clauses containing gaps, and the mixed chain when compared to aLaLgap for both the Listening and the Written Tests. Highly significant effects of condition were obtained for the long distance dependency in the Listening Test only and for the cyclical chains in the Written Tests only.

Highly significant effects of group were obtained for mutation contrasts only and only in the Written Test results for the following conditions: NPaL vs NPaN; SaLgap vs SaNgap; DOaLgap vs *DOaNgap; for aLaLgap vs aNaLgap; and for aNgorep vs *aLgorep. Marginal effect of group were obtained for the SaLgap vs SaNgap in the Listening Test and ObaNprep vs *ObaLprep in the Written Test.

Highly significant condition by group interaction was obtained for the following contrasts: for SaLgap vs SaNgap and DOaLgap vs *DOaNgap in both the Listening and the Written Tests; for NPaL vs *NPaN and aNgorep vs *aLgorep in the Listening Test only and for SaLgap vs SaLrep; aLaLgap vs aNaNrep and aLaLgap vs aNaLgap in the Written Test only. Marginal condition by group interaction was obtained in the Written Test for NPaL vs *NPaN.

6.2.2 Paired Comparison Test Results

The results for the Paired Comparison Test are given in Table 6.2 on the next page.

Highly significant effects of condition were obtained for all of the filler items, all the subject items, the direct object clauses containing gaps and resumptive pronouns, for cyclical aNaNrep vs aLaLrep and aLaLgap vs aNaLgap and for the long-distance dependency patterns. Highly significant effects of group were obtained for mutation contrasts only for DOaLgap vs *DOaNgap. A highly significant condition by group interaction was obtained for the following contrasts: for SaLgap vs SaNgap and DOaLgap vs *DOaNgap; aLaLgap vs aNaLgap and aNaLgap vs aNaLrep. A marginal condition by group interaction was obtained for DOaNrep vs *DOaLrep.

Table 6.2

Distribution of Paired Comparison Test Results for Older and Younger L1 speakers

Contrastive pairs	Paired Comparison Test	
	Older L1s	Younger L1s
VSO	5.0 ± 0.0	4.2 ± 1.2
*SVO	0.5 ± 1.0	0.8 ± 1.2
NPaL	5.0 ± 0.0	4.9 ± 0.1
*aLNP	0.0 ± 0.0	1.3 ± 1.6
NPaL	5.0 ± 0.0	4.9 ± 0.3
*NPaN	0.0 ± 0.0	0.8 ± 1.1
SaLgap	5.0 ± 0.0	4.6 ± 0.6
*SaNgap	0.0 ± 0.0	2.1 ± 1.4
SaLgap	5.0 ± 0.0	5.0 ± 0.0
*SaLrep	0.0 ± 0.0	1.1 ± 1.4
DOaLgap	5.0 ± 0.0	4.6 ± 0.6
*DOaNgap	0.0 ± 0.0	1.7 ± 1.3
DOaNrep	0.0 ± 0.0	1.8 ± 1.2
*DOaLrep	5.0 ± 0.0	3.3 ± 1.2
OBaNprep	2.3 ± 1.4	2.6 ± 1.5
*OBaLprep	3.3 ± 2.3	3.6 ± 1.3
aLaLgap	5.0 ± 0.0	3.9 ± 0.7
aNaLgap	0.0 ± 0.0	2.0 ± 1.4
aNaNrep	0.8 ± 1.2	2.3 ± 1.3
aLaLrep	4.1 ± 1.2	2.8 ± 1.3
aNaLgap	1.7 ± 2.3	2.9 ± 1.1
*aNaLrep	4.0 ± 0.8	1.6 ± 1.2
aNgorep	0.8 ± 1.2	1.2 ± 1.2
*aLgorep	4.2 ± 1.2	3.5 ± 0.5

6.3 Discussion of Results

This separate analysis of the native speakers in the control group revealed two important aspects concerning the test results for these two groups. The first is that the older L1 speakers have negligible error margins indicating that the range in responses observed in the results in the previous chapter are due to the responses provided by the younger L1 speakers. The second point is that the older L1 speakers make consistent categorical distinctions between the different structures across all three test formats. Any distinctions between the structures obtained for the younger L1 speakers are seen only in the Paired Comparison Test. As with the previous chapter, the results will be divided into two categories, mutation distinctions and structural distinctions.

6.3.1 Mutation Distinctions

The younger L1 speakers have varying levels of sensitivity to the *aL/aN* distinction as shown Table 6.3 below. A ‘√’ indicates that the contrast was perceived, an ‘X’ indicates that it was not perceived, i.e. that a significant effect of condition was obtained within the group.

Table 6.3

Discrimination of *aL/aN* contrasts by by L1 speakers
(L and W Tests)

Contrastive patterns	Older L1 speakers	Younger L1 speakers
SaLgap vs *SaNgap	√	X
DOaLgap vs *DOaNgap	√	X
DOaNrep vs *DOaLrep	√	X
ObaNprep vs *ObaLprep	X	X
aLaLgap vs aNaLgap	√	X
aNgorep vs *aLgorep	√ (L) X (W)	X
NPaL vs *NPaN	√	X

The younger native speakers do not discriminate between the *aL/aN* complementizers in any of the contrastive patterns in the Listening and Written Tests. This group is behaving in the same way as the L2 learners. Their lack of sensitivity to the mutations contrasts with the older native speakers who are able to distinguish between the *aL/aN* complementizers in all of the contrastive patterns in the Listening and Written Tests except for the oblique clauses and long-distance dependencies. This result indicates that the older native speakers are aware that both patterns are available in the language, the standard *ObaNprep* and *aNgorep* as well as the Munster preference for the non-standard **ObaLprep* and **aLgorep*.

The older native speakers only allow the *aN* with the prepositional pronoun in the oblique relative clauses. This could account for their rejection of *aNgorep*, the standard long distance dependency pattern, since the embedded resumptive pronouns were in the direct object position.

The results for these same contrasts for the Paired Comparison Test are given in Table 6.4

Table 6.4

Discrimination of *aL/aN* contrasts by by L1 speakers
(Paired Comparison Test)

Contrastive patterns	Older L1 speakers	Younger L1 speakers
SaLgap vs *SaNgap	√	√
DOaLgap vs *DOaNgap	√	√
DOaNrep vs *DOaLrep	√	X
ObaNprep vs *ObaLprep	X	X
aLaLgap vs aNaLgap	√	X
aNgorep vs *aLgorep	X	√
NPaL vs *NPaN	√	√

The younger L1 speakers were able to perceive the *aL/aN* contrast in the subject and the direct object clauses containing gaps, in the long-distance dependency pattern, and in the non-finite clauses in the Paired Comparison Test when both formats were presented to them. These results appear to indicate that the ability to distinguish between the complementizers is present for the more common patterns (Keenan and Comrie 1977; McCloskey 1990).

These results also support the argument that these younger L1 speakers are aware of some association between the form of the complementizer and the presence or absence of a gap in the relativised site. In the Paired Comparison Tests, the morphological distinctions were presented overtly to the subjects and this facilitated the accessing of this knowledge. It would appear that the L1 grammar of the younger L1 speakers is distinct from the L1 grammar of the older L1 speakers of the language.

A further difference between the older and younger L1 speakers is the older group's sensitivity to the distinct complementizer forms in the cyclical and mixed \bar{A} -dependencies. They reject the *aNaLgap* pattern and show a resounding acceptance of the *aLaLgap* pattern, where cyclical *al* complementizers bind the gap through the chain. They also reject the cyclical binding of the resumptive pronoun in the *aNaNrep* pattern, but accept the non-standard **aLaLrep*² pattern. The preference of the *aL* complementizers in this pattern is another indication of the consistency in the responses and L1 grammatical knowledge of older L1 speakers, as it reflects in all probability the dialectal preference for *aL* complementizers in the Munster dialect. These distinctions within chains are not found in the results for the younger L1 speakers.

² The reader is reminded that **aLaLrep* was included in the Paired Comparison Test only as a contrastive item for *aNaNrep*.

With the long distance \bar{A} -dependencies, the younger members of the control group do not appear to be sensitive to the form of the complementizers in either the Listening or the Written Tests. They were able to distinguish between *aL/aN* in the Paired Comparison Test when both patterns were presented to them, in which case they opted for the non-standard *aLgorep, the form used in their dialect. This result indicates that L1 knowledge of the roles of the distinct mutations is present but weak.

6.3.2 Structural Contrasts

The second basis for distinction between the clause structures tested in the Listening and Written Tests, the presence of a gap or a resumptive pronoun in the relativised site, is presented in Table 6.5 below. The results for these contrasts for the Paired Comparison Test are given in Table 6.6. As above ‘√’ indicates that the contrast was perceived, an ‘X’ indicates that it was not perceived, i.e. that a significant effect of condition was obtained within the group.

Table 6.5

Discrimination of gap vs resumptive pronoun contrasts by L1 speakers
(Listening and Written Tests)

Contrastive patterns	Older L1 speakers	Younger L1 speakers
SaLgap vs *SaLrep	√	√ (L) X (W)
DOaNrep vs *DOaNgap	√	√
DOaLgap vs *DOaLrep	√	√
aLaLgap vs *aLaLrep	√	X

The results for these same contrasts for the Paired Comparison Test are given in Table 6.6.

Table 6.6

Discrimination of gap vs resumptive pronoun contrasts by L1 speakers
(Paired Comparison Test)

Contrastive patterns	Older L1 speakers	Younger L1 speakers
SaLgap vs *SaLrep	√	√
DOaNrep vs *DOaNgap	√	√
DOaLgap vs *DOaLrep	√	√
aLaLgap vs *aLaLrep	√	X
aLaNgap vs *aNaLrep	√	X

The older L1 speakers categorically rejected the pattern for the subject relative clause which contained a resumptive pronoun in the subject position. The younger members of the control group also rejected the use of the pronoun, more so in the Listening and the Paired Comparison Tests but less emphatically in the Written Test³. These differences in scores between the older and younger L1 speakers explain the wide error margins which were obtained for the complete control group (all nine members taken together) in the analysis in the previous chapter. The direct object clauses containing resumptive pronouns are rejected by the older L1 speakers in the Listening and the Written Tests. The *DOaLrep pattern is categorically accepted however in the Paired Comparison Test by this same group. This choice, again, most probably arises due to the dialectal preference for the *aL* complementizer. The younger members of the control group also rejected the use of the pronoun, but less emphatically and there is no real difference in their rating of the patterns between the different test types. The younger members of the control group demonstrate a preference for the gap patterns aLaLgap and aNaLgap over the aNaNrep pattern.

³ As explained in the previous chapter, the intrusive pronoun may have been overlooked or else it was used to re-parse the pattern into two separate sentences. Either of these reasons contributed to the fact that the acceptability ratings were high for *SaLrep in the Written Test.

6.4 CP of L1 Equal to CP of L2

The lack of ability to distinguish the complementizers observed in the responses given by the younger members of the control group can be explained using the same reason as given for the learners in the previous chapter.

- i) exposure to the various dialectal differences *via* Irish-language radio, television and print media;
- ii) exposure to various dialectal differences in school from Irish-speaking teachers from different regions of the country; and
- iii) a failure to acquire the distinction at a young age.

The distinct CP features expected to be present in L1 grammar of Irish for this group of native speakers appear not to be firmly established. In other words, there is a morpho-syntactic link between the complementizer form and the relativised site in the L1 grammar for Irish CPs for the older native speakers, but not consistently in the L1 grammar of the younger native speakers. The Irish CPs for the younger members of the control group appear to be similar to the CPs of the L1 grammar of native speakers of English: while they accept the morphological mark of either lenition or eclipsis, it is not associated to a [\pm movement] feature of the CP as is the case for the older L1 speakers of Irish.

The younger members of the control group are performing in a manner similar to the L2 learners. Neither group anticipated the syntactic structure of the relative clauses by using morphological cues; they were insensitive to the distinct complementizers. It is

suggested that a loss in the morphological role of the complementizers appears to have taken place in the grammar of these younger L1 speakers leaving them in much the same situation as the L2 learners. The distinct morpho-syntactic [\pm movement] features of the Irish CP appear to be losing their function. The syntactic properties of [\pm movement] have been acquired but not the morphological counterpart. This means that the syntactic properties are seen as independent of the morphology.

6.4 Language Restructuring

Dressler (1991) looks at a similar case of decay and loss of Breton word initial mutations which have no counterpart in French. He states that the dying Breton dialects have become acculturated to French. He does not look at specific cases, such as relative clause constructions, but at the nature of the consequences of the loss of a distinction between the mutated forms. Dressler states that the morphological impact can be either a simplification or a reduction in the grammar. According to Dressler, a 'simplification' is usually compensated for in the grammatical system. An example provided to illustrate this is the loss, in English, of the genitive form which gave rise to rigid and obligatory prepositional constructions. When there is no compensation in the grammatical system, the impact is referred to as 'reduction'. When there is no compensation, the recessive language becomes "partially dysfunctional" and is characterized by "functional shifts towards the dominant language" (Dressler 1991:108). It is the term 'reduction' which Dressler uses to describe the decay and loss of Breton word initial mutations.

Maher (1991:68) states that when looking at language contact, where a minority language is in contact with a dominant language, the restructuring of morphological and syntactic structures display the following characteristics:

- Progressive reduction in the inflectional morphology
- Preference for coordinate rather than embedded constructions

These characteristics are found in the results in this thesis in the consistent lack of sensitivity to the *aL/aN* distinctions among the young L1 speakers. In addition, the use of multi-chain patterns in the Irish language of the last 40 years is rare as attested by Ó Ruairc, (2000).

Dorian (1978, 1981) looked at the erosion process of Scots Gaelic in northern Scotland. Looking at the phonology, morphology and syntax of Scots Gaelic, she observed a movement toward a single structure where competing structures, which had the same semantic value, existed. This may explain the observed preference in the present test results for direct object constructions which contain a gap, as opposed to those which contain a resumptive pronoun.

As mentioned above, the younger L1 speakers grew up in bilingual homes, but with extensive exposure to the dominant language, English, in the surrounding environment. This, according to research looking at language attrition (Maher 1991), contributes towards explaining the test results that were obtained. A phenomenon referred to as intergenerational language change occurs in bilingual communities. This language change is said to be due to an inadequate exposure to the minority language. “While these children are exposed to language B [dominant language] and learn it easily, exposure to

language A [minority language] gradually diminishes, resulting in ‘partially replicated languages’. [author’s use of apostrophe] (Maher 1991:81).

6.6 Conclusion

The older L1 speakers perceive the morpho-syntactic link between the complementizer and the relativised site for most contrasts in all test formats. The only exceptions are the oblique and the long-distance dependences which are accepted equally. The young L1 speakers do not perceive the morpho-syntactic link between the complementizers and the relativised site in the Listening and the Written Tests but make the distinctions to a certain degree in the Paired Comparison Test, performing in a similar manner to the learner groups. The L1 grammar for Irish relative clauses of the younger native speakers is different from the L1 grammar of the older native speakers in that there is no association between the morphology and the syntactic structure.

The similarity in results between the L1 speakers and the L2 learners needs to be explored further. One possibility is based on Zobl and Liceras (2005) who argue that during a period of parametric change in a language, speakers can run competing grammars, until such time as the grammar stabilizes. They apply this model to L2 acquisition by proposing that L2 learners also formulate more than one grammar, an ‘internalized diglossia’ (Zobl and Liceras 2005). Among the L1 speakers, Irish was the language in the home as they were growing up and now as adults, some of them use the language at work and all of them use it to a certain degree as part of their every day life in the *Gealtacht*. Given this greater exposure to the language, it could be argued that they are aware of the distinct patterns, but are also aware of elements of language change in

the language. The competition between grammars for the L1 speakers is based on the exposure to the different dialects.

In the case of the L2 learners, it is a case of the L1 grammar competing with the L2 grammar. Their exposure to the language is mainly *via the* classroom and not as part of their everyday language. Given this reduced exposure, they have not yet acquired the morpho-syntactic link between the complementizers and the relativised position.

Further study of additional contexts for mutations need to be carried out in order to determine whether this optionality in the use of the mutations is general across both groups and present across other grammatical functions.

There appears to be a sociolinguistic phenomenon of language change underway in Modern spoken Irish by native speakers who grew up in bilingual homes. This bilingual group represents a large proportion of the current Irish speaking population and will be increasing in the coming years as the older generation passes on. The ramifications of this language change are beyond the scope of this thesis, but clearly warrant further investigation.

Chapter 7

Conclusions

7.0 Introduction

The thesis set out to determine whether L2 learners of Irish had acquired the distinct complementizers *aL* and *aN* and their overt realization *via* lenition and eclipsis on the clausal verb. If this distinction has been acquired, the second objective was to determine whether the learners associated these complementizers with the content of the relativised site (gap or resumptive pronoun). A third objective was to discover if the learners had acquired the need for a distinct *aN*, to determine if this knowledge contributed to the development of a resumptive strategy, or whether a resumptive strategy was being developed independently of the morpho-syntax or not at all.

Three distinct categories of conclusions can be drawn from the results of this experiment. The first category are the morpho-syntactic conclusions which answer the questions raised above; the second category examines the overall results obtained using the different test formats; the third category describes the findings concerning the native speakers. The chapter ends with a final comment concerning the L2 teaching of Irish based on these results.

7.1 Morpho-syntactic Conclusions

It can be concluded that all groups have native-like competence with the word order pattern for finite (VSO) declarative sentences. Learners appear to be running competing grammars for the non-finite constructions, where both the English and the Irish word order patterns are accepted.

The answer to the first research question is that the adult L2 learners are not sensitive to distinct [\pm movement] features of the *aL* and *aN* complementizers. The morphology appears to be a neutral feature in the learners' IL grammar. It is difficult to state conclusively whether this means that the mapping has been imperfectly acquired (Lardière 1998a, 1998b) because learners would be aware of the various other grammatical functions of lenition and eclipsis or whether the learners have a problem with the realization of the surface morphology (Prévost and White 2000) in real time (as in the Listening Test). Further experimentation including clausal verbs which are not mutated at all would provide evidence to establish more clearly whether the need to mutate, regardless of which type, is perceived to be required in these constructions. It is also critical that experiments including oral production tasks need to be carried out to be able to draw more definite conclusions.

The answer to the second question is that the morphology is not driving the acquisition of the syntax. Learners show a strong tendency to accept only relative clause structures which are comparable to those found in English, i.e. those which contain a gap. This preference is seen for all of the constructions tested which contained gaps. Learners have developed a primitive resumptive strategy that is not morpho-syntactically associated to the form of the complementizer. The consistent 'works for me' ratings to

direct object and oblique support this conclusion. Learners treat these resumptive pronouns differently. Accusative resumptive pronouns are dis-preferred. They are consistently deleted in the Written Test, whereas the prepositional pronouns are not. A different position could be that the level of acceptance of the oblique relatives does not suggest the presence of an early resumptive strategy but a case where the English prepositional stranding analysis has been applied to Irish. Additional research on the differences in the acquisition of resumptive accusative pronouns and prepositional pronouns is required.

7.2 Test Formats

The use of various modalities as well as the use of rating and ranking-type tasks provided a more complete picture of the L2 learner's IL grammar. The rating task revealed the lack of sensitivity to the complementizer forms, the preference of the gap constructions and the mid-range level of acceptance of the resumptive pronouns constructions. The ranking task provided an opportunity to observe a slight ability to distinguish between the complementizer forms in the subject and direct object relatives. This was not apparent in the rating tasks. Having the learners make suggested changes to the Written Test sentences provided valuable insight into the IL grammar of the learners, given the fact that there was no oral production task. This task confirmed the lack of sensitivity to the mutations because the learners proportionally made fewer changes to the mutated forms than to the content of the relativised site. In this experiment this type of information was critical in order to determine whether or not the learners had established

a relationship between the form of the complementizer and the presence of absence of a gap.

7.3 Native Speakers

Effects of language change appear to be present in the Irish of the younger members of the control group. This was a surprising result. Speakers of Irish who grew up in bilingual homes, where English was also spoken, appear to be as insensitive to the *aL* and *aN* distinctions as are the L2 learners. Only native speakers who grew up in monolingual environments until the age of puberty were able to perceive the differences. These results need to be explored further as the control group sample in this experiment was very small.

These observed changes may be further evidence of the impact of the linguistic pressure brought to bear on the Irish language by the omnipresence of English. *Fios Feasa*, an Irish language publishing company and Irish language watchdog, reports that the speakers of Irish outside the *Gaeltachtaí* use the language with limited ability. This is because they have limited opportunities to use the language, and those opportunities are in a restricted social range. These Irish language speakers suffer all the limitations one might expect from a lack of significant contact with authentic speakers, limited range in vocabulary, poor pronunciation and a simplified syntax.

Reversing language loss is achieved when people have a choice of learning or transmitting the local language (Hale 1998). The opportunity to work where people speak the local language is critical. If this situation does not exist, as is the case for Irish at the moment, the chances of survival are greatly reduced. The only hope is “an extraordinary

act of will, sometimes seen in the case of parents who simply insist that their language be used in the nuclear family, in defiance...of the otherwise prevailing dominant language” (Hale 1998:214).

7.4 L2 Teaching of Irish

From a pedagogical point of view, it is clear that unless the importance of the morphology is made clear to the learners, they will remain oblivious of the distinct roles of the *aL* and *aN* complementizers in the language. It is assumed that the greater the information load attached to the morphology, the more easily and more quickly it will be acquired.

The distinctions between lenition and eclipsis are not lost on the learners when the verbs are used in the past tense (lenition) (7.1a) and in the interrogative form (eclipsis) (7.1).

a. *gClúin tú mo guth* /glun/

hear-INTERR. you my voice

Do you hear my voice?

b. *Chlúin tú mo guth* /xlun/

hear-PAST you my voice

You heard my voice¹

The recent pervasive loss of the interrogative marker has ensured that eclipsis be perceived as different from lenition as distinct information is being communicated by the

¹ Thank you to Aralt Mac Giolla Chainnigh for this example.

/g/ and /x/ on the verb. This distinction plays as important a role as the mutation distinctions for the possessive adjectives.

Maolmhaodhóg Ó Ruairc, in his recent book "*I dTreo Teanga Nua*" ("On The Path Towards A New Language") makes several recommendations in anticipation of these natural changes in the language and in wanting to make them official at the present time in order to facilitate more widespread learning of the language. One in particular is of interest to the purposes of this thesis. Ó Ruairc suggests that Irish get rid of the eclipsis and lenition except when they introduce a syntactic distinction. This may already be underway in the language of the bilingual Irish speakers and the adult L2 learners.

Appendix A

Sentences used in the listening and written tests

FILLERS

- VSO
- 1 *Ceannaíonn mamaí bainne sa siopa.*
Buys mom milk in-the shop
Mom buys milk in the shop.
 - 2 *Téann Mam go dtí an siopa gach maidin.*
Goes Mom to the shop every morning
Mom goes to the shop every morning.
 - 3 *Osclaíonn an mhonarcha ar a hocht a chlog.*
Opens the factory at eight o'clock
The factory opens at eight o'clock.
- *SVO
- 4 *Na buachaillí imríonn peil.*
The boys play soccer
The boys play soccer.
 - 5 *An freastalaí cuireann an cupán tae ar an mbord.*
The waitress puts the cup tea on the table
The waitress puts the teacup on the table.
 - 6 *Pádraig piocann bláthanna lena stór.*
Patrick picks flowers for-his love
Patricks picks flowers for his love.
- NPaL
- 7 *Is maith liom an válsa a dhéanamh le mo bhean chéile.*
Is good with-me the waltz aL do-VN with my woman together
I like to dance the waltz with my wife.
 - 8 *Is feidir leis an imreoir an liathróid a bhualadh.*
Is able with-him the player the ball aL hit-VN
The player is able to hit the ball.
 - 9 *Táim anseo leis an phictiúr sin a fheiceáil.*
am-I here with-it the picture this aL see-VN
I am here to see this movie.
- *NPaN
- 10 *Níor mhaith liom fear bocht a bpósadh.*
Is-not good with-me man poor aN marry-VN
I do not want to marry a poor man.
 - 11 *Táim anseo chun an phictiúir a mbreathnú.*
am-I here to the picture aN watch-VN
I am here to watch the movie.

- 12 *Ba mhaith liom fiche toitín a bhfáil.*
Is-COND good with-me twenty cigarette aN get-VN
I would like to get twenty cigarettes.
- *aLNP 13 *Ní maith liom a bhriseadh nóta céad punt.*
Is-NEG good with-me aL break-VN note hundred pound
I don't like to break a £ hundred note.
- 14 *Ba mhaith liom a phiocadh bláthanna.*
Is-COND good with-me aL pick-VN flowers
I would like to pick flowers.
- 15 *Ba mhaith liom a cheannach teach níos mó.*
Is-COND good with-me aL buy-VN house more big
I would like to buy a bigger house.
- SaLgap 16 *Sin é an fear a imríonn sa chúl do Chiarraí.*
This-is-MASC the man_i aL plays t_i goal for Kerry
This is the man that plays goal for Kerry.
- 17 *Sin í an cailín a théann abhaile ar a naoi a chlog.*
This-is-FEM the girl_i aL goes t_i home at nine o'clock
This is the girl that goes home at nine o'clock.
- 18 *Sin é an banna ceoil a sheinneann gach oíche sa phub.*
This-is-MASC the band_i music-GEN aL plays t_i every night at-the pub
This is the band that plays at the pub every night.
- * SaNgap 19 *Sin é an seanchaí a n-insíonn na seanscéalta.*
This-is-MASC the story-teller_i aN tells t_i the old-stories
This is the story teller that tells the old stories.
- 20 *Sin í an cailín a mbreathnaíonn ar an teilifís gach oíche.*
This-is-FEM the girl_i aN watches t_i on the television every night
This is the girl that watches television every night.
- 21 *Sin é an buachaill a dtéann ar an mbus gach maidin.*
This-is-MASC the boy_i aN goes t_i on the bus every maidin
This is the boy that goes on the bus every morning.
- *SaLpro 22 *Sin é an buachaill a théann sé ar scoil gach maidin.*
This-is-MASC the boy_i aL goes he_i to school every maidin
This is the boy that he goes to school every morning.
- 23 *Sin é an fear a labhrann sé Spáinnis.*

- This-is-MASC the man_i aL speaks he_i Spanish
This is the man that he speaks Spanish.
- 24 *Sin é an fear a éiríonn sé ar a cúig a chlog gach maidin.*
This-is-MASC the man_i aL rises he_i at five o'clock every morning
This is the man that he rises at five o'clock every morning.
- DOaLgap 25 *Sin iad na bláthanna a phiocann gach cailín lena máthair.*
This-is-PLUR the flowers_i aL picks every girl t_i with-her mother.
These are the flowers that every girl picks with her mother.
- 26 *Sin í an riail a bhriseann an tiománaí i gcónaí*
This-is-FEM the rule_i aL breaks the driver t_i always
This is the rule that the driver always breaks.
- 27 *Sin iad na calógáí a itheann m'athair gach maidin.*
This-is-PLUR the cereals_i- PLUR aL eats my father t_i every morning.
This is the cereal that my father eats every morning.
- *DOaNgap 28 *Sin é an páipéar nuachta a gceanníonn mo dheirfiúr t_i gach tráthnóna.*
This-is-MASC the paper news_i aN buys my brother t_i every evening
This is the newspaper that my brother buys every evening.
- 29 *Sin é an scrúdú a ndéanfaidh mé an tseachtain seo chugainn.*
This-is-MASC the test_i aN do-FUT I the week this to-us
This is the test that I will write next week.
- 30 *Sin é an t-úll a n-itheann an buachaill gach am loin.*
This-is-MASC the apple_i aN eats the boys every time lunch-GEN
This the apple that the boy eats every lunchtime
- DOaNpro 31 *Sin é an fear a bhfeiceann Seán go minic é ar an mbus.*
This-is-MASC the man_i aN sees Sean always him_i on-the bus
This is the man that Sean always sees (him) on the bus.
- 32 *Sin é an t-amhrán a gcanann Clannad é.*
This-is-MASC the song_i aN sings Clannad it_i
This is the song that Clannad sings (it).
- 33 *Sin é an t-úll a n-itheann an leanbh é.*
This-is-MASC the apple_i aN eats the child it_i
This is the apple that the child eats (it).
- *DOaLpro 34 *Sin í an mhóin a ghearrann an fear í.*
This-is-FEM the turf_i aL cuts the man it_i
This is the turf that the man cuts (it).

35 *Sin é an dlúth dhiosca a cheannaíonn na daoine óga é.*
 This-is-MASC the compact disc_i aL buy the people young it_i
 This is the CD that the young people buy (it)

36 *Sin é an leabhar a cheannaíonn gach scoláire nua é.*
 This-is-MASC the book_i aL buys every student new it_i
 This is the book that every new student buys it.

IOaNprep 37 *Sin é an stáisiún raidió a n-eisteanann na daoine óga leis i gcónaí.*
 This-is-MASC the station radio_i aN listens the people young with-it_i always
 This is the radio station that the young people always listen to it.

38 *Sin é an fear a mbuailim leis ar an mbus gach maidin.*
 This-is-MASC the man_i aN hit-I with-him_i on the bus every morning
 This is the man that I meet him on the bus every morning.

39 *Sin é an dochtúir a bhfanann an t-othar leis.*
 This-is-MASC the doctor_i aN waits the patient with-him_i
 This is the doctor that the patient waits for.

*IOaLprep 40 *Sin é an stáisiún raidió a éisteanann na daoine óga leis.*
 This-is-MASC the station radio_i aL listens the people young with-it_i
 This is the radio station that the young people listen to it.

41 *Sin í an bhean a chuirim an t-airgead chuici.*
 This-is-FEM the woman_i aL put-I the money to-her_i
 This is the woman that I give the money to her.

42 *Sin é an fíaclóir a fhanann Una leis.*
 This-is-MASC the dentist_i aL waits Una with-him_i
 This is the dentist that Una waits for him.

MIXED CHAINS

aLaLgap 43 *Sin é an madra a cheapann tú a bhuaileann an fear gach lá.*
 This-is-MASC the dog_i aL believe you aL hits the man t_i every day
 This is the dog that you believe that the man hits every day.

44 *Sin é an leabhar a creideann tú a cheannóidh na páiste.*
 This-is-MASC the book_i aL believe you aL buy-FUT the children t_i
 This is the book that you believe that the children will buy.

45 *Sin í an luch a cheapann tú a mharóidh an cat.*
 This-is-FEM the mouse_i aL think you aL kill-FUT the cat t_i
 This is the mouse that you believe that the cat will kill.

- aNaLgap 46 *Sin é an t-airgead a gceapann tú a ghoideann an cuntasóir mí mhocánta.*
This-is-MASC the money_i aN think you aL steals the accountant dishonest
This is the money that you believe that the dishonest accountant steals.
- 47 *Sin é an bréagán a gcreideann tú a cheannóidh na tuismitheoirí.*
This-is-MASC the toy_i aN believe you aL buy-FUT the parents _{t_i}
This is the toy that you believe that the parents will buy.
- 48 *Sin é an bréagán a gcreideann tú a bhrisfidh na páistí.*
This-is-MASC the toy_i aN believe you aL break-FUT the children _{t_i}
This is the toy that you believe that the children will break.
- aNaNpro 49 *Sin é an cód a gceapann tú a mbrisfidh James Bond é.*
This-is-MASC the code_i aN think you aN break-FUT James Bond _{it_i}
This is the code that you believe that James Bond will break.
- 50 *Sin é an scéal a measann tú a gcreideann na polaiteoirí é.*
This-is-MASC the story_i aN think you aN believe the politicians _{it_i}
This is the story that you think that the politicians believe it.
- 51 *Sin é an bóthar a gcreideann tú a dtógfaidh an tiománaí é.*
This-is-MASC the road_i aN believe you aN take-FUT the drivers _{it_i}
This is the road that you believe that the drivers will take it.
- aNgopro 52 *Sin iad na drugaí a gcreideann na póilíní go ndíolann an fear sin leo.*
This-is-PLUR the drugs_i aN believe the police go sells the man this with-them_i
These are the drugs that the police believe that this man sells them.
- 53 *Sin é an gealltanais a gceapann tú go mbrisfidh an buachaill é.*
This-is-MASC the gift_i aN believe you go break-FUT the boy _{it_i}
This is the gift that you believe that the boy will break it.
- 54 *Sin é an teach a gcreideann tú go gceannóidh an fear é.*
This-is-MASC the house_i aN believe you go buy-FUT the man _{it_i}
This is the house that you believe that the man will buy it.
- aLgopro 55 *Sin í an táille a cheapann tú go n-íocann na ceoltóirí í.*
This-is-FEM the fee_i aL think you go charge the musicians _{it_i}
This is the fee that you think that the musicians charge it.
- 56 *Sin é an bia a cheapann tú go ndéanfaidh mo mháthair é.*
This-is-MASC the food_i aL think you go make-FUT my mother _{it_i}
This is the food that you think that my mother will make it.

57 *Sin é an teach a cheapann tú go dtógann an fear é.*
This-is-MASC the house_i aL think you go build the man it_i
This is the house that you think the man builds it.

Appendix B

Sentences used in the Paired Comparison test

FILLERS

- *SVO 1a **Na páistí itheann a mbricfeasta.*
 vs The children eat their breakfast
 VSO The children eat their breakfast.
- 1b *Itheann na páistí a mbricfeasta.*
 Eat the children their breakfast
 The children eat their breakfast.
- 2a **An cailín lasann an solas sa seomra.*
 The girl lights the light in-the room
 The girls turns on the light in the room.
- 2b *Lasann an cailín an solas sa seomra.*
 Lights the girl the light in-the room
 The girls turns on the light in the room.
- 3a **Na siopaí osclaíonn ar a naoi a chlog gach maidin.*
 The shops open at nine o'clock every morning
 The shops open at nine o'clock every morning
- 3b *Osclaíonn na siopaí ar a naoi a chlog gach maidin.*
 Opens the shops at nine o'clock every morning
 The shops open at nine o'clock. every morning
- NPaL 4a *Is feidir le m'athair an rothar a dheisiú.*
 vs Is able with my-father the bicycle aL repair-VN
 *NPaN My father is able to fix the bicycle.
- 4b **Is feidir le m'athair an rothar a ndeisiú.*
 Is able with my-father the bicycle aN repair-VN
 My father is able to fix the bicycle.
- 5a *Ba mhaith léi an gúna a cheannach*
 Is-COND good with-her the dress aL buy-VN
 She would like to buy the dress.
- 5b **Ba mhaith léi an gúna a gceannach*
 Is-COND good with-her the dress aN buy-VN
 She would like to buy the dress.
- 6a *Is feidir leis an leanbh milseáin a ithe.*
 Is able with-him the child candy aL eat-VN
 The child is able to eat the candy

6b **Is feidir leis an leanbh milseáin a n-ithe.*
 Is able with-him the child candy aN eat-VN
 The child is able to eat the candy

NPaL
 vs
 *aLNP

7a *Is feidir le m'athair an rothar a dheisiú.*
 Is able with my father the bicycle aL fix-VN
 My father is able to fix the bicycle.

7b *Is feidir le m'athair a dheisiú an rothar.*
 Is able with my father aL fix-VN the bicycle
 My father is able to fix the bicycle.

8a *Ba mhaith léi teach mór a cheannach.*
 Is-COND good with-her house big aL buy-VN
 She would like to buy a big house.

8b **Ba mhaith léi a cheannach teach mór.*
 Is-COND good with-me aL buy-VN house big
 She would like to buy a big house.

9a *Is feidir leis an leanbh milseáin a ithe.*
 Is able with-him the child candy aL hit-VN
 The child is able to eat the candy.

9b **Is feidir leis an leanbh a ithe milseáin.*
 Is able with-him the child aL hit-VN candy
 The child is able to eat the candy.

SaLgap
 vs
 *SaNgap

10a *Sin iad na fir a bhaineann an mhóin.*
 This-is-PLUR the men_i aL dig t_i the turf
 These are the men that dig the turf.

10b **Sin iad na fir a mbaineann an mhóin.*
 This-is-PLUR the men_i aN dig t_i the turf
 These are the men that dig the turf.

11a *Sin é an buachaill a cheanníonn a ceapaire ag am loin.*
 This-is-MASC the boy_i aL buys t_i his sandwich at time lunch-GEN
 This is the boy that buys his sandwich at lunchtime.

11b **Sin é an buachaill a gceanníonn a ceapaire ag am loin.*
 This-is-MASC the boy_i aN buys t_i his sandwich at time lunch-GEN
 This is the boy that buys his sandwich at lunchtime.

- 12a *Sin é an meicneoir macánta a dheisíonn na cairteacha.*
 This-is-MASC the mechanic_i honest aL fixes t_i the cars
 This is the honest mechanic that fixes the cars.
- 12b **Sin é an meicneoir macánta a ndeisíonn na cairteacha.*
 This-is-MASC the mechanic_i honest aN fixes t_i the cars
 This is the honest mechanic that fixes the cars.
- SaLgap vs *SaLpro 13a *Sin í an bhean a labhrann Spáinnis.*
 This-is-FEM the woman_i aL speaks t_i Spanish
 This is the woman that speaks Spanish.
- 13b **Sin í an bhean a labhrann sí Spáinnis.*
 This-is-FEM the woman_i aL speaks she_i Spanish
 This is the woman that she speaks Spanish.
- 14a *Sin é an buachaill a théann ar scoil gach maidin.*
 This-is-MASC the boy_i aL goes t_i to school every maidin
 This is the boy that he goes to school every morning.
- 14b **Sin é an buachaill a théann sé ar scoil gach maidin.*
 This-is-MASC the boy_i aL goes he_i to school every maidin
 This is the boy that goes to school every morning.
- 15a *Sin í an cailín a chanann ‘Báidín Fheidhlimidh’.*
 This-is-FEM the girl_i aL speaks t_i ‘Báidín Fheidhlimidh’
 This is the girl that signs ‘Báidín Fheidhlimidh’.
- 15b **Sin í an cailín a chanann sí ‘Báidín Fheidhlimidh’.*
 This-is-FEM the girl_i aL speaks she_i ‘Báidín Fheidhlimidh’
 This is the girl that she signs ‘Báidín Fheidhlimidh’.
- DOaLgap vs *DOaNgap 16a *Sin í an mhóin a ghearran na fir.*
 This-is-FEM the turf_i aL cut the men t_i
 This is the turf that the men cut.
- 16b **Sin í an mhóin a ngearran na fir.*
 This-is-FEM the turf_i aN cut the men t_i
 This is the turf that the men cut.
- 17a *Sin é an páipéir nuachta a cheannaím gach maidin.*
 This-is-MASC the paper news_i aL buy-1st pers t_i every morning
 This is the newspaper that I buy every morning.

17b **Sin é an páipéir nuachta a gceannaím gach maidin.*
 This-is-MASC the paper news_i aN buy-1st pers t_i every morning
 This is the newspaper that I buy every morning.

18a **Sin iad na daoine a bhfeicim sa bhus i gcónaí.*
 This-is-PLUR the people_i aL see-1st pers t_i on-the bus always
 These are the people that I always see on the bus.

18b *Sin iad na daoine a fheicim sa bhus i gcónaí.*
 This-is-PLUR the people_i aN see-1st pers t_i on-the bus always
 These are the people that I always see on the bus.

DOaNpro 19a *Sin é an seomra leapa a nglanann an bhean é gach lá.*
 vs This-is-MASC the room bed_i aN cleans the woman it_i every day.
 *DOaLpro This is the bedroom that the woman clean it every day.

19b **Sin é an seomra leapa a ghlanann an bhean é gach lá.*
 This-is-MASC the room bed_i aN cleans the woman it_i every day.
 This is the bedroom that the woman clean it every day.

20a *Sin é an píop a dtarraingíonn an fear é gach oíche.*
 This-is-MASC the pipe_i aN pulls the man it_i every night.
 This is the pipe that the smokes it every night .

20b **Sin é an píop a tharraingíonn an fear é gach oíche.*
 This-is-MASC the pipe_i aL draws the man it_i every night.
 This is the pipe that the smokes it every night .

21a *Sin é an gluaisrothar a dtiomáineann Pól é go dhí a oifig gach maidin.*
 This-is-MASC the motorcycle_i aN drives Paul it_i to his office every morning
 This is the motorcycle that Paul drives it to his office every morning.

21b **Sin é an gluaisrothar a thiomáineann Pól é go dhí a oifig gach maidin.*
 This-is-MASC the motorcycle_i aL drives Paul it_i to his office every morning
 This is the motorcycle that Paul drives it to his office every morning.

IOaNprep 22a *Sin é an fíaclóir a bhfanann an t-othar leis.*
 vs This-is-MASC the dentsit_i aN waits the patient with-him_i
 *IOaLprep This is the dentist that the patient waits for him.

22b **Sin é an fíaclóir a fhanann an t-othar leis.*
 This-is-MASC the dentsit_i aL waits the patient with-him_i
 This is the dentist that Una waits for him.

- 23a *Sin é an stáitiún raidió a n-éisteann na daoine óga leis.*
 This-is-MASC the station radio_i aN listens the people young with-it_i
 This is the radio station that the young people listen to it.
- 23b **Sin é an stáitiún raidió a éisteann na daoine óga leis.*
 This-is-MASC the station radio_i aL listens the people young with-it_i
 This is the radio station that the young people listen to it.
- 24a *Sin í an bhean a gcuirim an t-airgead chuici.*
 This-is-FEM the woman_i aN put-I the money to-her_i
 This is the woman that I give the money to her.
- 24b **Sin í an bhean a chuirim an t-airgead chuici.*
 This-is-FEM the woman_i aL put-I the money to-her_i
 This is the woman that I give the money to her.
- aNaLgap vs *aNaLpro 25a *Sin é an t-airgead a gceapann tú a ghoideann an cuntasóir mí mhacánta.*
 This-is-MASC the money_i aN think you aL steals the accountant dishonest t_i
 This is the money that you believe that the dishonest accountant steals it.
- 25b **Sin é an t-airgead a gceapann tú a ghoideann an cuntasóir mí mhacánta é.*
 This-is-MASC the money_i aN think you aL steals the accountant dishonest t_i
 This is the money that you believe that the dishonest accountant steals.
- 26a *Sin é an bréagán a gcreideann tú a cheannóidh na tuismitheoirí.*
 This-is-MASC the toy_i aN believe you aL buy-FUT the parents t_i
 This is the toy that you believe that the parents will buy.
- 26b **Sin é an bréagán a gcreideann tú a cheannóidh na tuismitheoirí é.*
 This-is-MASC the toy_i aN believe you aL buy-FUT the parents it_i
 This is the toy that you believe that the parents will buy it.
- 27a *Sin é an bréagán a gcreideann tú a bhrisfidh na páistí.*
 This-is-MASC the toy_i aN believe you aL break-FUT the children t_i
 This is the toy that you believe that the children will break.
- 27b **Sin é an bréagán a gcreideann tú a bhrisfidh na páistí é.*
 This-is-MASC the toy_i aN believe you aL break-FUT the children it_i
 This is the toy that you believe that the children will break it.
- aNgopro vs *aLgopro 28a *Sin é an cat a bhfeiceann Cáit go mbuaileann Seán é gach lá.*
 This-is-MASC the cat_i aN sees Kate go hits-PRES Sean it_i every day
 This is the cat that Kate sees that Sean hit everyday.

- 28b **Sin é an cat a fheiceann Cáit go mbuaileann Seán é gach lá.*
 This-is-MASC the cat_i aL sees Kate go hits-PRES Sean it_i every day
 This is the cat that Kate sees that Sean hit everyday.
- 29a *Sin é an gluaisteán a bhfeiceann Cáit go ngoideann an gadaí é.*
 This-is-MASC the car_i aN sees Kate go steals-PRES the thief it_i
 This is the car that Kate sees that the thief steals it.
- 29b **Sin é an gluaisteán a fheiceann Cáit go ngoideann an gadaí é.*
 This-is-MASC the car_i aL sees Kate go steals-PRES the thief it_i
 This is the car that Kate sees that the thief steals it.
- 30a **Sin é an t-amhrán a gcuimhníonn sí go gcanann Enya é ar an dlúthdhiosca*
 This-is-MASC the song_i aN remembers she go sings-PRES Enya it_i on the compact disk
 This is the song that she remembers that Enya sings on the CD.
- 30a *Sin é an t-amhrán a chuimhníonn sí go gcanann Enya é ar an dlúth dhiosca*
 This-is-MASC the song_i aL remembers she go sings-PRES Enya it_i on the compact disk
 This is the song that she remembers that Enya sings on the CD.
- aNaNpro vs *aLaLpro 31a *Sin é an cupán a gceapann tú a mbrisfidh tú é.*
 This-is-MASC the cup_i aN think you aN break-FUT you it_i
 This is the cup that you think that you will break it.
- 31b **Sin é an cupán a cheapann tú a bhrisfidh tú é.*
 This-is-MASC the cup_i aL think you aL break-FUT you it_i
 This is the cup that you think that you will break it.
- 32a *Sin é an cat a bhfeiceann Cáit a mbuaileann Seán é gach lá.*
 This-is-MASC the cat_i aN sees Kate aN hits-PRES Sean it_i every day
 This is the cat that Kate sees that Sean hit everyday.
- 32b **Sin é an cat a fheiceann Cáit a bhuaileann Seán é gach lá.*
 This-is-MASC the cat_i aL sees Kate aL hits-PRES Sean it_i every day
 This is the cat that Kate sees that Sean hit everyday.
- 33a *Sin é an bréagán a gcreideann tú a gceannóidh na tuismitheoirí é.*
 This-is-MASC the toy_i aN believe you aN buy-FUT the parents it_i
 This is the toy that you believe that the parents will buy it.

- 33b **Sin é an bréagán a chreideann tú a cheannóidh na tuismitheoirí é.*
 This-is-MASC the toy_i aL believe you aL buy-FUT the parents it_i
 This is the toy that you believe that the parents will buy it
- aLaLgap vs aNaLgap 34a *Sin é an cupán a cheapann tú a bhrisfidh tú.*
 This-is-MASC the cup_i aL think you aL break-FUT you t_i
 This is the cup that you think that you will break.
- 34b **Sin é an cupán a gcheapann tú a bhrisfidh tú.*
 This-is-MASC the cup_i aN think you aL break-FUT you t_i
 This is the cup that you think that you will break.
- 35a *Sin é an bóthar a chreideann Cáit a thógann an fear i gcónaí.*
 This-is-MASC the road_i aL believe Kate aL take-PRES the man t_i always
 This is the road that Kate believes that the man always takes.
- 35b **Sin é an bóthar a gcreideann Cáit a thógann an fear i gcónaí.*
 This-is-MASC the road_i aN believe Kate aL take-PRES the man t_i always
 This is the road that Kate believes that the man always takes.
- 36a *Sin é an tigh nua a chreideann tú a cheannóidh an fear.*
 This-is-MASC the house_i new aN believe you aL buy-FUT the man it_i
 This is the new house that you believe that the man will buy.
- 36b **Sin é an tigh nua a gcreideann tú a cheannóidh an fear.*
 This-is-MASC the house_i new aL believe you aL buy-FUT the man it_i
 This is the new house that you believe that the man will buy.

Appendix C Próifil

Please provide me with some background information which will help me provide a more comprehensive report of the results. All information will be kept completely confidential and only group scores and trends will appear in any reports of results.

1. How long have you been studying Irish?
_____ years _____ months

2. Which dialect have you been exposed to most while learning Irish?

Ulster Connaught Munster

3. What age were you when you started to learn Irish?

between 10-15 between 15-20 between 20-25
between 25-30 between 30-35 between 35-40
between 40-45 between 45-50 between 50-55
between 55-60 between 60-65 over 65

4. What other languages do you speak fluently, other than English?

5. If English is not your first language, please indicate what your mother tongue is:

6. How would you describe the format of your Irish language classes?

mostly conversation and role play
mostly grammar
mostly reading
good balance between grammar and conversation
other _____

7. Which Irish language book and audio material have you been using most recently?

Bibliography

- Adger, D. (2004). Merge and move: Wh-dependencies revisited. Unpublished manuscript. Queen Mary, University of London.
- Adjémian, C. (1976). On the Nature of Interlanguage Systems. *Language Learning*, XXVI: 297-320.
- Appel, R. and Muysker, P. (1987). *Language Contact and Bilingualism*. Edward Arnold. London.
- Aoun, J., L. Choueiri and N. Hornstein. (2001). Resumption, movement and derivational economy. *Linguistic Inquiry*, 32:3 371-403.
- Bailey, N., C. Madden and S. Krashen. (1974). Is there a 'natural sequence' in adult second language learning? *Language Learning*, 24: 235-43.
- Beard, Robert. (1995). *Lexeme-Morpheme Based Morphology*. University of New York press.
- Beck, M.-L. (1998a). L2 Acquisition and obligatory head movement: English-speaking learners of German and the local impairment hypothesis. *Studies in Second Language Acquisition*, 20:311-48.
- Beck, M.-L. (1998b). *Morphology and its interfaces in second language knowledge*. Amsterdam: John Benjamins.
- Birdsong, D. (1992). 'Ultimate attainment in second language acquisition'. *Language*, 68: 706-55.
- Bley-Vroman, R. (1989). What is the logical problem of second language learning? In S.Gass and J. Schachter (Eds.) *Linguistic Perspectives on Second Language Acquisition*, Cambridge University Press, Cambridge.
- Bley-Vroman, R, S. Felix and G. Ioup (1988) The accessibility of Universal Grammar in adult language learning. *Second Language Research*, 4: 1-32.
- Bobaljik, J. (2002) Realizing Germanic Inflection: Why morphology does not drive syntax. *Journal of Comparative Germanic Linguistics* ,6:129-167.
- Bobaljik, J. and H. Thráinsson. (1998) Two heads aren't always better than one. *Syntax* 1: 37-71
- Bowey, J. A. (1996) Orthographic Onsets as Functional Units of Adult Word Recognition. *Journal of Psycholinguistic Research*, 25 (5): 571- 595.

Borer, H. and B. Rohrbacher. (1997). Features and projections: arguments for the full competence hypotheses. In E. Hughes and A. Greenhill (Eds.) *Proceedings of the 21st Annual Boston University Conference on Language Development*, (pp. 23-35). Somerville, MA, Cascadilla Press.

Borer, H. and B. Rohrbacher. (2002). Minding the absent: Arguments for the Full Competence Hypothesis. *Language Acquisition* 10 (2), 123-175.

Borer, H and K. Wexler. (1987). The maturation of syntax. In T. Roeper and E. Williams (Eds.), *Parameter Setting*, Reidel, Dordrecht.

Bowey, J.A. (1996). *Orthographic Onsets as Functional Units of Adult Word Recognition*. *Journal of Psycholinguistic Research*, Vol. 25, No. 5.

Braningan, H.P., Pickering, M.J., Liversedge, S.P., Steward, A.J. and Urbach, T.P. (1995). Syntactic Priming: Investigating the Mental Representation of Language. *Journal of Psycholinguistic Research*.24:6.

Brown, R. (1973). *A first language: the early stages*. Cambridge, MA. Harvard University Press.

Brown, R. and C. Hanlon. (1970). Derivational complexity and Order Acquisition in Child Speech. In J. R. Hayes (Ed.) *Cognition and the Development of Language*. New York. John Wiley and Sons.

Bruhn de Garavito, J., and L. White. (2002). L2 acquisition of Spanish DPs: the status of grammatical features. In A.T. Pérez-Leroux and J. Liceras (Eds.) *The acquisition of Spanish morphosyntax: the L1/L2 connection* (pp. 151-76) Dordrecht: Kluwer.

Carnie, A., (2002) *Syntax A Generative Introduction* Blackwell Publishing. Malden, Mass.

Carnie, A and E. Guilfoyle (2000) (eds.) *The Syntax of Verb Initial Languages*. Oxford University Press. New York, New York.

Central Statistics Office. Press Statement. 2002 census of Population Volume 11 – Irish Language. Internet Article. Available: <http://www.cso.ie>

Chomsky, N. (1981). Principles and parameters in syntactic theory. In N. Horstein and D. Lightfoot (Eds.) *Explanation in linguistics: the logical problem of language acquisition* (pp32-75). London. Longman.

Chomsky, N. (1982). *Some concepts and consequences of the theory of government and binding*. Cambridge. MA. MIT Press.

Chomsky, N. (1993). A minimalist program for linguistic theory. In K. Hale and S. J. Keyser (Eds.) *The view from building 20: essays in linguistics in honor of Sylvain Bromberger* (pp.1-52). Cambridge, MA MIT press.

Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.

Christian Brothers (The). (1990). *New Irish Grammar*. Dublin. C. J. Fallon.

Clahsen, H. (1988). Parameterized grammatical theory and language acquisition: a study of the acquisition of verb placement and inflection by children and adults. In S. Flynn and W. O'Neil (eds.), *Linguistic theory in second language acquisition* (pp. 47-75). Dordrecht: Kluwer.

Clahsen, H. (1990). The Comparative study of first and second language development. *Studies in Second Language Acquisition*. 12 :135-53.

Clahsen, H. and P. Muysken. (1986). The availability of universal grammar to adult and child learners : A study of the acquisition of German word order. *Second Language Research* 2, 93-119.

Clahsen, H. and P. Muysken. (1989).The UG paradox in l2 acquisition. *Second Language Research* 5: 1-29.

Clahsen, H. and P. Muysken. (1996). 'How adult second language learning differs from Child first language learning. *Behavioral and Brain Sciences* 19(4): 721-3.

Clahsen, H., S. Eisenbeiss and M Penke. (1996). Lexical Learning in early Syntactic Development. In H. Clahsen (Ed.) *Generative Perspectives on Language Learning: Empirical Findings, Theoretical Considerations, Cross Linguistic Comparisons*. Amsterdam. John Benjamins.

Coppieters, R. (1987). Competence differences between native and fluent non-native speakers. *Language* 63: 544-73.

Cowan R. and Hatasa, Y. (1994). Investigating the validity and reliability of native speaker and second-language learner judgments about sentences. In E. Tarone, S. Gass, and A. Cohen (Eds.) *Research methodology in second-language acquisition* (pp. 287-302). Hillsdale, NJ. Lawrence Erlbaum Associates.

Curtiss, S. (1977). *Genie: A Psycholinguistic study of a modern-day "wild child"*. New York: Academic Press

Dermirdache, Hamida. (1991). Resumptive chains in restrictive relatives, appositives, and dislocation structures. Unpublished Doctoral Dissertation, Massachusetts Institute of Technology.

de Villiers, J. and P. de Villiers. (1974). Competence and performance in child language: are children really competent to judge? *Journal of Child Language*.1: 11-22.

Dorian, N. (1981). *Language Death*. Philadelphia. University of Pennsylvania Press.

Dorian, N. (1989). *Investigating Obsolescence*. Editor. Cambridge University Press: Cambridge, Mass.

Duffield, N. (1997). Configuring Mutation in Irish. *The Canadian Journal of Linguistics*. 42 (1-2): 75-110.

Dube, B., (2000). Where are the minimal trees? Evidence from early Zulu L2 subordination. *Second Language Research*, 16,3, pp. 233-265.

Duffield, N. (1997) 'Configuring mutation in Irish'. In *Canadian Journal of Linguistics* 42 (1-2): 75-109.

Dulay, H., and M. Burt. (1974). Natural sequences in child second language acquisition. *Language Learning*. 24: 37-53.

Ellis, R. (1994) *The Study of Second Language Acquisition*. Oxford: Oxford University Press.

Epstein, S., S. Flynn and G. Martohardjono (1996) Second language acquisition: theoretical and experimental issues in contemporary research. In *Brain and Behavioral Science* 19: 677-758.

Epstein, S., S. Flynn and G. Martohardjono. (1998). The strong continuity hypothesis in adult L2 acquisition of functional categories. In S. Flynn, G. Martohardjono, and W. O'Neil (Eds.) *The generative study of second language acquisition* (pp. 61-77). Mahwah, NJ. Lawrence Erlbaum Associates.

Erteschik-Shir, N. (1992). Resumptive pronoun islands. In H. Goodluck and M. Rochemont (Eds.) *Island Constraints*. (pp. 89-108). The Netherlands. Kluwer Academic Publishers.

Eubank, L. (1993/4). On the transfer of parametric values in L2 development. *Language Acquisition* 3: 183-208.

Eubank, L. (1994). Optionality and the initial state in L2 development. In T. Hoesktra and B.D.Schwartz (Eds.) *Language Acquisition Studies in Generative Grammar*. (pp. 369-388) Amsterdam/Philadelphia . John Benjamins.

Eubank, L. (1996). Negation in early German-English interlanguage: more valueless features in the L2 initial state. *Second Language Research* 12: 73-106.

- Fios Feasa Teo. (1999). The Social Context of the Irish Language. Internet Article. Available: <http://www.fiosfeasa.com/bearla/language/social.htm>.
- Flege, J.E., G.H. Yeni-Komshian, and S.Liu. (1999). Age constraints on second-language acquisition. *Journal of Memory and Language*. 41: 78-104.
- Flege, J.E., G. H. Yeni-Komshian and S. Liu. (1999). Age constraints on second-language acquisition. *Journal of Memory and Language*. 41: 78-104.
- Flynn, S. (1987). *A Parameter Setting Model of L2 Acquisition*. Dordrecht. Reidel.
- Fodor, J. (1999). 'Learnability theory, Triggers for parsing with' In E. Klein and G. Martohardjono (Eds.) *Development of Second Language Grammars*. pp.363-406.
- Garda College. Internet Site. <http://www.garda.ie/angarda/col/student.html>
- Gibson, E. and K. Wexler. (1994). Triggers. *Linguistic Inquiry* 25: 407 – 54.
- Goodluck, H. (1991). *Language Acquisition*. Oxford. UK Blackwell.
- Goodluck, H. and Tavakolian, S. (1982). Competence and processing in children's grammar of relative clauses. *Cognition*, 11: 1-27.
- Goodluck, H. and Stojanovic, D. (1996). The Structure and Acquisition of Relative Clauses in Servo-Croatian. *Language Acquisition*. 5(4): 285-315.
- Goodluck, H., E. Guilfoyle and S. Harrington. (2001). Acquiring subject and object relatives: evidence from Irish. *Journal of Celtic Language Learning*. 6: 21-3
- Goodluck, H., E. Guilfoyle and S. Harrington. (2005 in press). Merge and Binding in Child Relative Clauses: The case of Irish. *Journal of Linguistics*.
- Greenberg, J. H. (1959). A quantitative approach to the morphological typology of language. *International Journal of American Linguistics* 26: 178-94.
- Greenberg, J. H. (1963). Some universals of grammar with particular reference to the order of meaningful elements. In J. H. Greenberg (Ed.). *Universals of Language* (pp.73-113). Cambridge. MA. MIT press.
- Grenoble, L.A and L. J. Whaley. (Eds.) (1998). *Endangered Languages..* Cambridge University Press: Cambridge, Mass.
- Grimshaw, J. (1990). *Argument Structure*. Cambridge MA. MIT Press.
- Grondin, N. and L. White. (1996). Functional categories in child L2 acquisition of French. *Language Acquisition* 5: 1-34.

- Guasti, M. T. (2000). An excursion into interrogatives in early English and Italian. In M.-A. Friedemann and L. Rizzi (Eds.) *The Acquisition of Syntax*. Harlow, England. Longman.
- Guasti, M. T. (2002). *Language Acquisition The Growth of Grammar*. Cambridge, Mass. MIT Press.
- Guasti, M. T. and U. Shlonsky. (1995). The acquisition of French relative clauses reconsidered. *Language Acquisition*. 4: 257-276.
- Guilfoyle, E. (1997). The Verbal Noun in Irish Nonfinite Clauses. *Dán do Oide Essays in Memory of Conn. Ó Cléirigh*. A. Ahlqvist and V. Čapková (Eds.) (pp187-200). Dublin Institiúid Teangeolaíochta Éireann.
- Guilfoyle, E. (2000). Tense and N-features in Irish. In A. Carnie and E. Guilfoyle (Eds.) *The Syntax of Verb Initial Languages*. Oxford. Oxford University Press.
- Haegeman, L. (Ed.) (1997). *Elements of Grammar Handbook of Generative Syntax*. Kluwer Academic Publishers.
- Hale, K. (1998). On Endangered languages and the importance of linguistic diversity. In L.A. Grenoble and L.J. Whaley (Eds.) *Endangered Languages*. Cambridge University Press, Cambridge Mass pp. 192-233
- Hawkins, R. (1980). On implicational and distributional universals of word order. *Journal of Linguistics*. 16: 193-235.
- Hawkins, R. (2001). *Second Language Syntax A generative Introduction*. Malden, MA. Blackwell.
- Hawkins, R., and C. Chan. (1997). The partial availability of Universal Grammar in second language acquisition: the 'failed functional features hypothesis. *Second Language Research* 13: 187-226.
- Haznedar, B. (2001). The acquisition of the IP system in child L2 English. *Studies in Second Language Acquisition*. 23: 1-39.
- Haznedar, B. and B. D. Schwartz. (1997). Are there optional infinitives in child L2 acquisition? In E. Hughes, M. Hughes and A. Greenhill (Eds.) *Proceedings of the 21st Annual Boston University Conference on Language Development* (pp.257-68). Somerville, MA. Cascadilla Press.
- Hedgcock, J. (1993). Well-formed vs ill-formed strings in L2 metalingual tasks: specifying features of grammaticality judgments. *Second Language Research* 9:1-21.

Henry, A. and D. Tangney. (1999). Second Language Acquisition Of Irish. In *Language Creation and Language Change*, M.de Graff (Ed.). (pp. pp239-253) Cambridge Mass. MIT Press .

Hicks, Davyth A. (2004). Mixed Messages for Irish in New Census. Internet Article. <http://www.eurolang.net/news.asp?id=4499>

Hindley, R (1990). *The Death of the Irish Language*. Longman.

Holmberg, A. (2005). ELL130: The Nature of Language, Lecture 7: Language Variation. Web notes. <http://www.staff.ncl.ac.uk/hermann.moisl/ell130/lecture7full.htm>

Hytensam, K. (1984). the use of typological markedness conditions as predictors in second language acquisition: the case of pronominal copies in relative clauses. In: *Second Languages: A Cross- Linguistic Perspective*. R. Andersen (ed.) Rowley Mass.: Newbury House.

Johnson, J., and E. L. Newport. (1989). Critical period effects in second language learning: The status of subadjacency in the acquisition of a second language. *Cognitive Psychology* 21: 60-99.

Joseph, B., D. J. DeStefano, N.G. Jacobs and I. Lehiste. (2003). *When Languages Collide*. (Eds.) Columbus, Ohio. The Ohio State University Press.

Karimi, S. (2001). Persian Complex DPs: How mysterious are they? *Canadian Journal of Linguistics* 46 (1/2): 1-158.

Kayne, R. S.(1994). *The Antisymmetry of Syntax*, Cambridge, MA. MIT Press.

Keenan, E., and B. Comrie. (1977). Noun phrase accessibility and Universal Grammar. *Linguistic Inquiry*, 8: 63-99.

Klein, E. (1999). Just parsing through. In E. Klein and G. Martohardjono (Eds.) *Development of Second Language Grammars*. (pp197-216).

Klein, E. and G. Martohardjono (1999). Investigating Second Language Grammars. In Elaine Klein and Gita Martohardjono (Eds.) *Development of Second Language Grammars*.

Elaine Klein and Gita Martohardjono (Eds.) (1999). *The Development of Second Language Grammars*. Amsterdam/Philadelphia. John Benjamins Publishing Company.

Koopman, H. and D. Sportiche. (1991). The position of subjects. *Lingua*. 85: 211-58.

Labelle, M. (1990). Predication, WH-Movement, and the Development of Relative Clauses. In *Language Acquisition* 1(1): 95-119.

- Labelle, M. (1996). The Acquisition of Relative Clauses : Movement or No Movement? In *Language Acquisition* 5(2): 65-82.
- Lardière, D. (1998a). Case and tense in the “fossilized” steady state. *Second Language Research* 14: 1-26.
- Lardière, D. (1998b). Dissociating syntax from morphology in a divergent end-state grammar. *Second Language Research* 14: 359-75.
- Lenneberg, E. H. (1967). *Biological foundations of language*. New York: Wiley.
- Levelt, Haans and Meijers. (1977).
- Liceras, J. (1986). *Linguistic Theory and Second Language Acquisition*. Gunter Narr Verlag Tübingen. Tübingen.
- Liceras, J. (1999). In Elaine Klein and Gita Martohardjono (Eds.) *Development of Second Language Grammars*.
- Liceras, J., Valenzuela, E. and Díaz, L.,(1999). L1/L2 Spanish grammars and the pragmatic deficit hypothesis. *Second Language Research*, 15(2): 161-190.
- Lightfoot, D. (1999). *The Development of Language Acquisition, Change and Evolution*. Blackwell Publishers, Malden Mass.
- Mac Congail, Nollaig.(2002). *Leabhar Grammadai Gaeilge*. Clo Iar-Chonnachta, Indreabhan, Conamara.
- Maher, J. (1991). ‘A crosslinguistic study of language contact and language attrition’. In *First Language Attrition*. H.W. Seliger and R.M.Vago editors. Cambridge University Press: Cambridge, Mass.
- Marcus, G. H. (1993). Negative evidence in language acquisition. *Cognition* 46: 53-85.
- McCartney, R. A. Main causes for the decline of spoken Irish (according to Hindley). Internet Article. Available: http://homepage.ntlworld.com/r.a.mccartney/baile_nua/hindley.html
- McCloskey, J. (1985). The modern Irish double relative and syntactic binding. *Eriú* 36 : 45-84.
- McCloskey, J. (1990). Resumptive pronouns, \bar{A} -binding and levels of representation in Irish. *Syntax and Semantics of Modern Celtic Languages, Syntax and Semantics 23*, San Diego, California. Academic Press.

- McCloskey, J. (2000). Resumption, Successive Cyclicity and the Locality of Operations. Unpublished Manuscript. University of Santa Barbara.
- McCloskey, J. (2001). The morphosyntax of Wh-extraction in Irish. *Journal of Linguistics* 37, 67-100.
- Meisel, J. (1991). Principles of Universal Grammar and strategies of language learning: some similarities and differences between first and second languages acquisition. In L. Eubank (ed.), *Point counterpoint: Universal Grammar in the second language* (pp. 231-76). Amsterdam: John Benjamins.
- Meisel, J. (1997). The acquisition of the syntax of negation in French and German: contrasting first and second language acquisition. *Second Language Research* 13:227-63.
- Meisel, J., H. Clahsen, and M. Pienemann. (1981). On determining developmental stages in natural language acquisition. *Studies in Second Language Acquisition* 3: 109-35.
- Montrul, S. (1999) In Elaine Klein and Gita Martohardjono. (Eds.) *Development of Second Language Grammars*.
- Morgan, J.L., and L. Travis. (1989). Limits on negative information in language input. *Journal of Child Language* 16: 531-552.
- Murphy, V. (1997). The effect of modality on a grammaticality judgment task. *Second Language Research* 13 (1): 34-65.
- Murtagh, L. Retention and Attrition of Irish as a Second Language Summary. Internet Article. Available: <http://www.ite.ie/lmurtagh/RAILSLeng.htm>
- Myers-Scotton, C. (2002). *Contact Linguistics*: New York, New York. Oxford University Press.
- Newmeyer, F.J., (2003), *Grammar is Grammar and Usage is Usage*. *Language*, Vol. 79, No. 4.
- Ní Chiosáin. (1991). Topics in the Phonology of Irish. Unpublished doctoral thesis. Amherst MA.
- Noonan, M. (1997) Functional architecture and Wh-movement: Irish a case in point. In *Canadian Journal of Linguistics* 42 (1-2): 111-139.
- O'Brien, Carl (2003) 'State moves to halt Gaelteacht decline'. Internet Article. Available : <http://archives.tcm.ie/irishexaminer/2003/01/14/story786453294.asp>
- Ó Ruairc, M. (2000). *I dTreo Teanga Nua*. Fallon. Dublin.

- Ó Siadhail, M. (1988). *Learning Irish*. New Haven. CT. Yale University Press.
- Orr, R. (2002). Demythologising Celtic- Celtic as non-exotic compared with other linguistic systems. *Journal of Celtic Language Learning*. 7:5-44.
- “PageWise”, Inc. (2002). The Irish language - still a living language. Internet Article. Available: http://sd.essortment.com/irishgaeliclan_rfsz.htm
- Plann, S. (1980a). *Relative Clauses without Overt Antecedents and Related Constructions*. University of California Press.
- Plann, S. (1980b). The nonevidence for a Cross-relative from Spain. *Linguistic Inquiry*, XI, 607-613.
- Poeppel, D. and K. Wexler. (1993). *The Full Competence Hypothesis of Clause Structure in Early German*. *Language*, 69: 1.
- Prévost, P. and L. White. (2000a). Accounting for morphological variation in L2 acquisition: truncation or missing inflection? In M.-A. Friedmann and L. Rizzi (Eds.). *The Acquisition of Syntax* (pp. 202-35). London. Longman.
- Prévost, P. and White, L. (2000b). Missing Surface Inflection or Impairment in second language acquisition? Evidence from tense and agreement. In *Second Language Research* 16 (2): 103-33.
- Prévost, P. (1999). In Elaine Klein and Gita Martohardjono (Eds.) *Development of Second Language Grammars*.
- Pyatt, E. J. (1997). An integrated model of the syntax and phonology of Celtic mutation. Unpublished doctoral thesis. Harvard University.
- Ritchie, W. C. and T. K. Bhatia. (Eds.) (1999). *Handbook of Second Language Acquisition*. Academic Press. San Diego, California.
- Ritter, E. (1992). Cross-linguistic evidence for number phrase. *Canadian Journal of Linguistics*. 37:197-218.
- Rivero, M.-L. (1979). That-relatives and deletion in COMP in Spanish. In J.T. Jensen (Ed.) *Cahiers Linguistiques d'Ottawa. Proceedings of the 10th Annual Meeting of the North Eastern Linguistic Society*. IX. University of Ottawa.
- Rizzi, L. (1994). Early null subjects and root null subjects. In T. Hoekstra and B. D. Schwartz (Eds.) *Language Acquisition Studies in Generative Grammar* (pp. 151-76). Amsterdam: John Benjamins.

Roeper, T. and B. Rohrbacher. (1994). Null Subjects in Early Child English and the Theory of Economy of Projection. *University of Pennsylvania Working Papers in Linguistics* 2: 83-119.

Roeper, T. and B. Rohrbacher. (2000). True pro-drop in child English and the principle of economy of projection. In C. Hamann and S. Powers. (Eds.) *The Acquisition of Scrambling and Cliticization*. Dordrecht. Kluwer.

Rohrbacher, B. (1999). *Morphology-Driven Syntax*. Amsterdam/Philadelphia. John Benjamins Publishing.

Sadler, L. and A. Spencer. (2001). Syntax as an exponent of morphological features. *Yearbook of Morphology 2000*. G. Booij and J. van Marle (Eds.) (pp71-96). Kluwer Academic Publishers.

Schachter, J. (1974). An error in analysis. *Language Learning*. 24(2): 205-214.

Schachter, J. (1989) Testing a proposed universal. In S. Gass and J. Schachter (Eds.) *Linguistic Perspectives on Second Language Acquisition*. Cambridge: Cambridge University Press.

Schütze, C. T. (1997). INFL in child and adult language: Agreement, case and licensing. Unpublished doctoral dissertation. MIT.

Schwartz, B. and R. Sprouse. (1994). Word order and nominative case in nonnative language acquisition: a longitudinal study of (L1 Turkish) German interlanguage. In T. Hoekstra and B. D. Schwartz (Eds.) *Language Acquisition Studies in Generative Grammar*. (pp.317-68). Amsterdam. John Benjamins.

Schwartz, B. and R. Sprouse. (1996). L2 cognitive states and the Full Transfer/Full Access model. *Second Language Research* 12: 40-72.

Scott, S. (2000). If We Drill Them, Will They Learn Them? *Proceedings of the 6th annual conference of the North American Association of Celtic Language Teachers*. University of Limerick. Foras na Gaeile 133-139.

Scott, S. (2001). About clitics: A prosodic account for word-initial mutations in Irish. Unpublished manuscript. University of Ottawa.

Scott, S. (2002). A Case for Clitic Group. Unpublished manuscript. University of Ottawa.

Scott, S. (2003a). The L2 Acquisition of Irish relative Clauses. *Proceeding of GASLA 6*. Cascadilla Press.

Scott, S. (2003b). The L2 Syntax and Morphology of Irish relative Clauses. Presented at the Canadian Linguistics Association Conference in Halifax, N.S.

Seliger, H., and R. M. Vago (Eds.). (1991) *First Language Attrition*. Cambridge University Press. Cambridge, Mass.

Shlonsky, U. (1992). Resumptive pronouns as a last resort. *Linguistic Inquiry* 23:3 443-468.

Sorace, A. (1993). Incomplete vs divergent representations of unaccusativity in non-native grammars of Italian. *Second Language Research* 9: 22-47.

Sorace, A. (1996) Use of Acceptability Judgments. In W.C. Ritchie and T. K. Bhatia (Eds.) *Handbook of Second Language Acquisition*. San Diego, California. Academic Press.

Sprouse, R. (1998). Some notes on the relationship between inflectional morphology and parameter setting in first and second language acquisition. In M.-L. Becky (ed.), *Morphology and I interfaces in second language knowledge* (pp. 41-67). Amsterdam: John Benjamins.

Stump, G.T. (2001). *Inflectional Morphology. A Paradigm Structure Approach*. Cambridge: Cambridge University Press.

Suñer, M. (1998). Resumptive restrictive relatives: A crosslinguistic perspective. In *Language* 74:2, 335-364.

Learning Irish. http://www.clubsult.com/english/language/learning_Irish.htm

Tarallo, F. and Myhill, J. (1983). 'Interference and natural language processing in second language acquisition'. *Language Learning* 33: 55-76.

Tarone, E., Grass, S. and Cohen, A., (Eds.) (1994). *Research Methodology in Second-Language Acquisition*. Hillsdale, NJ. Lawrence Erlbaum Associates.

Thráinsson, H. (1996). On the (non-) universality of functional categories. In W. Abraham, S. Epstein, H. Thráinsson and J.-W. Zwart (Eds.) *Minimal ideas: syntactic studies in the minimalist framework*. (pp. 253-81). Mahwah, NJ. Lawrence Erlbaum.

Trask, R. L. (1996). *A Dictionary of Phonetics and Phonology*. New York, New York. Routledge.

Travis, L. (1991). Inner Aspect and Structure of VP. Presented at NELS 22.

Tsimpli, I.-M. and A. Roussou. (1991). Parameter resetting in L2? *UCL Working Papers In Linguistics*. vol. 3, 149-169.

Uriagereka, J. (1998). *Rhyme and Reason. An Introduction to Minimalist Syntax*. MIT Press. Cambridge Mass.

- Vainikka, A. and M. Young-Scholten. (1994). Direct Access to X'-Theory. Evidence from Korean and Turkish Adults Learning German. In T. Hoekstra and B. Schwartz (Eds.) *Language acquisition studies in generative grammar*, (pp 265-316). Amsterdam. Benjamins.
- Vainikka, A. and M. Young-Scholten. (1996a). The early stages of adult L2 syntax: additional evidence from Romance speakers. *Second Language Research* 12: 140-76.
- Vainikka, A. and M. Young-Scholten. (1996b). Gradual development of L2 phrase structure. *Second language Research* 12: 7-39.
- Wexler, K. (1991). "Some issues in the growth of control," Occasional Paper 44, Department of Brain and Cognitive Science, M.I.T., Cambridge, Massachusetts.
- Wexler, K. (1994). Optional infinitives, head movement and the economy of derivations. In D. Lightfoot and N. Hornstein (Eds.) *Verb movement* (pp. 305-350) Cambridge: Cambridge University Press.
- White, L. (1985). The pro-drop parameter in adult second language acquisition. *Language Learning* 35: 47-62.
- White, L. (1989). *Universal Grammar and Second Language Acquisition*. Amsterdam/Philadelphia . John Benjamins Publishing..
- White, L. (1992a). Long and short verb movement in second language acquisition. *Canadian Journal of Linguistics* 37: 273-86.
- White, L. (1992b). Subjacency Violations and Empty Categories in Second Language Acquisition. In H. Goodluck and M. Rochemont (Eds.) *Island Constraints*. (pp. 445-64) Dordrecht. Kluwer.
- White, L. (2003). *Second Language Acquisition and Universal Grammar*. Cambridge Textbooks in Linguistics. Cambridge, MA. Cambridge University Press.
- White, L. and F. Genesee. (1996). How native is near native? The issue of ultimate attainment in adult second language acquisition. *Second Language Research* 11: 233-65.
- White, L., E. Valenzuela, M. Macgregor, Y.-K. I. Leung and H. Ben-Ayed. (2001). The status of abstract features in interlanguage grammars: gender and number in L2 Spanish. In A. H.-J. Do, L Domínguez and A. Johnson (Eds.) *Proceedings of the 25th Annual Boston University Conference on Language Development* (pp. 792-802) Somerville, MA. Cascadilla Press.
- Zobl, H. and J. Liceras. (1994). Functional categories and acquisition orders. *Language Learning* 44(1):159-180.

Zobl, H and J, Licerias (2005). Accounting for Optionality in Nonnative Grammars: Parametric Change in Diachrony and L2 Development as Instances of Internalized Diglossia. *Proceedings of the 7th Generative Approaches to Second Language Acquisition Conference (GASLA 2004)*, MA. Cascadilla Press.