

Second Language Acquisition of Relative Clauses in Irish*

Sheila Scott
University of Ottawa

First language acquisition research on the Irish relative clauses has been conducted by Goodluck, Guilfoyle and Harrington (2002). This paper concerns itself with the acquisition of relative clauses by adults L2 learners of Irish.

1. Structure of Irish Relative Clauses

McCloskey (1990 & 2000) argues that there are two patterns that form the basis of relative clause constructions in Irish, one containing a gap in the relativized site and the other a resumptive pronoun in this position. The verb which follows the complementizer is phonologically marked either by lenition or by nasalization. McCloskey (1985, 1990, 2000) has adopted the abbreviations **aL** (lenition) for the ‘a’ particle which introduces relative clauses containing the gap and **aN** (nasalization) for the particle which introduces a relative clause containing resumptive pronoun.

McCloskey argues that all constructions containing a gap are formed by A'-movement, and assumes that what has been moved is a null operator. McCloskey (2000) further argues that both the EPP and MOVE are present in the SPEC, CP resulting in the pattern in (1) (McCloskey 2000:13).

- (1) [CP [aL [TP t ...]] C: EPP and Wh-movement (MOVE)

The second pattern does not involve movement from the position of *pro*. McCloskey (2000) claims that this structure is formed through binding where the C bears only the EPP feature and the SPEC, CP will be filled with MERGE. The result is the pattern in (2) (McCloskey 2000:13).

- (2) [CP [aN [TP *pro* ...]] C: EPP (MERGE)¹

1.1 Subject Relatives

There is only one choice of pattern for subject relative clauses, the one containing the gap. The option of the pattern in (2) is ruled out on McCloskey's analysis due to a Principle B effect.

- (3) a. [IP Sin an buachaill_i [CP **a** [IP **bhuaigheann** ______i an chupa.]]]
This is the boy aL wins the cup
“This is the boy that wins the cup.”
- b. *[IP Sin an buachaill_i [CP **a** [IP **bhuaigheann sé**_i an chupa]]]
This is the boy aL wins he the cup
“*This is the boy that he wins the cup.”
- c. *[IP Sin an buachaill_i [CP **a** [IP **mbuaigheann** an chupa **é**]]]
This is the boy aN wins the cup him
“*This is the boy_i that wins the cup him_i.”

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¹ Patterns containing long distance dependencies and a variety of mixed chains are possible in Irish and are also accounted for in McCloskey's (2000) analysis. This is a preliminary report on an ongoing larger study, not all of the conditions of which are reported here.

1.2 Object Relatives

There are two distinct structures for finite object relative clauses in Irish: one which contains a gap, (4a) i.e. pattern (1) and another which contains the resumptive pronoun, (4b) i.e. pattern (2).

- (4) a. [_{IP} Sin an chupa_i] [_{CP} a [_{IP} bhuaigheann an buachaill _____i].
This is the cup aL wins the boy ____
 “This is the cup that the boy wins.”
- b. [_{IP} Sin an chupa_i] [_{CP} a [_{IP} mbuaigheann an buachaill *i*_i].
This is the cup aN wins the boy it (fem.)
 “This is the cup that the boy wins.”

The literature reports that the gap structure is more common than the structure containing a resumptive pronoun (McCloskey 1985, 1990, 2000). This preference was also found virtually to the exclusion of the use of object relatives containing resumptive pronouns in production tasks with adult native speakers (Goodluck, Guilfoyle and Harrington 2002).

The availability of two structures to form the object relatives affords the possibility to resolve ambiguities in situations where the semantics of the verb would allow two interpretations because the direct object structure containing the gap could be interpreted as being the subject relative structure.

- (5) [_{IP} Sin an buachaill_i] [_{CP} a [_{IP} phógann (_____i) an cailín (_____i)]]
This is the boy aL kisses ____ the girl ____

Sentence (5) could be interpreted to be either ‘the boy that kisses the girl’ (subject relative) or ‘the boy that the girl kisses’ (object relative with gap). The NP in the clause is not overtly marked for case and neither is the gap. The source of the ambiguity lies in the location of the gap. Does the gap represent the subject NP or the object NP? Do we have a subject relative sentence or an object relative with the structure in (1)?

- (6) [_{IP} Sin an buachaill [_{CP} a [_{IP} bpógann an cailín é]]
This is the boy aN kisses the girl him.
 “This is the boy that the girl kisses.”

Sentence (6) can only be interpreted to mean that it is the boy that the girl kisses. The insertion of the resumptive pronoun in the accusative case in (6), signals that the NP in the clause is the subject of the verb ‘póg’ *kiss*.

2. Research Questions

In addition to the difference in the structures i.e. use of gap or resumptive pronoun, the listener has an oral cue in the form of the mutation on the verb: aL introduces direct clauses and aN introduces indirect clauses. The distinct mutation on the verb occurs early in the clause and provides the only clue to the listener as to the presence of a gap or a resumptive pronoun in the relativized site. The test reported here addresses the following questions.

1. Will the learner be sensitive to the relationship between mutations on the verb and the clause final element (gap or resumptive pronoun) in (7)?
2. Will we see a preference for constructions containing a gap as we have seen in L1 speakers?

3. The Study

Aural and written grammaticality judgment tests were used, in which subjects judged the grammaticality of sentences containing correct and incorrect combinations of mutations and gaps and

resumptive pronouns. All sentences were in the present tense. Six items of each correct structure and 6 items of the incorrect structures were given to the subjects. Filler items provided a baseline measure of skill at judgment with respect to word order violations. There was a total of 90 sentences in each test.

3.1 Filler Items

TABLE 1

Filler Sentences	
VSO	*SVO
Non-finite clause NP+ aL	Non-finite clause *aL + NP
	Non-finite clause * NP+ aN

Filler items were used to determine to what extent the subjects had acquired two specific word order patterns: simple sentences and non-finite clauses. Simple sentences in Irish follow the VSO pattern; sentences containing this pattern and the ungrammatical SVO patterns were included (7a, b). There were two specific features about the non-finite patterns which made them interesting filler items: a word order pattern distinct from the L1 and the presence of aL mutations. The word order pattern for non-finite clauses is distinct from English because the object NP is preposed to the front of the verb. In addition to testing the extent to which the learners had acquired this word order pattern, we also included sentences with the aN mutation to test the subjects' ability to distinguish between the mutations. (7c, d, e).

- (7) a. Ceannaíonn mamaí bainne sa siopa. (VSO)
Buys Mom milk at the shop.
- b. *Na buachaillí imríonn peil. (Word order violation *SVO)
The boys play soccer.
- c. Is feidir liom an rothar **a dheisiú**. (NP + aL)
Is able to-me the bicycle to fix
- d. *Is feidir liom **a dheisiú** an rothar. (Word order violation; *aL + NP)
Is able to-me to fix the bicycle
- e. *Is feidir liom an rothar **a ndeisiú**. (Incorrect mutation; *NP+ aN)
Is able to-me the bicycle to fix

3.2 Subject and Object Relative Clauses

TABLE 2

Relative Clause Constructions			
Subject	aL + gap	Subject	*aN + gap
Object	aL + gap	Object	*aL + pro
Object	aN + pro	Object	*aN + gap

The experimental sentences included subject gap relatives with both types of mutation patterns (8) along with the aL and aN relative clauses with correct and incorrect mutations and gap/pro combinations. (9)

- (8) a. Sin an páiste **a phiocann** ____ na bláthanna. (aL + gap)
This is the child aL picks ____ the flowers
 This is the child that picks the flowers.

- b. *Sin an bhean **a bpáirceálann** _____ an leoraí. (*aN + gap)
This is the woman aN parks _____ the truck.
 This is the woman that parks the truck.
- (9) a. Sin an fear **a gcreideann** Seán í gcónaí **é**. (aN + pro)
This is the man aN believes Sean always him.
 “This is the man that Sean always believes.”
- b. *Sin an fear **a gcreideann** Seán í gcónaí _____. (*aN + gap)
This is the man aN believes Sean always _____.
 “This is the man that Sean always believes.”
- c. Sin an fear **a chreideann** Seán í gcónaí _____. (aL + gap)
This is the man aL believes Sean always _____.
 “This is the man that Sean always believes.”
- d. *Sin an fear **a chreideann** Seán í gcónaí **é**. (*aL + pro)
This is the man aL believes Sean always him.
 “This is the man that Sean always believes.”

3.3 Questionnaires and Procedures

A group of 11 adult high-intermediate to advanced level L2 learners of Irish in Canada and the U.S. were tested. The test was also administered to 6 native speakers of the language who are recent immigrants to North America and have continued using the language.²

Subjects were given a cloze test to determine basic knowledge of Irish sentence structure and mutation patterns. The test was clearly able to distinguish the fluent speakers from the L2 learners. Fluent speakers were perfect and learners hovered around the mid-point. Their mean cloze scores are given in Table 3.

TABLE 3

Mean Scores: Cloze Test (results out of a maximum of 25)		
L2 learners born in Ireland	L2 learners born in N-Am.	Native Speakers
17	12	23

An independent t-test revealed that there was no significant difference between the two learner groups with respect to cloze scores. These two groups were combined for all subsequent analysis.

After completing the Cloze test, the subjects were then asked to judge the acceptability of the 90 sentences presented to them orally (recorded by a local teacher of Irish). The subjects then read the same 90 sentences and indicated in writing whether the sentences were acceptable or unacceptable and indicated how they would correct the sentence, if possible. The testing period lasted approximately 1 hour.

4. Results

4.1 Listening Test Results

4.1.1 Filler Sentences

The results for the filler sentences are presented in Table 4. Subjects were clearly sensitive to the basic sentence word order constraints in Irish. An ANOVA comparing the rate of acceptability for the

² While 6 native speakers wrote the test, results are provided for only 5 of the 6. One of the speakers disliked the “Seo an fear ...” (*This-is the man*), used in the main clause of many of the sentences used. He consequently marked all these sentences “unacceptable”. This speaker preferred the other equally acceptable form “Seo é an fear... *This-is him the man*. There is wide dialectal variability in the preference of both of these structures.

grammatical vs ungrammatical simple sentences is highly significant ($F(1,14)=1000.38, p<.001$). There was no significant effect of group (L2 vs native speaker) and no significant group x condition interaction. We can say that this word order has been acquired.

With respect to the non-finite sentences, the figures in Table 4 show that both L2 and native speakers accept the grammatical NP + aL sentences. Both groups over-accepted the ungrammatical NP + aN sentences to a high degree. Both were more successful at rejecting the ungrammatical aL + NP, although the error rate for the learners for this sentence type remains high. There was a significant main effect of condition ($F(2,28)=30.916, p<.001$) and a main effect of group ($F(2,28)=5.709, p=.032$). A pairwise comparison of NP + aL vs NP + aN showed a main effect of condition ($F(1,14)=11.389, p=.005$) and no effect of group or group x condition interaction. A pairwise comparison of NP + aL vs aL + NP showed a main effect of condition ($F(1,14)=53.433, p<.001$), a significant main effect of group ($F(1,14)=5.691, p=.032$) and a near significant group x condition interaction ($F(1,14)=4.106, p=.062$).

TABLE 4

Filler Sentences: Rates of Acceptability (Listening Test)

	L2		L1	
	Mean	%	Mean	%
<i>VSO</i>	5.2 ± 0.6	86	6.0 ± 0.0	100
* <i>SVO</i>	1.5 ± 1.5	26	.75 ± 1.0	13
<i>NP + aL</i>	5.3 ± 0.6	88	5.4 ± 0.9	90
* <i>NP + aN</i>	4.3 ± 1.4	71	3.4 ± 1.1	57
* <i>aL + NP</i>	2.5 ± 1.7	42	0.6 ± 0.9	10

4.1.2 Subject Relatives

The results for subject relatives are given in Table 5. The aL structure was correctly identified more often as being correct. The aN structure was very often incorrectly mistaken as being correct. Sensitivity to the mutation is thus weak. An ANOVA showed no significant difference in the rate of acceptability of aL + gap vs aN + gap ($F(1,14) = 3.180, p=.096$). There was also no effect of group, but there was a significant effect of group x condition interaction ($F(1,14) = 7.794, p=.014$), reflecting the fact that the native speakers showed a trend in the direction of correctly rejecting the aN + gap sentences, whereas the learners showed a trend in the opposite direction.

TABLE 5

Subject Relatives (Listening test)

	L2		L1	
	Mean	%	Mean	%
<i>aL + gap</i>	4.0 ± 1.2	67	5.2 ± 0.8	87
<i>aN + gap</i>	4.4 ± 1.5	73	3.6 ± 1.5	60

4.1.3 Object Relatives

The results for object relatives are given in Table 6. A clear preference for gap constructions was observed, even in the ungrammatical construction containing the mutation for indirect clauses but a gap in the relativized position. The difference between aL + gap and aL + pro was highly significant ($F(1,14) = 52.869, p<.001$). There was no significant main effect of group, but the group x condition interaction was significant ($F(1,14) = 6.502, p=.023$), reflecting the fact that the native speakers were somewhat more adept at accepting the grammatical constructions and at rejecting the ungrammatical one. The comparison between aN + pro and aN + gap also produced a significant main effect of condition ($F(1,14) = 31.032, p<.001$) and a significant condition x group interaction ($F(1,14)= 5.390, p=.036$). In this case however, the significant main effect derives from a massive

preference to over-accept the ungrammatical *aN + gap*, a pattern that is even more pronounced for the native speakers than for the learners.

TABLE 6

Object Relatives (Listening test)				
	L2		L1	
	Mean	%	Mean	%
<i>aL + gap</i>	4.2 ± 1.8	70	5.0 ± 0.8	83
<i>*aL + pro</i>	2.8 ± 2.1	47	0.5 ± 0.6	8
<i>aN + pro</i>	2.4 ± 1.5	39	1.0 ± 1.4	17
<i>*aN + gap</i>	4.1 ± 1.9	68	4.8 ± 1.0	79

4.2 Written Test Results³

4.2.1 Filler Sentences

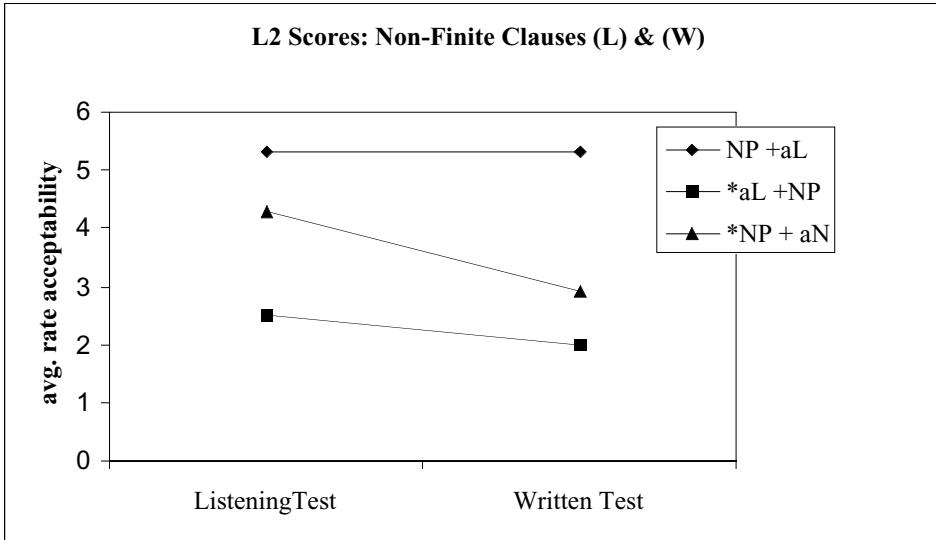
The results for filler sentences are given in Table 7. The results confirm that the learners have acquired the VSO word order pattern as well as the NP + aL construction for non-finite clauses. The same comparisons as for the aural test were performed and they produced main effects of condition for the word order pairs at the same level of significance as for the listening test. Both groups continued to accept the **NP + aN* to a high degree. A comparison of the three non-finite conditions produced an interaction effect of group x condition ($F(1,11)=3.907$ $p = .035$), indicating that L1 speakers were more successful in accepting the grammatical NP + aL form and rejecting the ungrammatical forms. A pairwise comparison of NP + aL and NP + aN was performed and it produced a main effect of condition at almost the same level of significance as for the listening test ($F(1,11) = 10.628$ $p = .008$). A pairwise comparison of the NP + aL and **aL + NP* was also performed and it produced a main effect of condition at the same level of significance as for the listening test ($F(1,11) = 52.194$ $p = .000$).

TABLE 7

Filler Sentences (Written test)				
	L2		L1	
	Mean.	%	Mean	%
<i>VSO</i>	5.0 ± 1.4	84	5.8 ± 0.4	97
<i>*SVO</i>	1.0 ± 1.2	17	0.4 ± 0.8	7
<i>NP + aL</i>	5.3 ± 0.7	91	5.4 ± 0.9	90
<i>*NP + aN</i>	2.9 ± 2.5	50	3.2 ± 1.8	53
<i>*aL + NP</i>	2.0 ± 2.3	35	0.0 ± 0.4	3

³ Unfortunately, 4 of the initial 11 L2 subjects opted not to complete this portion of the test.

FIGURE 1



5.2.2 Subject Relative Clauses

The results for subject relative clauses in the written test are given in Table 8. The results continue to show similar patterns as for the listening tests. The same comparison was performed as for the listening test and produced a main effect of condition (F (1,11) p = .023) and a marginal effect of group x condition (F (1,11) = 3.550, p = .086). This time however the L2 aren't showing a trend in the wrong direction.

TABLE 8

	Subject Relatives (Written test)			
	L2		L1	
	Mean	%	Mean	%
<i>aL + gap</i>	4.1 ± 2.1	72	5.6 ± 0.8	93
<i>*aN + gap</i>	3.6 ± 2.1	63	2.6 ± 1.8	43

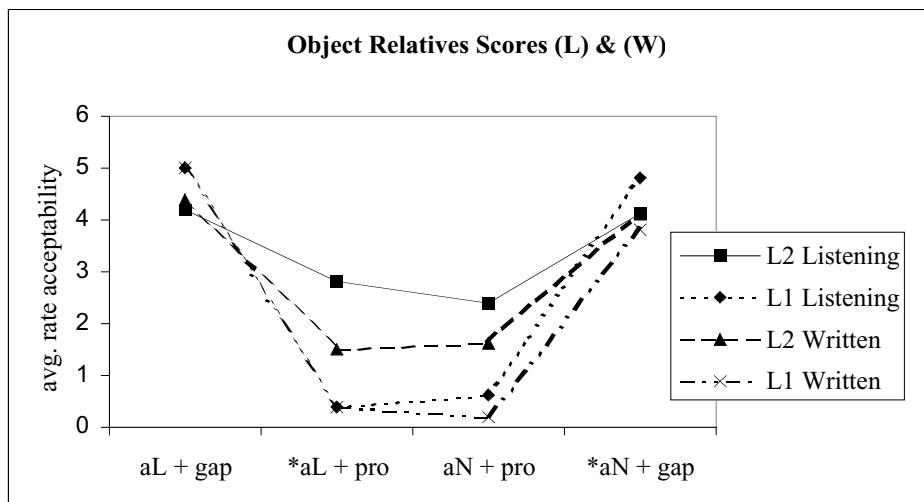
4.2.3 Object Relatives

The results for object relative clauses in the written test are given in Table 9. The results show a similar pattern as for the listening test. The same comparisons were performed as for the listening test and produced main effects of condition at the same level of significance as for the listening test (F (1,11) = 95.451, p < .001). A group x condition interaction was also found for the aL + gap vs *aL + pro pair (F (1,11) = 5.083, p = .046), but not for the aN + pro vs the aN + gap pairs. Figure 2 illustrates the similarity between the scores for the listening and written tests.

TABLE 9

	Object Relatives (Written test)			
	L2		L1	
	Mean.	%	Mean	%
<i>aL + gap</i>	4.4 ± 1.8	76	5.0 ± 1.0	83
<i>*aL + pro</i>	1.5 ± 1.7	26	0.4 ± 0.5	7
<i>aN + pro</i>	2.1 ± 2.2	37	0.2 ± 0.4	3
<i>*aN + gap</i>	4.1 ± 2.1	72	3.8 ± 2.6	63

FIGURE 2



5. Conclusions

There are three main conclusions that can be drawn from this study. The first is that the basic Irish word order patterns of VSO and NP + aL for non-finite clauses have been acquired by the learners.

The second conclusion is that sensitivity to mutation patterns in relative clauses is low, not merely for L2 learners, but for native speakers also. With respect to the subjects' ability to distinguish between mutations in both the listening and the written test, L2 learners performed poorly on both tests while L1 speakers performed slightly better than the L2 learners on the listening tests and considerably better on the written test. This may be due to two factors. First of all, L1 speakers have had more exposure to the mutations in aural and written contexts and are consequently more sensitive to the differences between the aL and aN mutations. Secondly, the similarity in scores for the listening and written scores of the learners in the sentences containing subject relative clause, or the non-finite clause (listening especially), would suggest that the lack of additional structural markers for these types of clauses made it more difficult for the learners to distinguish between these sentence pairs. The other sentence pairs contained either a change in word order or the presence of a pronoun. These I believe acted as additional information on which the learners based their ability to accept or reject the sentences. I hypothesize that the improvement in the learners' scores for the non-finite pairs in the written tests is based on a greater familiarity with this structure than the subject relative clause structures in their overall exposure to and use of the language.

The third conclusion is that learners and native speakers show an overwhelming preference for gap constructions in object relative clauses. It would be tempting to suggest that an absence of pro in the L1 is causing learners to disfavor it in the L2, but we have seen that there is evidence that L1 speakers of Irish clearly disfavor the structure containing the pro. This leads me to conclude that the distinction is based on the structure itself and not the presence or absence of the structure in the L1 of the learner. This is also supported by the fact that orthographic cues indicating the distinct mutations did not play a role in the written test with respect to ability to distinguish between aL + gap and aN + gap structures. Sensitivity to McCloskey's proposed correspondence between form of mutation and presence or absence of gap vs pro in the relativized site is weak. It would be interesting to test L1 speakers of languages which favor resumptive pronoun constructions in order to examine whether the preference for gap constructions in their L2 Irish prevails or not.

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