CLAUSAL ARGUMENTS IN IRISH

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This paper investigates various phenomena related to clausal arguments in Irish, and based on the findings, we claim (i) that Irish grammar should contain a language-particular condition on A’-resumption chains, (ii) that the subject position is not a properly governed position in Irish, (iii) that human language allows a bare IP to function as a subject, and (iv) that the chain pattern (aL, that, RP) turns out to be real in movement constructions with one embedded clause in Irish.

Keywords: chain, clausal argument, extraction, Irish, subject

1. Introduction

This paper investigates various phenomena related to clausal arguments in modern Ulster Irish (abbreviated as Irish, hereafter, only for space reasons), and points out (i) that a bare IP can be a subject, and clefted, (ii) that extraction out of a sentential object (complement) is permissible, but extraction out of a sentential subject is not, (iii) that the resumption strategy cannot save a resumptive pronoun in certain configurations headed by the COMP go/gur ‘that,’ and (iv) that the chain pattern (aL, that, RP)

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turns out to be well-formed in examples with extraction from a sentential subject. Based on these findings, we claim (i) that Irish grammar should contain a condition such as the Condition on A’-Resumption Chains which states that the base-generated operator in the SPEC of the COMP $aN$ which constitutes the head of the chain, cannot bind its corresponding resumptive pronoun when there is a COMP $go/gur$ ‘that’ whose maximal projection is not complement to a verb in the structure that c-commands the resumptive pronoun, (ii) that the subject position is not a properly governed position in Irish, providing further support for Maki and Ó Baoill’s (2011) claim, (iii) that human language allows a bare IP to function as a subject, and there seems to be a COMP-Predicate (verb+INFL) agreement in human language, and (iv) that the chain pattern (aL, that, RP), which has not been reported in the literature except Maki and Ó Baoill (2011), turns out to be real in movement constructions with one embedded clause in Irish.

The organization of this paper is as follows. Section 2 reviews the properties of the wh-interrogative construction in Irish as the background to the subsequent sections. Section 3 provides relevant examples with clausal arguments in Irish. Based on the properties of clausal arguments in Irish, Section 4 discusses what they might suggest for the theory of (Irish) syntax. Finally, Section 5 concludes this paper.

2. Background

Let us start by briefly summarizing the properties of the wh-interrogative construction in Irish. See McCloskey (1979, 1990) and Maki and Ó Baoill (2011), among others, for discussion of operator constructions in Irish. Irish has three types of complementizers: the [−Q] marker, the direct relative marker, and the indirect relative marker. The properties of the three COMPs are summarized in (1).

|       | types of COMPs          | non-past form | past form | symbol |
|-------|-------------------------|---------------|-----------|--------|
| a.    | the [−Q] marker         | $go$          | $go/gur$  | that   |
| b.    | the direct relative marker | $a$            | $a$       | aL     |
| c.    | the indirect relative marker | $a$          | $a/ar$    | $aN$   |

Let us illustrate the properties of the COMPs by relevant examples. (2) is a declarative sentence, and the embedded clause is headed by the [−Q] COMP $gur$ ‘that.’ On the other hand, when the sentence involves wh-in-
terrogative clause formation, as in (3), the embedded COMP must change to the direct relative marker aL, and at the same time, another COMP aL must be inserted right after the wh-phrase.1

(2) Creideann Seán gur cheannaigh Máire an carr.
believe John that bought Mary the car
‘John believes that Mary bought the car.’

(3) Cad é a chreideann tú a cheannaigh Seán t?
what aL believe you aL bought John
‘What do you believe that John bought?’ (movement) (aL, aL, t)

There is another way to form a wh-interrogative clause in Irish. Observe the example in (4).

(4) Cad é a gcreideann tú gur cheannaigh Seán é/*t?
what aN believe you that bought John it
‘What do you believe that John bought?’
(resumption) (aN, that, RP)

In (4), the topmost COMP of the wh-interrogative clause is an indirect relative marker aN, the COMP of the embedded clause is a [−Q] COMP, and the embedded clause contains a resumptive pronoun (RP) é ‘it’ instead of a gap. Note that (4) becomes ungrammatical, if the resumptive pronoun is replaced by a trace, which suggests that aN must bind a resumptive pronoun.

McCloskey (2002) provides an account of the distribution of the COMPs by proposing (5).

(5) 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/gur.

McCloskey assumes that the SPEC of aL contains a null operator/null pronoun (henceforth, null operator) as a result of movement, that in the SPEC of aN, there is a base-generated operator, and that in the SPEC of go/gur, there is no operator. In this paper, for expository purposes only, we represent the structure of a wh-interrogative clause by putting a wh-phrase, not its operator, in the SPEC of aL/aN, as shown in (6).

(6) [WH₁ aL/aN [IP…t₁/RP₁…]]

1 The abbreviations used in this paper are as follows: 1 = first person, 2 = second person, Cond = conditional, Cop = copula, Neg = negation, Past = past tense, Pres = present tense, Prog = progressive, RP = resumptive pronoun, and Sg = singular.
Data

Let us observe the phenomena related to clausal arguments in Irish. First, IP can be a subject. In Irish, some verbs take both finite and infinitival complement clauses, as shown in (7) and (8).

(7) Is cuimhin le Liam [gur cheannaigh Seán carr].

Cop.Pres memory with Bill that bought John car

‘Bill remembers that John bought a car.’

(8) Is cuimhin le Liam [Seán carr a cheannach].

Cop.Pres memory with Bill John car to buy

‘Bill remembers that John bought a car.’

In (7) and (8), the finite and infinitival complement clauses are in the object position. The examples in (9) and (10) show that finite and infinitival clauses may appear in the subject position as well.

(9) Chuir [go gceannódh Seán carr] iontas ar Mháire.

put that would.buy John car surprise on Mary

‘That John would buy a car surprised Mary.’

(10) Chuir [Seán carr a cheannach] iontas ar Mháire.

put John car to buy surprise on Mary

‘That John bought a car surprised Mary.’

Second, IP and CP can be clefted in Irish, as shown in (11)–(14). (11) and (12) show that infinitival subject IPs may be clefted, and (13) and (14) show that subject CPs may be clefted.

(11) Is é [Seán carr a cheannach] a chuir t₁ iontas

Cop.Pres it John car to buy aL put surprise

ar Mháire.

‘*It is [that John bought a car] that surprised Mary.’

(12) Is é [Seán carr a cheannach] a chreideann Liam

Cop.Pres it John car to buy aL believe Bill

aL put surprise on Mary

‘*It is [that John bought a car] that Bill believes that surprised Mary.’

(13) Is é [gur cheannaigh Seán carr] a chuir t₁ iontas

Cop.Pres it that bought John car aL put surprise

ar Mháire.

‘*It is [that John bought a car] that surprised Mary.’
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(14) Is é [gur cheannaigh Seán carr] a chreideann Liam Cop.Pres it that bought John car aL believe Bill a chuir t₁ iontas ar Mháire.
*It is [that John bought a car] that Bill believes that surprised Mary.’

Note here that IP/CP clefting is impossible in English, as the translations of the examples in (11)–(14) show.

Third, (15)–(23) clearly indicate a subject/object asymmetry in wh-movement in Irish. (15) and (16) involve extraction out of a complement clause, and the examples are grammatical.

(15) Cad é₁ atá súil ag Liam [a cheannódh Seán t₁]?
what aL+is hope at Bill aL would.buy John
‘What does Bill hope that John would buy?’

(16) Cad é₁ atá súil ag Liam [Seán t₁ a cheannach]?
what aL+is hope at Bill John to buy
‘What does Bill hope that John would buy?’

On the other hand, (17)–(23) involve extraction out of a clause in the subject position, and the examples are all ungrammatical.

(17) *Cad é₁ a chuir [Seán t₁ a cheannach] iontas ar Mháire?
what aL put John to buy surprise on Mary
‘What did [that John bought t₁] surprise Mary?’

(18) *Cad é₁ a chuir [go gceannódh Seán t₁] iontas ar Mháire?
what aL put that would.buy John surprise on Mary
‘What did [that John would buy t₁] surprise Mary?’

(19) *Cad é₁ a chuir [a cheannódh Seán t₁] iontas ar Mháire?
what aL put aL would.buy John surprise on Mary
‘What did [that John would buy t₁] surprise Mary?’

(20) *Cad é₁ a chreideann Liam a chuir [Seán t₁ a cheannach] what aL believe Bill aL put John to buy iontas ar Mháire?
surprise on Mary
‘What does Bill believe that [that John bought t₁] surprised Mary?’

(21) *Cad é₁ a gcreideann Liam a chuir [Seán t₁ a cheannach] what aN believe Bill aL put John to buy iontas ar Mháire?
surprise on Mary
‘What does Bill believe that [that John bought t₁] surprised
Mary?’

(22) *Cad é₁ a chreideann Liam a chuir [go gceannódh Seán t₁]
what aL believe Bill aL put that would.buy John
iontas ar Mháire?
‘What₁ does Bill believe that [that John would buy t₁] surprised
Mary?’

(23) *Cad é₁ a chreideann Liam a chuir [a cheannódh Seán t₁]
what aL believe Bill aL put aL would.buy John
iontas ar Mháire?
‘What₁ does Bill believe that [that John would buy t₁] surprised
Mary?’

Fourth, the resumption strategy allows the chain patterns in (24)–(28),
which are all disallowed under the movement strategy.

(24) Cad é₁ ar chuir [Seán é₁/*t₁ a cheannach] iontas ar
what aN put John it to buy surprise on
Mháire?
Mary
‘What₁ did [that John bought t₁] surprise Mary?’

(25) Cad é₁ a gcreideann Liam gur chuir [Seán é₁/*t₁ a
what aN believe Bill that put John it to
cheannach] iontas ar Mháire?
buy surprise on Mary
‘What does Bill believe that [that John bought it] surprised
Mary?’

(26) Cad é₁ a gcreideann Liam ar chuir [Seán é₁/*t₁ a
what aN believe Bill aN put John it to
cheannach] iontas ar Mháire?
buy surprise on Mary
‘What does Bill believe that [that John bought it] surprised
Mary?’

(27) Cad é₁ a chreideann Liam ar chuir [Seán é₁/*t₁ a
what aL believe Bill aN put John it to
cheannach] iontas ar Mháire?
buy surprise on Mary
‘What does Bill believe that [that John bought it] surprised
Mary?’
(28) Cad é₁ a chreideann Liam gur chuir [Seán é₁/*t₁ a what aL believe Bill that put John it to cheannach] iontas ar Mháire? buy surprise on Mary
‘What does Bill believe that [that John bought it] surprised Mary?’

Fifth, the resumption strategy, however, cannot save a resumptive pronoun in the that-clause in the subject position, as shown in (29)–(31).

(29) *Cad é₁ ar chuir [go gceannódh Seán é₁] iontas ar what aN put that would.buy John it surprise on Mháire?
Mary
‘What₁ did [that John would buy t₁] surprise Mary?’

(30) *Cad é₁ a gcreideann Liam gur chuir [go gceannódh Seán what aN believe Bill that put that would.buy John é₁] iontas ar Mháire?
it surprise on Mary
‘What₁ does Bill believe that [that John would buy t₁] surprised Mary?’

(31) *Cad é₁ a gcreideann Liam ar chuir [go gceannódh Seán what aN believe Bill aN put that would.buy John é₁] iontas ar Mháire?
it surprise on Mary
‘What₁ does Bill believe that [that John would buy t₁] surprised Mary?’

4. Discussion

First, the data in (24)–(31) seem to suggest that Irish grammar contains a condition such as the Tensed-Subject Condition formalized in (32), because in these examples, the resumptive pronoun can be bound by the COMP aN only when it is contained in a sentential subject without tense.

(32) Tensed Subject Condition

No rule can involve X, Y in the structure …X…[α…Y…]… where α is a tensed subject.

It is well-known that the resumption strategy in Irish prevents island violations. Therefore, the Wh-Island Condition violation in (33) and the Complex NP Constraint violation in (35) are prevented by the resumption strategy. The data are from Basri and Maki (2012).
In (34) and (36), a\textit{N} can bind a resumptive pronoun across a syntactic island, and the examples are grammatical. However, in (29)–(31), a\textit{N} does not seem able to bind the resumptive pronoun in a tensed subject, in spite of the fact that it c-commands it. The ungrammaticality of these examples thus suggests that Irish grammar should contain a condition such as (32).

However, the fact that (32) is not sufficient is shown by the examples in (37)–(40).

(37) Chuir [an ráfla gur cheannaigh Seán carr] iontas ar put the rumor that bought John car surprise on Mháire.
Mary
‘The rumor that John bought a car surprised Mary.’

(38) *Cad é\textsubscript{1} ar chuir [an ráfla gur cheannaigh Seán é\textsubscript{1}] iontas what a\textit{N} put the rumor that bought John it surprise on Mary?
‘What\textsubscript{1} did the rumor that [that John bought \textsubscript{t\textsubscript{1}}] surprise Mary?’

(39) Chreideann Máire an ráfla gur cheannaigh Seán carr.
believe Mary the rumor that bought John car
‘Mary believes the rumor that John bought a car.’
(40) *Cad é a gcreideann Máire an rábla gur cheannaigh Seán é?
    what aN believe Mary the rumor that bought John it
    ‘What does Mary believe the rumor that John bought it?’

In (38), the subject is an NP, which contains a complement clause to the head noun, which in turn contains a resumptive pronoun. The complement clause, which is tensed, is not a subject by itself, so that the ungrammaticality of (38) does not fall under (32). Furthermore, the ungrammaticality of (40) shows that even when the same NP is in the object position, the sentence does not improve, which indicates that (32) is not relevant to the ungrammaticality of (40).

(40) is also surprising, given the fact that the resumption strategy saves island violations in Irish. All these data then seem to suggest that the complementizer go/gur ‘that’ blocks association between the COMP aN and the resumptive pronoun. Given the fact that (4), reproduced as (41), is perfectly grammatical,

(41) Cad é a gcreideann tú gur cheannaigh Seán é/*t?
    what aN believe you that bought John it
    ‘What do you believe that John bought?’
    (resumption) (aN, that, RP)

Irish grammar should contain a condition such as the one in (42).²

² One of the referees points out the following. “If the condition in (42) applies at LF/the CI-interface, how does a child acquire such a language-particular interface condition? It seems impossible for a child to acquire such a language-particular interface condition “from scratch.” Would the author claim that there is some “universal” interface condition which is potentially present in the initial state of every child’s grammar, and the condition is “activated” by some trigger present in Irish (and not in other languages)? If so, what might be the trigger that activates the universal condition and turns it into a language-particular condition in Irish?”

This is a very important question. The following we speculate is a possible answer to the question. In Irish, a wh-phrase directly followed by the indirect relative marker a/ar ‘aN’ must bind a resumptive pronoun rather than a trace, as shown in (41). Apparently, examples such as (41) indicate that the wh-phrase directly followed by the indirect relative marker a/ar ‘aN’ binds a resumptive pronoun, and the intermediate COMP(s) with gur ‘that’ seem(s) irrelevant to the resumptive A’-chains. By hypothesis, there is no operator or any element in the SPEC of gur ‘that’ in Irish. Therefore, it must be assumed that gur ‘that’ does not enter into the chain formation headed by the wh-phrase followed by aN.

However, in this paper, we found that example (40) is ungrammatical. Since gur ‘that’ does not enter into the chain formation headed by the wh-phrase followed by aN,
Condition on A’-Resumption Chains

The base-generated operator in the SPEC of the COMP aN which constitutes the head of the chain, cannot bind its corresponding resumptive pronoun when there is a COMP go/gur ‘that’ whose maximal projection is not complement to a verb in the structure that c-commands the resumptive pronoun.

(42) suggests that in an A’-resumption chain, the head of the chain aN sees every intermediate COMP on the way to the tail of the chain, that is, the resumptive pronoun, and when it finds a COMP that is not selected by a verb, the association does not hold between the head and the tail of the chain. If this is true, examples such as (38) and (40) suggest that the chain tail search by the chain head is a kind of agreement, and involves the phase that has already been passed. This constitutes evidence for Bošković (2007), who argues, contra Chomsky (2000, 2001), that the locality of Move and Agree is radically different in the sense that Agree is free from mechanisms constraining Move, such as the Phase-Impenetrability Condition (PIC) in (43).

the A’-chain headed by the wh-phrase followed by aN in (40) should be allowed. However, this is not the case.

The crucial difference between (41) and (40) is the fact that the syntactic status of gur ‘that’ in (40) is different from the syntactic status of gur ‘that’ in (41). It is required by the verb in (41), while it is required by the noun in (40). This difference and the difference in the grammaticality between (41) and (40) seem to indicate (i) that A’-chain formation with resumptive pronouns by native speakers of Irish not only involves operator-resumptive pronoun relations, but also the intermediate [−Q] COMP(s) with gur ‘that,’ and (ii) that there is an algorithm that automatically incorporates the COMP gur ‘that’ into an A’-chain headed by aN in Irish. This indicates that A’-chains with resumptive pronouns might consist of two parts shown in (i). (We will not go into the issue of whether (i.a) could be integrated into (i.b) in this paper.)

(i)
   a. Operator-resumptive pronoun chains (Op, RP).
   b. COMP-resumptive pronoun chains (aN, (gur, …), RP)

In grammatical A’-chains with resumptive pronouns with more than one embedding, if the embedded clause has a [−Q] COMP, its maximal projection CP is always required by the higher verb. Therefore, the CP is a complement. On the other hand, in the ungrammatical A’-chain with a resumptive pronoun in (40), the maximal projection of the [−Q] COMP is not required by the verb. Rather, it is a complement to the noun. Note that the complement to a noun constitutes a barrier for movement, as shown by the ungrammaticality of example (ii).

(ii) *Cad éi a cheideann tú gur chreid Máire an ráfla gur cheannaigh Seán ti?

What do you believe that Mary believed the rumor that John bought?”
(43) **Phase-Impenetrability Condition (PIC)**

In phase $\alpha$ with head $H$, the domain of $H$ is not accessible to operations outside $\alpha$, only $H$ and its edge are accessible to such operations. (Chomsky (2000: 108))

The PIC in (43) will block the relation between $C_1$ and $RP_1$ in (44), when $C_1$ agrees with $RP_1$.

(44) $[CP_1\ C_1\ [...\ vP\ [...\ CP_2\ ...\ RP_1\ ...\ ]\ ]$

Therefore, the fact that (38) and (40) are ungrammatical, while (41) is grammatical, suggests that the chain tail search by the chain head is a kind of agreement, and supports Bošković’s (2007) view that the locality of Move and Agree is different.

Second, the clausal argument data in Irish provide further evidence for the claim that the subject position in Irish is not a properly governed position. Chung and McCloskey (1987) claim, under the theory with the Empty Category Principle (ECP), that the subject and the object positions are

Suppose here that *gur* ‘that’ itself has a certain feature that needs to be checked when it enters into an A′-chain, and that it moves to the higher COMP to be checked. Then, the contrast between the grammatical example in (41) and the ungrammatical example in (40) is expected in terms of a version of the locality condition on chain links, such as Chomsky and Lasnik’s (1993) Minimize Chain Links (MCL). This is because in (40), not (41), the position of the intermediate COMP *gur* ‘that’ is separated from the position of the topmost COMP *aN* by a barrier (a complex NP), and if *gur* ‘that’ moves to *aN* at LF, the trace will cause an anomaly, such as a violation of the Empty Category Principle (ECP) in the pre-Minimalist framework.

This hypothesis automatically accounts for the ungrammaticality of (29), where the clause headed by *go* ‘that’ (the non-past form of *gur* ‘that’) is in the subject position, which is not a complement position in Irish, which is to be shown directly in the text. Under the hypothesis, in (29), the algorithm that incorporates the COMP *gur* ‘that’ into an A′-chain headed by *aN* forms a chain (*aN*, *go*, *RP*), and the intermediate COMP *go* ‘that’ moves to *aN* across a barrier (a non-complement clause) in violation of the MLC. Therefore, example (29) is predicted to be ruled out.

Under this hypothesis, what must be acquired by native speakers of Irish is the connection between the COMPs in an A′-chain in (ib), and what need not be acquired is a condition on such a connection or movement like the MLC, as it is assumed to be part of universal grammar. Let us now consider whether native speakers of Irish can acquire the relevant connection between the COMPs in an A′-chain. Irish makes frequent use of resumptive pronouns, and allows A′-chains with resumptive pronouns, as in examples such as (41). Therefore, native speakers of Irish are exposed to the A′-chains with *gur* ‘that’ in the intermediate COMP(s). Thus, based on this positive evidence, it is plausible to assume that native speakers of Irish posit a sort of connection between *aN* and *gur* ‘that.’ It seems then possible to derive the Condition on A′-Resumption Chains in (42) from a universal condition such as the MCL and a language-particular property related to *aN* and *gur* ‘that.’
properly governed by the verb-INFL complex and (the trace of) the verb, respectively. They argue for this, based on the examples in (45). (45a) involves object extraction, and (45b) involves subject extraction.

(45)  
a. ??rud nach bhfuil mé ag súil go a.thing that.Neg be.Pres I expect.Prog t
bhfeicfinn t
see.Cond.1.Sg
‘something that I do not expect that I would see’
b. ??rud nach dócha go mbeadh t air a.thing that.Neg+Cop probable that be.Cond on.him
‘something that probably would not be on him’
(lit. ‘something that it is not probable would be on him’)

(Chung and McCloskey (1987: 224))

According to them, both (45a) and (45b) are equally marginal in grammaticality. Note that the intermediate COMP in both examples has not undergone COMP alternation, and remains go ‘that.’ This indicates that the SPEC of the intermediate COMP was not used as an escape hatch. Therefore, provided that only X0 categories can be proper governors (for both antecedent and lexical government), as argued in Stowell (1981a), Rizzi (1986) and Lasnik and Saito (1992), the intermediate COMP cannot be an antecedent governor for the subject trace, because the COMP would not have the same index as the subject trace, and thus, the former does not bind the latter. Hence, the subject trace is not saved by antecedent-government in (45b). This leads Chung and McCloskey (1987) to propose that in (45b), the subject trace is lexically governed by the verb-INFL complex, just as the object trace in (45a) is lexically governed by (the trace of) the verb, hence the subject and the object positions are properly governed positions in Irish.

Maki and Ó Baoill (2011) then found a subject/object asymmetry in wh-fronting shown in (46).

(46)  
a. De cé a tharraing Seán [pictiúr t]? of whom aL take John picture
‘Of whom did John take a picture?’
b. *De cé a fuair [pictiúr t] duais ?3 of whom aL got picture prize
‘Of whom did a picture get a prize?’

3 Note that Irish shows Kuno’s (1973) Internal Constituent Effect (ICE): extraction out of “internal constituents” is prohibited in general. Therefore, (ii) is worse than (i) in Irish, just like the English counterparts shown in (iii) and (iv).
Following Chung and McCloskey (1987), they assume that both subject and object positions are properly governed positions in Irish, and attribute the ungrammaticality of (46b), a case of extraction from a subject, to the prohibition against adjunction to agreeing specifiers and adjuncts (see Takahashi (1994) and Maki and Ó Baoill (2011) for relevant discussion), not to Huang’s (1982) Condition on Extraction Domain (CED)\(^4\), as the CED would incorrectly predict that (46b) is grammatical under the assumption that the subject position is properly governed in Irish.

The clausal argument data in Irish provide supporting evidence for Maki and Ó Baoill’s (2011) argument. Consider the examples in (15)–(18). If the subject position is a properly governed position, the CED will predict that extraction out of the subject is possible in (17) and (18), which is not correct. The contrast between (15) and (16), and (17) and (18) thus indicates that the subject position is not properly governed in Irish.

This is related to the issue of Chung and McCloskey’s (1987) claim that both subject and object positions are properly governed positions in Irish. Note, however, that their claim needs careful examination, because the examples in (45a, b) do not constitute a minimal pair, thus do not provide a fair comparison between object extraction and subject extraction. Examples such as (47a, b) constitute a minimal pair, and both are grammatical.

(i) De cé a tharraing Seán [pictiúr t]?
of whom aL took John picture
‘Who did John take a picture of?’
(ii) *De cé a thug Seán [pictiúr t] do Liam?
of whom aL gave John picture to Bill
‘Who did John give a picture of to Bill?’
(iii) Who did John take [a picture of t]?
(iv)??Who did John give [a picture of t] to Bill?

(Lasnik and Saito (1992: 91) slightly edited)

However, (46b), a case of extraction from a subject, is worse than extraction out of internal constituents in (ii) in Irish, just as (iv) is worse than (v) in English.

(v)*Who did [pictures of t] please you?

(Lasnik and Saito (1992: 89))

This indicates that the ungrammaticality of (46b) is not solely due to the ICE, thus, involves some other factor independent of the ICE.

\(^4\) The Condition on Extraction Domain (CED) is defined in (i).

(i) **Condition on Extraction Domain (CED)**

A phrase A may be extracted out of a domain B only if B is properly governed.

(Huang (1982))
(47) a. Cad é a chreideann tú a cheannaigh Seán t?
   what aL believe you aL bought John
   ‘What do you believe that John bought?’
b. Cá a chreideann tú a cheannaigh t carr?
   who aL believe you aL bought car
   ‘Who do you believe bought a car?’

When the intermediate COMP does not change to a ‘aL,’ and remains gur ‘that’ in (47a, b), the resulting sentences are both ungrammatical, as shown in (48a, b). However, more importantly, (48b) is worse than (48a) in grammaticality.

(48) a. *Cad é a chreideann tú gur cheannaigh Seán t?
   what aL believe you that bought John
   ‘What do you believe that John bought?’
b. **Cá a chreideann tú gur cheannaigh t carr?
   who aL believe you that bought car
   ‘Who do you believe bought a car?’

This indicates that the subject position in (48b) should not be properly (lexically) governed. This fact is then consistent with the data in (15)–(18), supporting the claim that the subject position is not a properly governed position in Irish.

If this is the case, the ungrammaticality of (46b), for example, can be attributed to either the prohibition against adjunction to agreeing specifiers and adjuncts (Takahashi (1994) and Maki and Ó Baoill (2011)) or Huang’s (1982) CED, which then raises the question of which should be necessary in grammar. Note here that ‘proper government’ in the definition of the CED can be restated as ‘selection by a (lexical) head,’ so that the definition of the CED does not contain the devices unfavorable within Chomsky’s (1995) Minimalist Program, such as ‘government,’ and the function of the prohibition against adjunction to agreeing specifiers and adjuncts is fundamentally identical to the function of the CED. In this paper, we leave this question open for future research.

Third, human language allows the option that a bare IP can be a subject. As shown in (10), for example, reproduced as (49), IP can be a subject in Irish.

(49) Chuir [Seán carr a cheannach] iontas ar Mháire.
   put John car to buy surprise on Mary
   ‘That John bought a car surprised Mary.’

Note that IP cannot be a subject in English, which in one analysis (Stowell (1981b)) is due to an ECP violation by the empty category in C, as shown
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in (50b).

(50)  a. \([CP \text{ That } [\text{IP John bought a car}]] \text{ surprised Mary.}\)
b. \(\ast [CP \text{ e } [\text{IP John bought a car}]] \text{ surprised Mary.}\)
c. Mary said \([CP \text{ that } [\text{IP John bought a car}]].\)
d. Mary said \([CP \text{ e } [\text{IP John bought a car}]].\)

If the infinitival subject is headed by an empty C in Irish, as in (51), (49) would be incorrectly predicted to be ungrammatical.

(51) Chuir \([CP \text{ e } [\text{IP Seán carr a cheannach}]] \text{ iontas ar Mháire.}\)
put John car to buy surprise on Mary
‘That John bought a car surprised Mary.’

The fact that (49) is perfectly grammatical in Irish thus suggests that human language in principle allows a bare IP to be a subject. This conclusion, however, raises the question as to why (50b) is ungrammatical under the assumption that the subject can be a bare IP in English as well. The answer to this question seems to lie in the fact that even in Irish, a tensed clause cannot be a bare IP, as shown in (52) and (53).

(52) a. Síleann Seán go gceannófá carr.
think John COMP buy.Cond.2.Sg. car
‘John thinks that you would buy a car.’
b. Síleann Seán gur cheannaigh tú carr.
think John COMP.Past bought you car
‘John thinks that you bought a car.’

(53) \(\ast \text{Síleann Seán } [CP \text{ e } [\text{IP cheannaigh tú carr}]].\)
think John [CP e [IP bought you car]
‘John thinks that you bought a car.’

(52) shows that Irish has overt COMP-Predicate (verb+INFL) agreement. In (52a), the embedded predicate (verb+INFL) is in the conditional form, and the COMP is represented as go, while in (52b), the embedded predicate is in the past tense form, and the COMP is represented as gur. This indicates that there is a visible agreement relationship between COMP and the predicate (verb+INFL) in Irish. (53) shows that without an overt COMP, (52b), for example, becomes ungrammatical. This indicates that there seems to be a COMP-Predicate (verb+INFL) agreement in human language, and this agreement must be overt in Irish, and can be covert in English. If English has covert COMP-Predicate (verb+INFL) agreement, the empty C must be present, whether or not the CP is in the object position. Then, in (50b), the empty COMP must be present, which will run afoul of the principle that has the effect of the ECP.

This parametric variation between Irish and English in terms of overt/
covert COMP-Predicate (verb+INFL) agreement is further linked to another parametric variation between both languages. Maki and Ó Baoill (2014) examine embedded topicalization in Irish and English, and point out that COMP can bear a [+TOPIC] feature in Irish, not in English, so that Irish, not English, allows a topic phrase to be in CP SPEC. They claim that the contrast between Irish and English suggests that the relevant head for embedded topicalization is COMP in Irish, and it is INFL in English.

They go on to suggest that the difference in the head positions in charge of embedded topicalization lie in the relationship between the COMP and the Predicate (verb+INFL) in the given languages. It was shown in this paper that there is a visible agreement relationship between the COMP and the predicate (verb+INFL) in Irish. Then, once the head in charge of embedded topicalization is placed between COMP and INFL, this morphological agreement relationship cannot hold, so that no embedded topicalization is allowed. However, if COMP can do the work for embedded topicalization, the agreement is successfully established. On the other hand, in English, being a non-verb initial language, there is no such visible agreement between COMP and INFL which would be blocked when INFL is in charge of embedded topicalization.

Fourth, and finally, (28), reproduced as (54), clearly indicates that the chain pattern (aL, that, RP) is essentially possible in movement constructions with one embedded clause in Irish.

\[(54)\] \(\text{Cad } \eta_1 \text{ a chreideann Liam gur chuir [Seán } \eta_1 \text{ a cheannach]}
\text{what aL believe Bill that put John it to buy}
\text{iontas ar Mháire?}
\text{surprise on Mary}
\text{‘What does Bill believe that [that John bought it] surprised Mary?’}
\]

Maki and Ó Baoill (2011) were the first researchers who found the sixth pattern of COMP alternation in Irish, when there are two COMP positions in a relative clause. The pattern is (aL, that, RP), as shown in (55).

\[(55)\] \(\text{Sin an carr a mheasann Seán gur cheart dúinn é a}
\text{that the car aL think John that right for.us it to}
\text{cheannach.}
\text{buy}
\text{‘That’s the car that John thinks that we ought to buy it.’}
\]

Under McCloskey’s (2002) system, the chains in (54) and (55) should be illicit, as \(aL\) appears without an obvious movement operation, that is, the
element locally bound by the relevant $aL$ is not a trace. Therefore, the fact that the chains in (54) and (55) are fundamentally licit is an interesting problem for the theory of chain formation in general, and forces us to reconsider the mechanism of $A'$-chain formation in Irish on the whole. In this paper, we follow Maki and Ó Baoill (2011), who argue that given McCloskey’s claim that COMP whose specifier is not filled are realized as $go/gur$ ‘that,’ $go/gur$ ‘that’ may optionally have a feature that would reside in the operator base-generated in the SPEC of $aN$, and only when it agrees with $aL$ in a local relation, does this feature force $go/gur$ ‘that’ to function as $aN$. See Maki and Ó Baoill (2011) for the precise argument for this claim.

5. Conclusion

This paper investigated the properties of clausal arguments and chain patterns that arise from extraction from these in Irish. Based on the newly found facts, we argued (i) that Irish grammar should contain a condition such as the Condition on $A'$-Resumption Chains, (ii) that the subject position is not a properly governed position in Irish, (iii) that there seems to be a COMP-Predicate (verb+INFL) agreement in human language, and (iv) that the chain pattern ($aL$, that, $RP$) is real in movement constructions with one embedded clause in Irish.

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