

Successive-cyclic movement

Considering some of the mess that McCloskey (2002) gets himself into.

1 Reading notes on McCloskey (2002)

There will be lots of talk here of “A'-dependencies” or “A' movement.” To recap something I mentioned earlier: *Wh*-movement is the canonical case of A' movement. It is “non-argument” movement.

There is an idea that A' movement carries with it a kind of semantic effect. The *wh*-word that moves *binds* the trace, and establishes a kind of quantificational relationship. So, it's something like:

- (1) What did John buy?
- (2) [Out of the possible things, name the x] such that [John bought x].

The last x there serves as the variable, over which the *wh*-word quantifies. Regular quantifiers are thought to undergo to the same sort of movement (but in a “covert” way, so it doesn't actually change the order of the words being pronounced). But the idea is the same, there is a quantifier (in an “A' position”) binding a variable.

- (3) John bought everything.
- (4) [For each of the possible things, x] [John bought x].

A quantifier can not only bind its trace but also a pronoun:

- (5) Everyone sold his house.
- (6) [For each of the people, x] [x sold x 's house].

The interpretation of (5) has the quantifier *everyone* binding both its trace (the first x) and the pronoun *his* (interpreted as a variable, the second x). (The pronoun could also refer to some third person, say, Bill—in which case the sentence means that everyone sold Bill's house. In that case the pronoun is not interpreted as “bound,” but that interpretation is not the important one for these purposes.)

It is not possible to move out of an island. So, (7) is bad. But these can (kind of) be saved by putting a “resumptive pronoun” where the trace should have been, as in (8). Although these are kind of weird in English, (8) is much better than (7)—and there a lots of languages where this kind of construction is quite normal. Discussion can be found in McCloskey (2006).

- (7) * He's the kind of guy [*Op* that you never know [what _ is thinking]].
 (8) ? He's the kind of guy [*Op* that you never know [what he's thinking]].

In Irish, the same kind of thing is possible—when there is an island between a *wh*-word and the place where its variable should be getting its θ -role, you put a pronoun in, and everything's fine.

- (9) teach nach n-aithneochthá cá rabh sé
 house NEG.C recognize[COND] where was it
 'a house that you wouldn't recognize where it was.'

1.1 Background

Wh-movement (here in the form of a relative clause) appears to go very far, yet we also think syntax is quite concerned with very local relations. Conclusion: the long-distance relations are made up of a series of shorter relations.

- (10) He's the guy [*Op* that they said [_ they thought [_ they wanted to hire _.]]]

Terminology: The *Op* there is the “antecedent”, the original trace is the “variable”.

1.2 The core pattern and some initial issues

Finite complement clauses are usually introduced by *go* (or *gur* in the past tense). But a finite clause out of which *A'* movement occurs gets *aL* instead. And they all get it.

In modern terminology, we'd want to say that the complementizer *aL* forces movement. The question: why are there intermediate *aL* markers?

The paragraph beginning with “This perceived dilemma...” initiates a discussion about a proposal set in terms of Optimality Theory, and can be safely skipped or skimmed. Serious reading can resume as of the sentence “In this respect, the Irish case is completely typical.”

1.3 The form of complementizers

The three forms of complementizer are *go*, *aL*, and *aN*.

- (11) Creidim gu-r inis sé bréag.
 I-believe *go*-PAST tell he lie
 'I believe that he told a lie.'
- (12) an ghirseach a ghoid na síogaí
 the girl *aL* stole the fairies
 'the girl that the fairies stole away'

- (13) an ghirseach a-r ghoid na síogaí í
 the girl aN-PAST stole the fairies her
 ‘the girl that the fairies stole away’

The basic form is *go* as in (11). The meaning of (12) and (13) is the same—in (13), there is a pronoun where the trace of movement should have been. And the assumption is that there was no actual movement—rather, in the SpecCP, there is something like an *Op* that binds the pronoun like a quantifier would (cf. *Every boy lost his keys.*). So in (12) there is movement, but in (13) there is not. Tests for movement (like islands) confirm that in cases like (13) there is no movement. Some of these tests come up in section 5.

It is worth noting that McCloskey will often use *pro* here to refer to an actual pronoun (not to the silent *pro* that we might suppose is the subject in, say, Spanish or Italian sentence where you don’t hear a subject).

1.4 An earlier analysis

The question McCloskey is grappling with here is how the form (*aL* vs *aN*) is determined. We have an idea of when each occurs, but he is worried about how they arise syntactically.

The first idea he works with seriously is a kind of magical one, according to which the *Op* or whatever it is in the specifier of *aN* can pick up some features of the pronoun it binds. This quickly gets difficult, because (a) there is no reason to distinguish a pronoun bound by *Op* from any other pronoun, (b) if any features are shared, they must not include person and number features, and (c) the distances over which this feature transmission would have to happen seem to be too large.

The second idea he addresses briefly is the idea that the *Op* that binds pronouns (in relative clauses, for example) is different from the *Op* that actually moves. He’s going to refute that possibility, in the upcoming sections.

1.5 Mixed chains—movement and binding

He starts off here saying that he assumes that the *Op* that moves in relative clauses is “a subtype of the null pronominal *pro*” (this time he really does mean the silent *pro*). That’s less weird than it sounds—*wh*-words are also kind of like pronouns, so the idea that *Op* is kind of like a silent *what* or *which* more or less fits under his assumption.

He then turns to consider two different kinds of “mixed” patterns, as well as a “successive-cyclic” binding pattern. The first is (14), in which the operator moves in an embedded clause (as signaled by *aL*), but is then bound by an inserted operator in the higher clause (as signamed by *aN*).

(14) [CP XP_j aN... [DP (D) N [CP pro_j aL...t_j...]]]

The second is kind of the reverse. In (15), the embedded clause has an operator binding a pronoun (signaled by *aN*), but then movement (presumably of the operator that bound the pronoun, signaled by *aL*).

(15) [CP Op_j aL... [CP t_j aN... pro_j...]]

The third pattern has two binding relations (both signaled by *aN*), as in (16), which suggests that the *Op* that binds (signaled by *aN*) can itself be bound (kind of parallel to what we saw in (15), that it can be moved).

(16) [CP Op_j aN... [CP pro'_j aN... pro_j...]]

What he wants to conclude here is that since the *Op* that moves can also bind pronouns (15) and even be bound itself (16), we can't distinguish between the *Op* that moves and the *Op* that just binds—they're the same thing.

The proposal, ultimately, is this:

(17) Proposal

- 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*.

There's then a mention of the “Highest Subject Restriction”—you can skim over that if need be. But the idea is just that we have further evidence that intermediate *aN* indicates the same kind of binding that a main clause *aN* does, because they're both subject to the same constraint (being that you can't have a resumptive pronoun in the subject position closes to the binder).

1.6 Analysis

The introduction of the “EPP” feature has is somewhat different from how we thought about it in Syntax I. This is just a feature that says “I must have a specifier” and is satisfied by MOVE of an item into the specifier, or by MERGE of something (*Op*) into the specifier.

1.7 Adjunct extraction

Now, McCloskey turns to some new facts about adjunct extraction (that is, the movement of things like *how* and *why*—things that are not arguments, things that don't get θ -roles).

1.8 A final challenge

The problem here is that there is a construction that looks like a Pied Piping structure (*With whom were you talking?*) that involves *aN*, yet Pied Piping should be an indicator of movement. McCloskey will argue that it isn't actually Pied Piping, despite the fact that it looks like it.

On pp. 39–40, McCloskey mentions “incorporation”—this is basically just a name for head movement. So, when P “incorporates” to D, it means that P has moved to D to form a complex head.

On p. 42: “One can maintain that what the fronting rule targets is an indexed pronoun”—what he’s trying to do here is to determine how we know which PP to move. The suggestion he’s just made (though he quickly dismisses it) is just that the correct PP is labeled as being the one that should move (saying it is “indexed” is a way to say that it is specifically labeled this way).

On p. 43: The discussion surrounding (95) is not very clear. It might be made marginally clearer (e.g., how the word order comes to match (85b)) by the homework assignment below.

2 The homework

Here’s something kind of related drawn from McCloskey (1996), though it’s not all *that* related I suppose. Just more Irish.

2.1 Complementizers inflect for tense

The word *go* in (18a) is pretty clearly a complementizer. Interestingly, it is inflected for tense—*gur* in (18b) indicates that the embedded clause is in the past tense.

- (18) a. Gheall sé go bhfillfeadh sé ar an bhaile
promised he C return[COND] he on home
‘He promised that he would return home.’
b. Creidim gu-r fhill sé ar an bhaile
I-believe C-PAST return he on home
‘I believe that he returned home.’

There are other complementizers as well that show this kind of agreement for past tense. One is the negative complementizer *nach* (or *ná-r*).

- (19) a. Creidim nach bhfillfidh sé choíche
I-believe NEG.C return[FUT] he ever
‘I believe that he will never return.’

- b. Creidim ná-r fhill sé choíche
 I-believe NEG.C-PAST return he ever
 ‘I believe that he never returned.’

2.2 Temporal adverbials vs. complementizers

In English, we assume that things like *next Christmas* and *in a few days* adjoin to TP. That explains the facts in (20) and (21).

- (20) a. They used to say that next Christmas he would come up.
 b. * They used to say next Christmas that he would come up.
- (21) a. It’s probable that in a few days it would be possible to leave.
 b. * It’s probable in a few days that it would be possible to leave.

Explain. Very quickly explain what it is that makes the ungrammatical sentences in (20) and (21) bad. (Don’t overthink this, it’s a very simple question I’m asking.)

Weirdly, the facts are exactly opposite in Irish.

- (22) a. Deiridís an chéad Nollaig eile go dtiocfadh sé aníos
 they-used-to-say the first Christmas other C would-come he up
 ‘They used to say that next Christmas he would come up.’
 b. * Deiridís go an chéad Nollaig eile dtiocfadh sé aníos
 they-used-to-say the C first Christmas other would-come he up
 (‘They used to say that next Christmas he would come up.’)
- (23) a. Is dóiche faoi cheann cúpla lá go bhféadfaí imeacht
 is probable at-the-end-of couple day C could[IMPERS] leave[-FIN]
 ‘It’s probable that in a few days it would be possible to leave.’
 b. * Is dóiche go faoi cheann cúpla lá bhféadfaí imeacht
 is probable C at-the-end-of couple day could[IMPERS] leave[-FIN]
 (‘It’s probable that in a few days it would be possible to leave.’)

Hang on to the facts above in Irish for a moment, and consider the facts below in (24). What we’re looking at here is an embedded question with the *wh*-phrase *cé chomh gnóitheach is* ‘how busy’ as well as a temporal adverbial *roimh an Nollaig* ‘before Christmas.’ Notice that ‘before Christmas’ must follow ‘how busy.’

- (24) a. Níor thuig mé cé chomh gnóitheach is roimh an Nollaig a
 NEG.PAST understand I how busy as before Christmas C
 bheadh siad.
 be[COND] they
 ‘I didn’t realize how busy they would be before Christmas.’

- b. * Níor thuig mé roimh an Nollaig cé chomh gnóitheach is a
 NEG.PAST understand I before Christmas how busy as C
 bheadh siad.
 be[COND] they
 ('I didn't realize how busy they would be before Christmas.')

What do we learn about temporal adverbials from (24)? We might have had an explanation for (22) and (23) above by saying that things like *roimh an Nollaig* are attached higher in the tree in Irish than *before Christmas* is in English. But the facts in (24) tell us otherwise. Briefly explain this—where might we have thought they attach, and why can't that be right in the face of (24)?

Where is C? Looking even harder at (24), you might notice another odd thing about it—*roimh an Nollaig* is *between* the *wh*-phrase and C. Assuming that *roimh an Nollaig* is attached in the same place in Irish that *before Christmas* would be in English—that is, adjoined to TP—where does it seem this “complementizer” has to be? (It doesn't look like it's really in C.)

Does that help? Does the answer from the previous question help us make sense out of (22) and (23)? (I think it should.) Explain briefly why the pattern in (22) and (23) looks like it is the reverse of the pattern in (20) and (21).

McCloskey (1996) goes to some lengths to argue that these things I glossed as C are *actually* complementizers. They really do start off as the head CP. Here's maybe a little bit of evidence.

2.3 Licensing negative polarity items

In English, a negative polarity item like *anybody* needs to be c-commanded by negation. This explains the examples below—an NPI is not allowed in the subject position *unless* negation (in the form of *n't*) has moved to C. C c-commands the subject, and so *anybody* is allowed.

- (25) a. * Which one of them does anybody like?
 b. Which one of them doesn't anybody like?
 c. * Which one of them does anybody not like?

Recall from above in (19) that Irish has a negative complementizer. When the complementizer in English includes negation (like in (25b) above), a subject NPI is allowed. And in Irish, with this negative complementizer, a subject NPI is also allowed (26).

- (26) Char labhair duine ar bith liom.
 NEG.PAST speak person any with-me
 ‘Nobody spoke to me.’

In Irish, there is a stylistic construction that allows you to front a DP to a position before the verb. It’s interpreted, as I understand it, a bit like English *Not one drop did he take from the cup*. The normal example is in (27a), and the stylistic one is in (27b). It’s clear why (27a) allows the NPI interpretation of the object—it’s more or less like (26).

- (27) a. Níor bhain sé aon deor amháin as an chorn.
 NEG.PAST took he one drop one out-of the cup
 ‘He didn’t take a single drop out of the cup.’
 b. Aon deor amháin níor bhain sé as an chorn.
 one drop one NEG.PAST took he out-of the cup
 ‘Not one drop did he take from the cup.’

What about (27b)? In (27b), the NPI seems to c-command everything else in the sentence. Why is it allowed? The sentences in (28) show the same thing. Assume that when the NPI is first like this, it is adjoined to TP just like temporal adverbials are. What kinds of things might you propose to explain the fact that NPIs are possible here?

- (28) a. pingin rua char chaith mé _ ar an bhád.
 penny red NEG.PAST spent I on the boat
 ‘Not a red cent did I spend on the boat.’
 b. Greim ar bith ní fhuil sé a ithe _.
 bite any NEG is he eat[PROG]
 ‘Not a bite is he eating.’

References

- McCloskey, James. 1996. On the scope of verb movement in Irish. *Natural Language and Linguistic Theory* 14(1): 47–104.
 McCloskey, James. 2002. Resumption, successive cyclicity, and the locality of operations. In Samuel D. Epstein & T. Daniel Seely (eds.) *Derivation and explanation in the Minimalist Program*, 184–226. Oxford: Blackwell.
 McCloskey, James. 2006. Resumption. In Martin Everaert & Henk van Riemsdijk (eds.) *The Blackwell companion to syntax*, vol. 4, 94–117. Oxford: Blackwell.