

Long Distance Binding 1: complement clauses

Björn Lundquist
UiT The Arctic University of Norway

1. Introduction

It is well known that Long Distance Reflexives (LDR), that is, a reflexive with its antecedent in a superordinate clause, are more common in the Insular North Germanic languages (Icelandic and Faroese) than the Mainland North Germanic languages. It has even been claimed that Long Distance Reflexives are only licit in languages that have overt agreement morphology on verbs, as in Icelandic and Faroese (see Holmberg and Platzack 1995). However, some long distance binding can be found in the Mainland North Germanic languages as well, as noted in both the Norwegian reference grammar (Faarlund et al. 1997) and the Swedish reference grammar (Teleman et al. 1999), though it may be completely absent in Danish. As discussed in Thráinsson (2007), the type of LDR you find in the Mainland North Germanic languages is probably qualitatively different from the typical Icelandic and Faroese LDR. In Icelandic, you find LDR's in complement clauses, most often subjunctive complement clauses (see Maling 1984), but as noted by Sigurðsson (1986), many speakers allow LDR in indicative complement clauses as well, as long as the main clause subject (i.e. the binder of the LDR) is the attitude holder, or the one whose point of view is reported on. The following examples are from Sigurðsson (1986): in (1) we see a LDR in a subjunctive clause, and in (2) we see an LDR in an indicative clause. In (3), the main verb has been negated, with the consequence that the subject is no longer the attitude holder, and hence not a possible antecedent for the long distance anaphor. Note that not all Icelanders find (2) grammatical, and also that (1) can be negated without affecting the binding properties of the subject:

- (1) Jón_i segir að María elski sig_i. (Ice.)
Jón say.PRES.3RD that María love.SUBJ.3RD RFLX
 'John says that Mary loves him.'
- (2) Jón_i veit að María elskar sig_i. (Ice.)
Jón know.PRES.3RD that María love.IND.3RD RFLX
 'John knows that Mary loves him.'
- (3) *Jón_i veit ekki að María elskar sig_i. (Ice.)
Jón know.PRES.3RD NOT that María love.IND.3RD RFLX
 'John does not know that Mary loves him.'

Long distance reflexives with similar properties as the Icelandic LDR can also be found in parts of Norway. Moshagen and Trosterud (1990) find the exact same pattern as in (1)-(3) in the Norwegian Smøla dialect (spoken on an island in northern Møre and Romsdal) where neither verbal agreement nor subjunctive morphology is present. Strahan (2003) found speakers who find sentences like (1) above more or less acceptable in Norway, again, without subjunctive morphology, or overt agreement. Her quantitative study shows that speakers in Trøndelag have the highest acceptance for LDR, while speakers in the southernmost parts find them least acceptable. This is not surprising, given that the Trøndelag dialect in general has more Old Norse or insular North Germanic traits than the southern dialects, that show more influence from Danish. Aasen (1864) also reports that long-distance anaphors can be found in mainly the Trøndersk dialect, indicating that fairly little has changed for the last 100-150 years with respect to long-distance binding in Norway. Recent fieldwork in Sweden has also shown that some more archaic dialects have some Icelandic type long distance reflexives, at least in the possessive paradigm (see more on this in section 3.1).

However, all over Mainland Scandinavia we find long distance reflexives that are not acceptable in Icelandic, most notably, binding into relative clauses and adjuncts, as discussed by Lødrup (2007, 2009) and Thráinsson (2007), and also mentioned in the Norwegian reference grammar (Faarlund et.al. 1997) and the Swedish reference grammar (Teleman et.al. 1999). As we will see, these long distance reflexives can be complex reflexives, of the form *seg selv* (Bokmål), in contrast to the Icelandic long-distance reflexives, which

are always of the simple form (seg/sig) (see Hellan 1988 for a discussion of the distribution on simple and complex reflexives). The long-distance reflexives found in Insular North Germanic are usually described as logophoric reflexives, and they are co-referent with the author/origin or the mental center of the utterance. The long-distance reflexives found in Mainland Scandinavian on the other hand tend to be bound by the closest possible binder, even in cases when the binder is not present in the same clause, and can presumably not be described as logophoric reflexives.

Binding into relative clauses is discussed in a separate NALS-chapter (Lundquist 2014a). Below, we will only look at binding into complement clauses.

2. Results

2.1 Nordic Syntactic Database (NSD)

In the ScanDiaSyn survey, two types of binding into complement clauses were tested: binding of an anaphor inside an embedded subject, and binding of an anaphor in an embedded object. Binding into subjects was tested all over Mainland Scandinavia, while binding into objects was tested only in Sweden, Finland and Iceland. The following sentence was tested for binding into an embedded subject: [\[1\]](#)

- (4) Regjeringen_i regner ikke med at forslaget sitt_i vil få flertal. (#156) (Nor.)
government.DEF count.PRES NOT with that proposal.NEUT.DEF RFLX.POSS.NEUT will.PRES get.INF majority.
 'The government does not expect that its proposal will get a majority vote'

The results are shown in Map 1:



Map 1: Binding of possessive anaphor in an embedded subject by matrix subject.

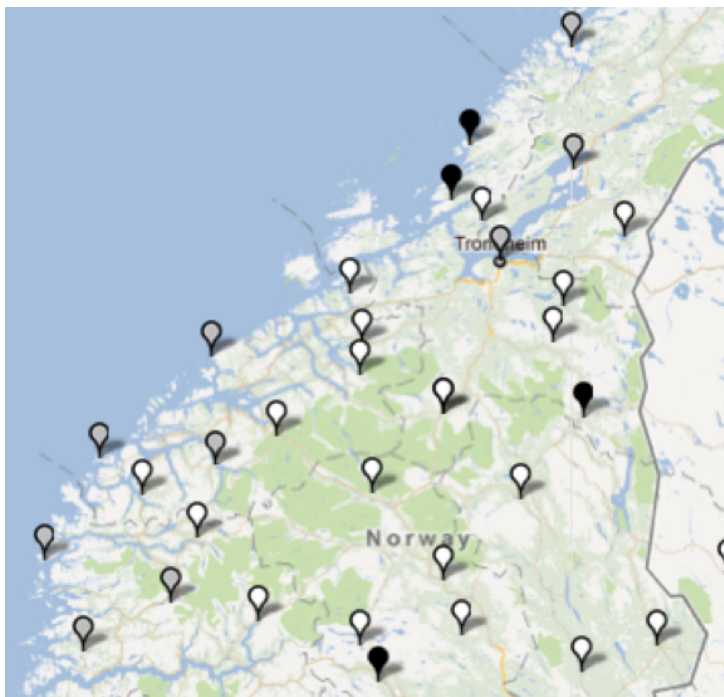
(#156: *Regjeringen regner ikke med at forslaget sitt vil få flertal.* 'The government does not expect that its proposal will get a majority vote.')
 (White = high score, grey = medium score, black = low score)

What is perhaps most striking about the map above is the large number of grey spots, i.e., we get a medium score from many of the measure points. It should be pointed out that this does not necessarily mean that

speakers are unsure about the grammaticality of the test sentence (i.e., giving it a mid score). Looking closer at the results, we see that 237 of 637 informants strongly rejected the test sentence (giving it 1 or 2 on five grade scale), while 254 informants judged the sentence as fully grammatical (score 5). That is, 77% of the informants had very strong intuitions about the tested sentence. Within each measure point, informants often gave completely different judgments for this sentence, which shows that there is a lot of variation tied to non-local binding that is not directly conditioned by region/location.

What is also noticeable about map 1 is the absence of high scores in Denmark, and the fairly high concentration of high scores in Sør-Trøndelag, Møre og Romsdal, northern Oppland and northern Hedmark. As discussed in Strahan 2003, this area in general has more LDR than the rest of Norway. Map 2 below shows a zoom-in on this area. From this we can conclude that the variation to some extent *is* conditioned by location/region as well.

The sentence above was also tested with a non-reflexive possessive pronoun (either *dens* ('its') or *deras* ('their')) (test sentence #157). This sentence in general got high scores from the informants all over Mainland Scandinavia, with some few exceptions. It is however worth pointing out that sentence #156 gets higher scores than sentence #157 in the area where LDR in general is quite acceptable (Sør-Trøndelag, Møre og Romsdal, northern Oppland and northern Hedmark).^[2] Map 2 and 3 below show the results for (#156) and (#157) in the relevant area:



Map 2: Anaphoric embedded possessor
 (#156: *Regjeringen regner ikke med at forslaget sitt vil få flertall.* 'The government does not expect that its proposal will get a majority vote.')
 (White = high score, grey = medium score, black = low score)



Map 3: *Pronominal embedded possessor*
 (#157: *Regjeringen regner ikke med at forslaget dens vil få flertall.* 'The government does not expect that its proposal will get a majority vote.')
 (White = high score, grey = medium score, black = low score)

Binding into an embedded object by the matrix subject was tested in Sweden, Finland and Iceland. In Sweden and Finland, the test sentence contained a possessive anaphor, and on Iceland, the test sentence contained a simple reflexive in a PP complement of a direct object. The sentences are given in (5) and (6) below. Note that the verb *vilja* ('want') here is construed with finite complement clauses in both Swedish and Icelandic:

- (5) Grannen_i ville att vi skulle passa sin_i katt. (#1395) (Swe.)
neighbour.DEF want.PAST that we would look after RFLX.POSS.CG cat.CG
 'The neighbour_i wanted us to look after his_i cat.'
- (6) Ólafur_i vildi að ég tæki mynd af ser_i. (#1395) (Ice.)
Olaf.NOM want.PAST that I take.SUBJ.1SG picture of RFLX.DAT
 'Olaf_i wanted me to take a picture of him_i.'

The results are shown in map 4 and 5 below:



Map 4: Binding into an embedded object
 (#1395: *Grannen ville at vi skulle passa sin katt.* 'The neighbor wanted us to look after his cat.')
 (White = high score, grey = medium score, black = low score)



Map 5: Binding into an embedded object
 (#1395: *Olafur vildi að ég tæki mynd af ser.* 'Olaf wanted me to take a picture of him.')
 (White = high score, grey = medium score, black = low score)

The maps above show clearly that long-distance binding of an anaphor over an embedded subject in a finite complement clause is fully acceptable in Icelandic, but completely rejected in Swedish. We have no direct reasons to suspect that the difference between prepositional object (as in the Icelandic test sentence) and

possessive pronoun (Swedish) influences the results.

3. Discussion

Below I will first look at some data from other sources, mainly Strahan (2003). Thereafter I will discuss the fact that binding into embedded subject is more accepted than binding into embedded objects in Swedish and Norwegian (and possibly Danish too), and the difference between simplex and complex reflexives.

3.1. Other data sources

Long-distance binding into embedded objects was not tested in Norway and Denmark. However, binding into embedded prepositional phrases in complement clauses has been carefully investigated in Norwegian by Tania Strahan (see Strahan 2003). Strahan also investigated long distance binding of direct objects and prepositional objects in complement clauses, which was not investigated in the ScanDiaSyn-survey. Her results on binding of direct objects and prepositional objects are worth mentioning. She tested the following two sentences:

- (7) Trond_i ville at me skulle snakka om seg_i. (Nor.)
trond want.PAST that we should talk.INF about RFLX
 'Trond_i wanted us to talk about him_i.'
- (8) Jon_i trur at Maria elsker seg_i. (#1395) (Ice.)
Jon believe.PRES that Maria love.PRES RFLX
 'Jon_i thinks that Maria loves him_i.'

The acceptance scores for the two sentences above are in general low: only 14 per cent of the informants accepted (7) and (8) above. However, Strahan found clear dialectal variation with respect to LDR: while no informants in Northern Norway or Southern Norway accepted sentence (8), 38 per cent of the informants in the Trøndersk dialectal area (covering Trøndelag, and the northernmost part of Møre and Romsdal) and 33 per cent of the speakers Midlandsk dialectal area (Oppland and Buskerud) accepted (8). Similar dialectal variation was found for (7).

Strahan also tested sentences with a possessive anaphor in a prepositional phrase:

- (9) Han_i sa at hun hadde snakket med kameraten sin_i. (Nor.)
he say.PAST that she had talk.PART with friend.DEF.CG RFLX.POSS.CG
 'He_i said that she had talked with his_i friend.'
- (10) Trond_i ville at me skulle snakka om broren sin_i. (Nor.)
trond want.PAST that we should talk.INF about brother.DEF.CG RFLX.POSS.CG
 'Trond_i wanted us to talk about his_i brother.'

The acceptance for (10) was found to be surprisingly high: 31 per cent of the informants accepted the sentence. The acceptance rate for (9) was however only 5 per cent. It is not clear if it is the choice of preposition phrase, main verb, embedded tense or the nature of the embedded subject that is responsible for the difference in acceptance between (9) and (10). It is probably most likely that the third person singular subject in the embedded clause in (9) acts as an intervener: the informants prefer to interpret the embedded subject as the binder of the anaphor rather than the main clause subject. The first person plural embedded subject in (10) cannot be the binder of the object in (10). The acceptance of (10) can however be compared to the low acceptance of the Swedish sentence (5) above, where there is a first person plural intervener as well. We can tentatively conclude that long distance binding of possessive anaphors is more acceptable in some Norwegian dialects than in Swedish in general.

Recent fieldwork in Sweden has however revealed that speakers of some non-standard or archaic dialects allow long distance binding into an object to some degree. Results from fieldwork conducted by Janne Bondi Johannessen in Älvdalen indicate that at least some older speakers accept sentences of the type exemplified in (10) above: 3 out of 4 speakers born before 1945 fully accepted long distance binding, while none of the younger informants did so.^[31] Further, some genuine dialect speakers in Northern Sweden, fully accept long distance binding of the type illustrated in (10) above, as was discovered in fieldwork conducted in Arjeplog (Lappland) and Byske (Västerbotten). There are some things that should be pointed about these findings. First, long distance binding seems to be accepted mainly of the possessive reflexive. Long distance binding of

a simple reflexive (*sig*) following a verb was rejected by all informants in Älvdalen, Arjeplog and Byske. However, long distance binding of a simple reflexive in the complement of a preposition was found marginally acceptable for the informants in Arjeplog (and it was not tested in the other locations).^[4] Similar results were found for mid-distance binding, i.e., binding into an infinitival clause (Lundquist 2014c). Second, these dialects have some other non-standard or archaic traits, at least the dialects in Älvdalen (Övdalian) and around Byske (Skelleftebondska), like number agreement in verbs and (optional) high verb placement in embedded clauses (see Garbacz 2009 for a discussion of verb placement in Övdalian).

Binding into complement clauses is in general not possible in Danish. In Standard Danish, binding into infinitival clauses but not finite embedded clauses is possible (see e.g. Vikner 1985 Strahan 2009 for discussion). Example (11) (from Strahan 2009) shows that long-distance binding of a reflexive object is impossible in Danish. No difference in binding possibilities for possessive reflexives and object reflexives has been reported for Danish, so we cannot assume that a possessive anaphor would have been better in (11) (as e.g. *sin bror* 'his brother'):

- (11) *Peter_i sa at Anne hadde ringt til sig_i. (Dan.)
Peter say.PAST that Anne had call.PART to RFLX
 Int. 'Peter_i said that Anne had tried to call him_i.'

As is discussed in Lundquist (2014a, 2014b), the possessive anaphor *sin* in the Western Jutland dialect can be long-distance bound, or possibly bound by an antecedent in another sentence. It is possible, that the Western Jutlandic possessive anaphor is best characterized as a regular pronoun rather than an anaphor (Henrik Jørgensen, p.c.). The other members of the Western Jutland reflexive paradigm do not have similar exceptional binding properties.

3.2. The subject/non-subject asymmetry and the effect of interveners

Comparing map 1 to map 5, we clearly see that binding into embedded subjects is more accepted than binding into embedded objects in the Swedish speaking area. 60 of 187 informants found sentence #156 fully grammatical in the Swedish speaking area, while none of these informants found #1395 fully acceptable (only four informants gave sentence #1395 judgment 4). Also, comparing the results in Norway for sentence (#156) with Strahan's result on binding of/into objects and prepositional objects we see that binding into subjects is more available than binding into non-subjects in Norwegian as well. In Insular Scandinavian, no subject/non-subject asymmetry is seen, i.e. long-distance binding is available regardless of the syntactic function of the embedded anaphor. No asymmetry is seen in Danish either, where long distance binding is ungrammatical, with the possible exception of the Western Jutland dialect.

It is not obvious that the subject/non-subject asymmetry we see in Norwegian and Swedish should be explained in terms of size of binding domain. Rather, the stricter restriction on binding into an embedded object might arise from the fact that the embedded subject acts as an intervener, making it harder for the main clause subject to bind into the object. As discussed in Lødrup (2009), long-distance binding into non-subjects is much easier when the subject of the embedded clause is an unlikely binder of an anaphor, for example an expletive, non-animate or non-specific DP, as illustrated in (12) where the embedded clause is an existential clause. Here, many speakers allow the main clause subject to bind an anaphor in the locative phrase:

- (12) De_i ønsker ikke at det skal etableras en hjortstamme på sine_i områden. (Nor.)
they wish.PRES NEG that it shall establish.INF.PASS a deer-herd on RFLX.POSS.PL area.PL.
 'They_i do not want a deer herd to be established on their_i areas.'

According to Lødrup, the Norwegian LDR can even be complex, as opposed to Icelandic LDR. Lødrup gives the following example, where the main clause subject binds a complex anaphor across two finite clauses, where none of the embedded subjects could be interpreted as possible antecedents of the anaphor:^[5]

- (13) Hun_i trudde at det var klart at dette var best for sig_i selv. (Nor.)
she think.PAST that it was clear that this was best for RFLX SELF
 'She_i thought that it was clear that this was best for her_i.'

We see the same effect when a main clause subject binds into a relative clause, as is discussed in Lundquist (2014a). However, the nature of the intervening subject plays a much smaller role in restricting non-local binding into infinitival clauses, as is discussed in Lundquist (2014c).

References

- Aasen, Ivar. 1864. *Norsk Grammatik*, Christiania, Oslo (1965).
- Faarlund, Jan Terje, Svein Lie and Kjell Ivar Vannebo. 1997. *Norsk referansegrammatikk*. Universitetsforlaget, Oslo
- Hellan, Lars. 1988. *Anaphora in Norwegian and the Theory of Grammar*, Foris, Dordrecht.
- Holmberg, Anders and Christer Platzack. 1995. *The Role of Inflection in Scandinavian Syntax*, Oxford University Press, Oxford.
- Garbacz, Piotr. 2009. *Issues in Övdalian syntax: Structural properties and the role of inflection in a Scandinavian vernacular*, Ph.D dissertation, Lund University, Lund.
- Lundquist, Björn. 2014a. Long Distance Binding 2: Relative Clauses. *Nordic Atlas of Linguistic Structures (NALS)*. <http://www.tekstlab.uio.no/nals#/chapter/23>.
- Lundquist, Björn. 2014b. Number sensitive anaphors and short-distance pronouns. *Nordic Atlas of Linguistic Structures (NALS)*. <http://www.tekstlab.uio.no/nals#/chapter/51>.
- Lundquist, Björn. 2014c. Mid-distance binding. *Nordic Atlas of Linguistic Structures (NALS)*. <http://www.tekstlab.uio.no/nals#/chapter/24>.
- Lødrup, Helge. 2009. 'Animacy and long distance binding in Norwegian,' *Nordic Journal of Linguistics* 32.1, 111-136.
- Maling, Joan. 1984. 'Non-Clause Bounded Reflexives in Modern Icelandic,' *Linguistics and Philosophy* 7, 211-241.
- Moshagen, Sjur Nørstebø and Trond Trosterud. 1990. 'Non-Clause-Bounded Reflexives in Mainland Scandinavian,' *Working Papers in Scandinavian Syntax* 46, 47-52.
- Sigurðsson, Halldór Ármann. 1986. 'Long Distance Reflexives and Moods in Icelandic' in Joan Maling and Annie Zaenen (eds.) *Modern Icelandic Syntax, Syntax and Semantics* 24, Academic Press, San Diego, 309-346.
- Strahan, Tania E. 2003. *Long-Distance Reflexives in Norwegian: A Quantitative Study*, Lincom Europe, Munich.
- Teleman, Ulf, Staffan Hellberg and Erik Andersson. 1999. Svenska Akademiens Grammatik II: Ord. Svenska Akademien, Stockholm.
- Thráinsson, Höskuldur. 2007. *The Syntax of Icelandic*. Cambridge University Press, Cambridge.
- Vikner, Sten. 1985. 'Parameters of Binder and Binding Category in Danish,' *Working Papers in Scandinavian Syntax* 23.
- Web sites:**
 Nordic Atlas of Language Structures (NALS) Journal: <http://www.tekstlab.uio.no/nals>
 Nordic Dialect Corpus: <http://www.tekstlab.uio.no/nota/scandiasyn/index.html>
 Nordic Syntax Database: <http://www.tekstlab.uio.no/nota/scandiasyn/index.html>

[1] In Swedish and Danish, the possessive pronoun precedes the head noun, which surfaces in the indefinite form. We have no direct reason to suspect that this influences the binding properties.

[2] It should be pointed out that sentence (#156) gets high scores in Northern Norway, most notably Finnmark. The speakers in this area however give higher or equally high scores for (#157), as opposed to at least some speakers in Mid-Norway.

[3] The following sentence was tested: *An truo'dd ig add twaið biln senn* 'he thought (that) I had washed his car', where the possessor in the object of the complement clause has the reflexive form.

[4] In Arjeplog, the following sentences were tested with one young informant, the judgments are given in parenthesis at the end of the sentence:

1. Kalle vill int att vi sku prat om farsan sin.(5)
Kalle didn't want that we should talk about his father
2. Kalle vill int att vi sku prat om sig.(4)
Kalle didn't want that we should talk about him.
3. Kalle vill int att vi sku hjälp sig. (1)
Kalle didn't want that we should help him

[5] Note however that sentences (12) and (13) were not tested in the ScanDiaSyn survey, so we can't be sure that Norwegians (or Swedes) really accept them. It is possible that they will be equally acceptable as sentence (4/#156). Personally, I find (12) and especially (13) more marked than (4/#156) (Swedish judgment).