An LFG analysis of the Latin reflexive

Marius L. Jøhndal
mlj32@cantab.net
6 November 2013

Introduction

We call the Latin word *se* a reflexive because it shows up where we use *himself, herself* and so on in English. The traditional term for this in Latin grammar is the ‘direct reflexive’. This contrasts with the ‘indirect reflexive’ in the sentence below:

(1) *is, [mi se, locum> dixit <dare].*
    he.NOM me.DAT RELF.ACC place.ACC said.3SG give.INF
    'He said he’d give me a place.' (Pl. Cas. 479)

The issues addressed in this paper are:

• How is the distribution of reflexives explained in generative grammar?
• How can we apply this to Latin?
• How do reflexive systems differ between languages?
• Do we find anything similar to the ‘indirect reflexive’ in other languages?
• How do we best explain how ‘indirect reflexives’ work?

Binding theory

In the example below, *himself* cannot refer directly to an entity in the world. Instead it takes its reference from an antecedent elsewhere in the sentence. We say that *himself* is bound by the antecedent, which is the referential NP *John*.

(2) John watches himself in the mirror.

Binding theory is a part of generative grammar that seeks to give this a syntactic explanation. It was originally formulated by Chomsky (1981) and exists in a number of versions. This section summarises the main points, which are shared by most versions.

The theory classifies NPs into three classes:

(3) a. Reflexives (including reciprocals), e.g. *himself*
    b. Non-reflexives, e.g. *him*
c. Full NPs, e.g. John, the mirror

(The standard generative terminology for these classes is anaphors, pronominals and r-expressions. I will avoid these terms in order to avoid confusion with the traditional use of the term anaphor to mean ‘any NP with an antecedent’.)

The key bit of data that we wish to account for is the following:

(4) a. John\(_i\) watches himself\(_i\)/him\(_i\)/John\(_i\) in the mirror.
   b. John\(_i\) thinks that I hate *himself\(_i\)/him\(_i\)/John\(_i\).
   c. That it rains bothers *himself/him/John.

If we want the two NPs in (4a) to corefer, only a reflexive is possible. Similarly, in (4b) only a non-reflexive is possible. The difference is that John is a local antecedent (i.e. in the same clause as the other NP) in (4a) but a non-local antecedent in (4b). In (4c) there is no possible antecedent in the sentence, and we see that either a non-reflexive or a full NP is possible.

The table below summarises this:

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Reflexive</th>
<th>Non-reflexive</th>
<th>Full NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local antecedent</td>
<td>OK</td>
<td>Not OK</td>
<td>Not OK</td>
</tr>
<tr>
<td>Non-local antecedent</td>
<td>Not OK</td>
<td>OK</td>
<td>Not OK</td>
</tr>
<tr>
<td>No antecedent</td>
<td>Not OK</td>
<td>OK</td>
<td>OK</td>
</tr>
</tbody>
</table>

Binding theory derives this distribution from three principles known as Binding Condition A, B and C:

(6) A: A reflexive must be bound within its local domain.

B: A non-reflexive must not be bound within its local domain.

C: A full NP must not be bound.

We will not try to define the terminology precisely here. We can intuitively understand its local domain as roughly its own clause and be bound as have an antecedent.

We also have to build into our definition of be bound some notion of structural dominance. This should rule out certain NPs as possible binders even when they occur within the correct domain. In the configuration in (7), for example, the NP John’s friend can bind the reflexive, but John cannot. Most versions of binding theory use c-command to accomplish this.

(7) [John\(_i\)’s friend\(_j\)] voted for himself\(_i,j\).

The resulting theory is neat and elegant, and it has enjoyed lasting popularity despite some difficult empirical challenges. (7) shows some characteristic examples of the challenges that have been debated in the literature.

(8) a. John\(_i\) saw [NP Mary’s picture of ??himself\(_i\)/him\(_i\)].
   b. John\(_i\) looked around him\(_i\)/himself\(_i\).

We will not go into these issues here but we should keep in mind that real-world data and judgements can be much messier than textbook examples.

Note also that the binding principles are set up so that each class of NP is associated with a positive or negative binding condition. Complementary distribution between two classes, as between himself and him in (4), results if the positive domain for one class is the same as the negative
domain for another. But there is no independent principle that enforces this so we could define be bound and its local domain differently for different classes of NP (and indeed this is standardly done as part of the solution for some of the issues in (8)).

Local binding in Latin

Local binding in Latin seems quite similar to local binding in English. There is probably a complementary distribution between reflexives and non-reflexives (examples borrowed from Viti (2009: 150–1)):

(9) a. mira sunt nisi invitavit, sese in cena plusculum.
   strange be.3PL if not treat.PERF.3SG REFLEX in dinner bit too much
   'It would be strange if he hasn’t drunk his own health a bit much at dinner.' (Pl. Am. 283)

   b. Neptunus magnis poculis hac nocte eum invitavit
      Neptunus big.ABL cups.ABL this.ABL night.ABL him.ACC treat.PERF.3SG
      'Neptune treated him to some large cups last night.' (Pl. Rud. 362)

Not all transitive verbs are created equal. In (9a), himself is a semantic argument of the verb but in (9b) it is, in a sense, not. Behaving is intuitively a one-place property while despising is a two-place relation, and we cannot replace the reflexive with a full NP in (9b).

(10) a. John hated himself/Mary.

   b. John behaved himself/^Mary.

We can place transitive verbs with reflexives on a scale of transitivity. Some languages use reflexives liberally across this scale. The examples given below are from Norwegian:

(11) a. semantically intransitive: oppføre seg ‘behave oneself’

   b. typically self-directed verbs: vaske seg ‘wash oneself’

   c. typically other-directed verbs: hate seg selv ‘hate oneself’

Some (frequent) Latin transitive verbs with the reflexive as object are of the semantically intransitive type, e.g. (12), but most are of the typically other-directed type. Typically self-directed verbs tend to be (medio)passive.

(12) quae res se sic habet
      this.NOM affair.NOM REFLEX.ACC so have.3SG
      'This is how the matter stands.' (Cic. Att. 5.1.3)

In syntactic terms, there are two important differences between Latin and English. One is that se has a slightly wider distribution. (13) shows how it is used in an adjunct where English would not use one.

(13) me se =cum in Hispaniam ducit
      me.ACC REFLEX.ABL=with in Spain.ACC bring.3SG
      'He is taking me with him to Spain.' (Cic. Att. 10.9A.4)
The other difference is that the binder of *se* must be a subject. This is an important theoretical point since reflexive binding is a key diagnostic in syntactic argumentation. It can be used, for example, to test for the presence of the empty category PRO in a structure.

Showing that the binder of *se* must be a subject is difficult. The main issue is that the notion *subject* is notoriously hard to define. If we leave aside data in which it is uncontroversial what the subject is, what we can say is that accusative, genitive and dative experiencer arguments of verbs do not bind *se* (although there are some very tricky data points involved). Diagnostics that typically identify subjects in other languages (e.g. that they can be the target of control) fail to identify these arguments as subjects in Latin. This still leaves us with a residual group of problematic examples. These predominantly involve the gerundive, which we do not have a precise and uncontroversial analysis of.

**Parameters of variation**

The previous section mentioned two syntactic differences between English and Latin reflexives, that *se* can be bound within a syntactic region that is slightly larger than that of English reflexives, and that the binder of *se* must be a subject. These two differences are characteristic of cross-linguistic variation.

The parameter that constrains the grammatical function of the binder is known as *orientation*. Subject orientation is cross-linguistically very common.

The second parameter is the *domain* of binding. There is no consensus on the number and nature of domains but we need at least four. Informally these are in order of increasing `size`: (1) the verb and its internal arguments, (2) the verb and its syntactic dependents, (3) the finite clause, and (4) the entire sentence. Latin *se* must be bound in domain (2).

Two further complications arise cross-linguistically. One is that languages can have multiple reflexives and non-reflexives, each associated with different parameter settings (Manzini and Wexler 1987). Norwegian is a well-documented example of this (table based on Dalrymple 1993: 34ff):

<table>
<thead>
<tr>
<th>Coarg. domain</th>
<th>Min. complete nucleus</th>
<th>Min. finite domain</th>
<th>Root domain</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>seg</em></td>
<td>−GF</td>
<td>+SUBJ</td>
<td></td>
</tr>
<tr>
<td><em>seg selv</em></td>
<td>+SUBJ</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>ham selv</em></td>
<td>+GF ∧ −SUBJ</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>sin</em></td>
<td>+SUBJ</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>hans</em></td>
<td>−SUBJ</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(+SUBJ = bound by a subject, +GF = bound by any argument, −GF = not bound)

The same complication arises in Latin. The binding conditions for *suus*, for example, must be different since *suus* systematically fails to show subject orientation.

The other complication is illustrated by the reflexive *seg* in the table above. This reflexive is simultaneously bound by a subject in one domain and not bound in a smaller domain. The net result in this specific case is that the binder must be the subject of the smallest finite clause containing the reflexive. The subject of a non-finite clause, for example, is not a possible binder.

We can state binding conditions generally on the form in (14), where the parts in italics should be replaced with values that are suitable for the class of NP in question.
A class of NP must (not) be bound (by a grammatical function) within its domain.

Lexical Functional Grammar uses binding equations to state such conditions. (15) shows the 'template' for these equations.

\[(\uparrow^\sigma \text{ANTECEDENT}) = ((\text{GF}_{\text{domain}} \text{ GF}_\text{pro} \uparrow) \text{GF}_\text{ant})\sigma\]

The binding equation associated with *se* (in its local use) is

\[(\uparrow^\sigma \text{ANTECEDENT}) = ((\text{GF}_{\text{domain}} \text{ GF}_\text{pro} \uparrow) \text{SUBJ})\sigma \neg(\rightarrow\text{SUBJ})\]

Informally, the equation acts like a search for a possible antecedent. The f-structure in (18) corresponds to the sentence in (17). We start with the f-structure labelled \(r\), which is the one that represents the reflexive. We search 'outwards' to the f-structure representing the preposition *cum* and the reflexive, and then further to the outermost f-structure representing the whole sentence. We then go one step 'inwards', into the f-structure representing the subject *Atticus*. The equation then states that the \(\uparrow^\sigma\) attribute in the semantic representation of the reflexive should equal the semantic representation of *Atticus*.

(17) *Atticum\(_i\)* me *se\(_j\)=cum in Hispaniam ducit, *Atticus.NOM me.ACC REF\(_{ABL}\)=with in Spain.ACC bring.3SG

'Atticus is taking me with him to Spain.'

The value of the orientation parameter is expressed by the \(\uparrow^\sigma\) towards the end of the equation. This has the effect of constraining the grammatical function of the antecedent in its containing f-structure.

The value of the domain parameter is expressed by \(\neg(\rightarrow\text{SUBJ})\). This has the effect of stopping the search for an antecedent when we reach an f-structure that contains a subject, i.e. when we reach the f-structure of the smallest clause containing the reflexive and a subject.

LFG's binding equations are an implementation of classical generative binding theory but with some distinguishing properties:

- Binding equations are stated over f-structures, which are abstract grammatical representations, in contrast to c-structures, which capture word order and constituency.
- There are no binding principles *per se*; the 'universal' properties of binding largely follow from other parts of the grammar. The structural dominance condition on binding, for example, is a consequence of the 'inside-out' formalisation.
- Binding equations are lexically associated with reflexives and non-reflexives.
Long-distance binding

So far we have only looked at examples of *se* when it is bound by the subject of its own clause (or, more precisely, by the structurally closest subject). This corresponds to the traditional notion ‘direct reflexive’.

But we know that the ‘indirect reflexive’ can be bound outside its own clause. The prototypical example is a sentence with a speech verb and an Acl-complement, like (1).

This behaviour is not unique to Latin. Several languages have reflexives that lead a ‘double life’, sometimes locally bound, sometimes bound elsewhere in the sentence. These are known as long-distance reflexives (LDRs).

Icelandic is a particularly well-studied example of a language with LDRs:

(19) Jón, segir [að Haraldur, viti [að Siggi elski sig_i/>]].

‘Jon says that Haraldur knows that Siggi loves him.’ (Maling 1984: 223)

One approach to data like this is to try to expand the binding domain. Let us look at some more Latin data to see if we can determine what the binding domain should be.

First we note that in an Acl the LDR does not have to be the subject (20). This is important because it rules out analyses that treat the embedded subject structurally as part of both the matrix clause and the Acl clause (e.g. the ECM analysis of English *he believes [himself to be a genius]*).

(20) ... Camillus mihi scripsit [te se_i/=cum locutum]

‘Camillus wrote to me that you had spoken to him.’ (Cíc. Att. 11.23.1)

Moreover, LDRs are not limited to Acl-complements. We find them in other non-finite complements, as in (21a), which is most likely an object-control complement, and even in finite complements (21b).

(21) a. ... Indutiomarum_i [Δ_i ad se_i cum CC obsidibus venire] iussit_i

‘he ordered Indutiomarus to come to him with 200 hostages’ (Caes. Gal. 5.4.1)

b. ... orat_i [ut eam det sibi_i].

‘He asks [her_i] to give her_i to him_i.’ (Pl. Cas. 42)

Based on this we might hypothesise that the binder is the subject of the smallest indicative clause containing the LDR. But (unlike local *se*) LDRs do not require the binder to be a subject (22), nor does the binder have to be in an indicative clause (22):

(22) ibi ego audivi ex illo_i [sese_i esse Atticum].

‘There I heard from him_i, that he_i’s an Athenian.’ (Ter. An. 927)
Where we usually do not find LDRs is in adjoined clauses, unless the adjoined clause is itself adjoined to a complement clause. Benedicto (1991) proposes a solution based on expanding the binding domain so that it fit this observation. While this gets an important empirical observation right she leaves out too many details. It is unclear, for example, how local binding would work. She also cites a number of counterexamples without giving any real solutions.

An intuition also not captured by this type of analysis is that the binder is closely associated with particular complement-taking verbs like dicere and scribere. The binder is a dependent of this verb and not just any NP buried within the syntactic structure below the verb.

The only work that discusses a way of formalising this intuition in detail is Solberg (2011). He ties LDR to clauses with a relative-tense interpretation (which includes clauses with sequence of tense) using a theory of temporal anchoring and propositional attitudes. This is an elegant theory but he ends up rejecting it because it incorrectly predicts that LDR can occur freely in purpose clauses and consecutive clauses.

**Logophoricity**

The classical example of a language with a logophoric pronoun (Hagège 1974) is Ewe (a Niger-Congo language):

\[
(24) \quad \text{a. Kofi be } \text{yè}_i/s_j/s_k=dzo. \quad \text{Kofi say LOG=leave} \\
\quad \quad \quad \quad \quad \quad \quad \text{`Kofi said that he (= Kofi) left.'} \\
\quad \text{b. Kofi be } \text{e}_s/s_j/s_k=dzo. \quad \text{Kofi say 3SG=leave} \\
\quad \quad \quad \quad \quad \quad \quad \text{`Kofi said that he/she (≠ Kofi) left.'} \\
\quad \text{c. Kofi be } \text{me}=dzo. \quad \text{Kofi say I=leave} \\
\quad \quad \quad \quad \quad \quad \quad \text{`Kofi said that I left.'}
\]

These examples come from (Clements 1975: 141-2) who also formulates the relevant empirical description of a logophoric pronoun:

\[\text{[The logophoric pronoun] yè is used exclusively to designate the individual (other than the speaker) whose speech, thoughts, feelings, or general state of consciousness are reported or reflected in the linguistic context in which the pronoun occurs.}\]

The examples below illustrate how this plays out. In (25a) and (25b) it is Kofi whose speech is reported in various ways, and the logophoric pronoun therefore refers to him. In (25c) the relation is harder to characterise but Ama’s feeling of happiness and its reason seem to be the relevant ingredients (Clements 1975: 158ff).

\[
(25) \quad \text{a. me-se tso Kofi gbɔ be } \text{yè}_i-xɔ \quad \text{nunana.} \quad \text{PRO-hear from Kofi side that LOG-receive gift}
\]
'I heard from Kofi that he [= Kofi] had received a gift.'

b. Kɔmi ɔxɔ agbalë tso Kofi, gbo be yè,-a-va me kpe na-e. Kwami receive letter from Kofi side that log-t-come cast block for-pro

'Kwami got a letter from Kofi saying that he [= Kofi] should come cast blocks for him.'

c. Ama kpɔ dyidɔ be yè,-dyi vi. Ama see happiness that log-bear child

'Ama was happy that she [= Ama] bore a child.'

Clements (1975) also noticed how Latin behaves in a similar way:

What may be termed the logophoric use of reflexive pronouns has been observed in a number of languages outside of Africa, and has long been documented for Latin and classical Greek, where it is usually termed 'indirect reflexivization'.

The parallels are indeed striking; compare (25a) and (22), for example.

Later work has shown that the set of logophoric predicates varies between languages. It has also shown that there is a pattern: If a language uses logophoric pronouns with knowledge predicates, for example, it will also use them with psychological predicates. The pattern can be expressed as a hierarchy of logophoric predicates:

(26) speech predicates > epistemic predicates > psychological predicates > knowledge predicates > perceptive predicates (Huang 2000: 185)

This hierarchy too fits LDR-use in Latin. The most typical examples in Latin are with verbs that are speech predicates, while examples with perceptive predicates (like *videre*) hardly exist, if at all. The ones in between are all attested. (27) shows a characteristic example of a psychological predicate.

(27) ... [totius Galliae sese, potiri posse] sperant, i all.GEN Gallia.gen refl.acc possess.inf be able.inf hope.pl

'they hope they can have power over all of Gaul' (Caes. Gal. 1.3.8)

Another characteristic of logophoric pronouns is that they can occur without a sentence-internal antecedent. In Latin we know this well from passages of indirect speech where *se* can refer back to an NP across a considerable number of sentences:

(28) ad ea Caesar, respondit: ... si id sit factum, sei nociturum to this Caesar.nom answered.3sg if this aux.subj.3sg done.ppp refl.acc harm.fam.acc nemini.

'nobody.dat

'To this Caesar answered: ... [two pages of text] ... If this were done, he [= Caesar] would harm nobody.' (Caes. Civ. 1.85)

Note that the reflexive *se* does not behave like a pronoun here. *Se* requires an antecedent in the discourse, and while it is plausible to argue that pronouns too require discourse antecedents, the antecedent of *se* cannot be any NP except the source of the information being reported.
This type of data is not easy to account for using classical generative binding theory. Büring (2005: 73) summarises the state of the art, primarily based on the available research on Icelandic, as follows:

*It is probably fair to say that the problems for movement accounts [= accounts based on adapting classical binding theory] are considerable and severe, but that logophoric approaches are only as restrictive as their underlying theory of logophoricity, an area where more work is required.*

A possible way of restricting this (somewhat) is to equip the lexical entry of a logophoric verb with something that flags one of its arguments as a possible antecedent of *se*. This is easily accomplished in LFG since the theory assumes that lexical entries are inserted into the syntax fully equipped with grammatical features. The lexical entry in (29), for example, flags the subject of *narrabat* in this way. The notation @LOG is a notational abbreviation; it is expanded using the definition in (30).

(29) \textit{narrabat} \ V (↑ \textit{PRED}) = ‘narrāre <\textit{SUBJ}, \textit{COMP}>’
@3SG
@IMPERFECT
@LOG(SUBJ, COMP)

(30) \textit{LOG}(f, d) = (((↑ f)_{LOGOCENTRE}) = +
(↑ d \textit{LOGOPHORIC}) = +

We then modify the binding equations for *se* so that they can search not only the relevant binding domain of a single sentence but also a (discourse-wide) representation of flagged antecedents.

This approach can be made to work with the type of data we have already seen, including non-trivial examples with multiple levels of embedding and several possible antecedents, as in (31).

(31) [(cum=que ex eo, de me percontaretur,] eum, sibi, ita
when=and from him.ABL about me.ABL ask.IMPF.SUBJ.3SG he.ACC REFLECT.DAT so
dixisse> narrabat, i <[se, mihi esse inimicissimum], [volumen=que sibi,
say.PERF.IMPF say.3SG REFL.ACC me.DAT be.IMPF enemy.SUP.ACC roll.ACC=and and REFLECT.DAT
ostendisse, orationis quam apud Caesarem contra me esset,
show.PERF.IMPF speech.GEN REL.ACC at Caesar.ACC against me AUX.IMPF.SUBJ.3SG
habiturus]].

have.FAP.NOM

‘He [= P. Terentius] said that when he [= P. T.] made inquiries with him [= Quintus] about
me, he [= Q.] told him [= P. T.] that he [= Q.] was my bitter enemy and showed him [= P. T.]
a roll containing a speech which he [= Q.] was going to make against me in Caesar’s
presence.’ (Cic. Att. 11.10.1)

But it runs into trouble when there is no overt logophoric verb, as in (32).

(32) ... statim quaeor ex Acto, ille, et tibi et sibi, visum et ita
at once from Acastus he.NOM and you.DAT and REFLECT.DAT seem.PPP and so
se, domi ex tuis audisse [ut nihil esset incommodi]
REFLECT.ACC at home from your hear.PERF.IMPF COMPL nothing be.SUBJ.IMPF.3SG WORNG.GEN

‘I at once enquired of Acastus. He said that, as you and he both thought and as he had
heard from your people at home, there was nothing wrong.’ (Cic. Att. 6.9.1)
There is also sometimes a mismatch between the true source of information and the participant who actually does the reporting. This typically happens when letters or ambassadors are sent to report something. In (33) the antecedent of *se* is the subject of *mittunt*, which is the Helvetii. A lexical approach would instead pick out *qui*, which refers not to the Helvetii themselves but to their ambassadors.

(33) legatosₐj ad eum mittunt, ..., quiₐj dicerent [sibi, esse in animo iter per provinciam facere]

"they [= the Helvetii] send ambassadors to him [= Caesar] ..., who are to say that they [= the Helvetii] intend to pass through the province" (Caes. Gal. 1.7.3)

It is probably possible to formulate a constrained theory that correctly predicts this. More problematic, and perhaps more interesting, is a small, residual group of examples that shows neither local binding nor clear logophoric effects. These typically involve a relative clause, causal clause, conditional clause or purpose clause, and it is as if the speaker temporarily chooses to step into the shoes of a sentence-internal protagonist for the duration of the clause.

(34) shows an example with a relative clause. The context of the example is as follows: Cicero, who is governor of a province, suggests that his predecessor abused his position and that, to top it off, Cicero’s attempt to rectify the situation has offended him. He explains this with the simile in (34).

(34) ut si medicus, cum aegrotus alii medico traditus sit, as if doctor when sick other.DAT doctor.DAT hand over.PPP AUX.SUBJ.3SG
irasci velit [ei medico [qui sibi get angry.INF want.SUBJ.3SG that.DAT doctor.DAT REL.NOM REL.DAT
successerit] si quae ipse in curando constituerit succeed.PERF.SUBJ.3SG if REL he.NOM in cure.ND.ABL decide.PERF.SUBJ.3SG
immutet ille ...]
change.SUBJ.3SG he.NOM

"as if a doctor, when his patient has been handed over to another doctor, were to choose to get angry with the doctor who succeeded him if he changed the treatment he had decided on" (Cic. Att. 6.1.2)

This phenomenon actually has a parallel in Japanese, which also has LDRs and logophoric effects:

(35) Taroₐ-wa, mosi Hanako-ga zibunₐ-o syootai-site-kure-tara, ooyokobi-suru-daroo.
Taro-TOP if Hanako-NOM REFL-ACC invite-BEN-COND be delighted-will

"Taro will be very pleased if Hanako invites him." (Oshima (2007: 31))

The judgements involved are, however, very subtle, and I suspect we would need a native speaker of Latin to decide if the phenomena are truly comparable.
References


