An HPSG Account of Nonfinite Verbal Complements in Latin
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Chapter 6

The Accusative Reflexive in A+I and AcI

6.1 Motivation

In the last two chapters we had a closer look at two structures. The first morphologically consisted of an NP\textsubscript{acc} and a VP\textsubscript{ac}. It was formerly referred to as *Accusativus cum Infinitivo* (AcI). The second consisted morphologically of an NP\textsubscript{acc} and a VP\textsubscript{part}. This one was formerly referred to as *Accusativus cum Participtio* (AcP). We examined the structure referred to as AcI and the structure referred to as AcP on a syntactic level and found out that in both cases, a more fine-grained differentiation is necessary. Instead of one structure AcI we have two which we suggested to call A+I and AcI. The same was the case with the AcP: here our analysis led us to the differentiation between the two structures A+P and AcP. Now let us focus on a new topic: the distribution of the reflexive pronoun *se* in infinitival constructions.

This topic was not selected arbitrarily. Our aim in this dissertation is to understand verbal complementation. Binding takes place between the anaphor and an antecedent which is often the subject. Binding can either be local (clause-internal) or cross-clausal (long-distance reflexivity). Focussing on binding criteria in Latin infinitive constructions thus seems to be a good impulse if we want to gain a deeper knowledge of the syntactic structure of verbal complements, in particular the grammatical relations which are used.

We decide to investigate only the distribution of the Latin reflexive pronoun in A+I and AcI-constructions, and not its distribution in A+P and AcP-structures. Especially the AcP-structure is extremely scarce. We do not find enough data in our corpus in which reflexive pronouns occur in A+P/ AcP constructions. So it is impossible to differentiate whether a construc-
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The lexical entry for *dicit* is

\[
(2) \quad \text{dicit} [\text{itv-lex}]
\]

\[
\text{arg-str} \quad \langle \text{NP}, \text{S} \left[ \text{dtrs} \quad \langle \text{NP}, \text{VP} \rangle \right] \rangle
\]

\[
\text{sem} \quad \langle \text{index} \quad \text{s} \rangle
\]

\[
\text{restr} \quad \langle \text{reln} \quad \text{dicere} \rangle
\]

We see that we have two very different structures. As section 6.5 below demonstrates, we expect similar patterns with respect to the antecedent-anaphor relations. But we do not know this for certain, and this chapter reports on investigations about similarities and differences in distribution.

6.3 Literature Overview

Before we start our own investigation, let us first have a look at what has already been written on the Latin reflexive pronoun. Literature on this topic is scarce. The authors generally work outside the framework of formal grammatical theories. Three authors will be discussed below: Fruyt (1987) and Szajnker (1995) who work in purely descriptive terms, and Benedicto (1991) who focusses on long-distance binding of the reflexive pronoun within the framework of Chomsky’s Government and Binding Theory (Chomsky, 1986).

6.3.1 Paradigm of the Reflexive Pronoun

In Latin, we have a reflexive personal pronoun and a reflexive possessive pronoun. The distribution of the possessive pronoun will not be discussed in this dissertation. We focus on the personal pronoun alone.

There are some peculiarities concerning the reflexive personal pronoun. It
is the only Latin pronoun that is unspecified for number and gender.\footnote{Latin has two numbers: singular and plural, and three genders: masculine, feminine, and neuter. Generally, Latin nouns and pronouns specify for number and gender.} Note also that there is no nominative form of the Latin personal reflexive pronoun. The paradigm is as follows:

<table>
<thead>
<tr>
<th>Case</th>
<th>Reflexive Pronoun</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>—</td>
</tr>
<tr>
<td>gen</td>
<td>sui</td>
</tr>
<tr>
<td>dat</td>
<td>sibi</td>
</tr>
<tr>
<td>acc</td>
<td>se</td>
</tr>
<tr>
<td>abl</td>
<td>secum / a se</td>
</tr>
</tbody>
</table>

### 6.3.2 Fruyt: A Semantic-Referential Interpretation of the Reflexive Pronoun

If we look up the reflexive pronoun in traditional grammars,\footnote{Cf. Kühner and Stegmann (1912:600-617).} a differentiation is made between the direct reflexive and the indirect reflexive. This is a well-known differentiation to which also Fruyt refers in her work: the direct reflexive refers to the clause-internal subject, and the indirect reflexive cross-clausally refers to the subject of the matrix clause (1987:205). The reflexive pronoun in the latter case is always found in a lower clause than its antecedent. This is supposed to be a more or less general rule, yet numerous exceptions may be adduced to this rule. The traditional grammars present meticulous enumerations of these counter-examples, whilst leaving the grammatical theory undiscussed. Following the work of Sznajder (1981) and Milner (1982), Fruyt aims at finding an explanatory principle for the frequent irregularities. Therefore she refers to the work of Hagège (1982, 1985), who first described the notion of logophoricity discovered in various African languages. Hagège defines a logophoric pronoun as a specialized pronominal form occurring always and only embedded under a verb of saying, thinking or perception and referring to the person whose speech, thoughts or perceptions are reported.

Fruyt differentiates between three levels of language: syntax, semantics, and a semantic-referential level which takes contextual information into account (1987:204). She argues that grammatical irregularities concerning the
reflexive pronoun only occur if the phenomenon is analysed in strictly syntactical terms. If, however, the perspective is changed and the behaviour of the reflexive pronoun is studied from a semantic-referential point of view, as Fruyt maintains, the irregularities will immediately dissolve. Fruyt discusses the direct as well as the indirect reflexive, however strongly focussing on the latter one.

The indirect reflexive is found in subordinate clauses subcategorized for by a matrix *verbum sentiendi et dicendi*. This is the phenomenon of indirect speech (*oratio obliqua*). We have a speaker in the matrix clause, and the speech that is reported by the speaker, found in the lower clause. The addressee of the speech does not have to be explicitly mentioned. Dealing with indirect speech, Fruyt investigates the syntactical status of the antecedent. Generally, she says, there is coincidence between the position of the grammatical subject and the semantic-referential value of the speaker or agent in a process of saying/thinking. This coincidence is found in (3):

(3) Camillus₁ mihi scripsit te secum₁ locutum.
Camillus₁(nom) me(dat) writes you(acc) with-him₁(abl)
to-have-spoken.
‘Camillus₁ writes me that you have spoken to him₁.’

*Cic.*, *Att.*, 11, 23, 1

Camillus is syntactically the nominative subject of the matrix clause. On the semantic-referential level, Camillus is the source of the utterance *te secum locutum*.

If the matrix *verbum sentiendi et dicendi* is passivized, the contextual source of the utterance still is the antecedent of the reflexive pronoun. Syntactically, the source is not a nominative NP, but an ablative PP. This is the case in example (4):
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(4) multa a Caesare, in eam sententiam many(nom.,pl.,neut.) by Caesar(abl.) in this sentence
dicta sunt, quare negotio desistere non said(nom.,pl.,neut.) are, why from-job to-withdraw not
posset, .. neque se indicare Galliam potius esse he-could, ... and-not self(acc) to-judge Gaul rather to-be
Ariovisti quam populi Romani Ariovist(dat) than people(dat) Roman(dat)
‘Caesar spoke at length in this sentence, why he could not withdraw from the job, ... and that he did not judge Gaul to belong to Ariov-
istanius rather than to the Roman people.’

Caes., B.G., 1, 45, 1

Fruyt argues that (3) and (4) differ only syntactically. On the level of context, both sentences show exactly the same behaviour in binding. If the
matrix verb is not a verb like dicere ‘to speak’ or scribere ‘to write’, but
audire ‘to hear’ the antecedent still is the source of the utterance, regarded
from a contextual perspective. This is illustrated in (5):

(5) vos ex M. Favonio audistis Clodium sibi
you from M. Favonius(abl) have-heard Clodius(acc) self(dat)
dixisse periturum Milonem to-have-said(acc) will-have-died Milo(acc)
‘You have heard from the mouth of M. Favonius; that Clodius told
him, that Milo will be dead.’

Cic., Mil., 44

The non-reflexive personal pronoun vos, syntactically the subject of the
matrix verb, stresses the listeners, those who receive the message. M. Favonius,
syntactically an ablative PP in (5), is the one who spoke and therefore the
antecedent of the reflexive pronoun sibi.

Fruyt comes to the conclusion that the various irregularities in cross-clausal
binding listed by the traditional grammarians disappear if we state that in
cross-clausal binding the antecedent is always the speaker, taken in a
broad sense. From the semantic-referential perspective, cross-clausal binding
in Latin is a regular phenomenon according to this view.
6.3.3 Sznajder: The Reflexive — a “Particular” Anaphor

Sznajder takes up the initial concept developed by Fruyt and works this out in more detail, stressing the ambiguous or ambivalent character of the reflexive. She puts it like this: “le réfléchi est et n’est pas un pronom personnel” (1995:132). — The reflexive is and is not a personal pronoun. Like Fruyt, she differentiates between direct (clause-internal) and indirect (clause-external) reflexivity.

Sznajder remarks that the clause-internally bound reflexive very rarely may take an inanimate antecedent. An example of this is shown in (6):

\[(6) \text{ neque se\textsubscript{i} luna\textsubscript{i} mutat and-not self(acc); moon(nom); transforms} \]

\[\text{‘And the moon does not transform itself.’} \]

Plaut., Amph., 274

In cross-clausal binding, however, the antecedent is always animate (1995:133). This is a necessary semantic condition. Specifying the concept already developed by Fruyt, she notes that the antecedent of the cross-clausally bound reflexive is the author of a reported speech. This author’s presence signals, either explicitly or implicitly, a discourse within the discourse, which means an opinion or point of view expressed which is not that of the main narrator. The indirect reflexive always refers to this “second narrator” or “sub-narrator” presented to the audience by the “main narrator”. He tells a story within the story, from his own perspective. Sznajder also refers to Hagège and his concept of logophoricity, claiming that logophoricity is not only found in African languages, but also in Latin. The difference between Latin and languages like Dogon for example is that languages like Dogon show two morphologically distinct pronouns; a reflexive and a logophoric pronoun. In Latin, however, one and the same morphological form functions as a reflexive and as a logophoric, fulfilling two different tasks: as a reflexive, the behaviour of the pronoun seems to be syntactically determined (clause-internal reflexivity), whilst as a logophor, it has to be looked at from a contextual point of view (cross-clausal reflexivity, 1995:138-141).
6.3.4 Benedicto: Long-Distance Reflexivity – Enlarging the Minimal Domain

In her article, Benedicto (1991) discusses long-distance reflexivity of the Latin reflexive personal pronoun within the grammatical framework of GB. Let us first recall the essential elements of Chomsky’s (1986) binding theory we already introduced in chapter 3 of this dissertation. Within the typology of GB, noun phrases are cross-classified by the two binary features anaphor and pronominal. GB works with empty and overt categories. Benedicto (1991) only focuses on overt categories. The overt categories existing in Latin, according to the theory of GB, are the pronoun *is*, the reflexive pronoun, and referential nouns, such as the name *Caesar*, for example:

- overt categories

  \[+a \quad -a\]

  \[+p \quad \text{is}\]

  \[-p \quad \text{se} \quad \text{Caesar}\]

In order to understand binding, we need a definition for c- or configurational command:

- Y c-commands Z iff:
  i) Z is contained in the least maximal projection containing Y; and
  ii) Z is not contained in Y.

Following Chomsky (1986), the [+ANAPHORIC] element *se* has to be bound within a certain local domain. GB defines binding in configurational terms:

- Y binds Z iff:
  i) Y and Z are coindexed; and
  ii) Y c-commands Z.

Let us take a simple example of local binding and see how Chomsky’s theory can explain this:

\[
\begin{array}{c}
\text{XP} \\
Y_i \\
\text{Antonius} \\
se_i \text{ laval} \\
\end{array}
\]
Antonius and se are coindexed. Y, Antonius, c-commands Z which is not contained in Y, but which is contained within the least maximal projection containing Antonius, i.e. XP.

Note that Chomsky's binding theory focusses on “A-binding” where the binder is in an A or argument position, that is, subject, object, or the object of a preposition. Z is called A-bound if it is bound by a Y in an argument position. Otherwise, Z is called A-free. The anaphor se is A-bound by Antonius, because Antonius is the subject of the clause, and so the antecedent is an argument.

Benedicto (1991) points out that the reflexive personal pronoun appears in both local as well as long-distance reflexivity. In local reflexivity, it behaves as a “strict” anaphor, following Principle A of the binding theory.

- **Principle A**: An anaphor is bound in a local domain,

As a “long” anaphor, the reflexive picks an antecedent outside its minimal clause. The latter is the phenomenon she further investigates.

Benedicto comes up with a theory explaining the conditions under which the minimal binding domain can be enlarged. Examples (7) and (8) show the kinds of complement-clauses where the anaphor may occur:

(7) Cicero_2_ effecerat ut Quintus Curius consilia
    Cicero(nom)_3_ had-achieved that Quintus Curius designs(acc)
    Catilinae_4_ sibi_5_ proderet.
    Catilinae(gen) self(dat)_5_ should-reveal.
    ‘Cicero had induced Quintus Curius to reveal Catiline’s designs to
     him.’

_Salt., Cat., 26, 3_

---

3The term anaphor is used in the Chomskyan sense here. The general definition for an anaphor is the following: it is an item with little or no intrinsic meaning or reference that takes its interpretation from another item in the same sentence or discourse, its antecedent. In GB, an anaphoric item is additionally specified as being either a reflexive or a reciprocal pronoun or an NP-trace. As Latin has no reciprocals, the term anaphor therefore is used to refer to the reflexive pronoun in Latin, if it is used in the sense of the GB-definition.
(8) Camillus\(_i\) mihi scripsit te secum\(_i\),
Camillus(nom) me(dat) wrote you(acc) with-him(abl),
locutum.
to-have-talked
‘Camillus\(_i\) wrote to me that you had talked to him\(_i\).’

_Cic., Att., 11, 23, 1_

In (7), the anaphor is found in a finite _ut_-clause, and in (8), the anaphor is situated in an infinitival clause. We note that example (7) strains the explanations of Fruyt and Sznaider, which license anaphors cross-clusally only when the antecedent is the source of a speech act reported in the minimal clause in which the anaphor occurs. Following Koster (1987), Benedicto formulates a dynasty concept in order to explain cross-clausal or long-distance reflexivity (1991:172):

- A _dynasty_ is a chain of governors such that each governor governs the minimal domain containing the next governor.

In (7), the matrix verb _effecerat_ governs the minimal domain containing the next governor, _S’_, the subordinate _ut_-clause which contains the anaphor. A dynasty can be constructed out of these two clauses, and the anaphor is successfully passed up to its antecedent. The following scheme illustrates long-distance binding in (7) and (8):

**binding scheme**

```
          β
           
          NP
           .
            
           X°
           α
             
             
             
             domain containing anaphor Y
```

α is the minimal domain containing Y, the anaphor. If α is an _S’_-complement to _X°_, a dynasty is established. The domain in which the anaphor Y can be bound is enlarged up to β. Here it can find its antecedent, NP (Benedicto, 1991:172-174).
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The second part of her article focusses on possible non-subject antecedents in long-distance binding. Following Giorgi (1984), Benedicto introduces a thematic hierarchy (1991:179):

1. Agent
2. Experiencer
3. Theme and others

Usually, the syntactic subject represents the $\theta$-role agent. However, when there is no agent, the experiencer becomes the most prominent element in the thematic hierarchy. Benedicto claims that the most prominent argument of a $\theta$-grid is the most appropriate antecedent of a long-distance anaphor. In order to demonstrate this, she presents the following example involving a copula construction as a matrix verb and a dative NP as antecedent of the long-distance anaphor.

(9) iam inde ab initio Faustulo$$_i$$ spec
Already therefore from beginning(abl) Faustulus(dat)$$_i$$ hope(nom)
fuerat regiam stirpem apud se$$_i$$ educari,
 had-been royal(acc) stock(acc) next-to self(acc)$$_i$$ to-be-educated.
‘Therefore already since the beginning, Faustulus$_i$ had hoped that someone of royal stock was being educated with him$_i$.’

Liv., 1, 5, 5

The $\theta$-grid in which the dative NP Faustulo participates has no agent. Therefore the experiencer becomes the most prominent argument. The anaphor is $p$-bound, i.e. bound by the most prominent argument. The $p$-domain includes an Acl-complement clause in (9) (1991:179f.). Finally, she discusses the following two examples:

(10) Canum$_i$ tam fida custodia quid significat
dogs(gen)$_i$ such trusty watchfulness(nom,sg,fem) what means
alud nisi se ad hominum commoditates esse
e else except self(acc)$_i$ for men(gen) comfort(acc) to-be
generatos?
created(acc,pl,masc) ?
‘The trusty watchfulness of the dogs$_i$, what else does it mean, except that they were created for human comfort?’

Cic., N.D., 2, 158
(11) A Caesarei valde liberaliter invitavit sibi ut sim legatus.

I-am(invite) very generously I-am-invited self(dat) that

I-am(subj) legate(nom).

‘Caesar, most liberally invites me to take a place on his personal staff.’

_Cic., Att., 2, 18, 3_

Benedicto states that both (10) and (11) are strange cases. In (10), the antecedent is a genitive NP adjunct (_caenum_) depending on a nominative NP (_custodia_). (11) seems even stranger to her. The antecedent is the ablative PP _a Caesare_. She tries to explain both examples (10) and (11) by the concept of _Topic_-binding (1991:181). Benedicto argues that in both (10) and (11), the antecedent is found in a prominent position with respect to linearization. Long-distance binding is triggered by word order.

Benedicto is left, then, with an account in which reflexive pronouns may be bound due to their immediate syntactic context (Principle A), their extended context (dynastic binding), their position in a thematic grid, or their status as a topic.

### 6.4 The HPSG Binding Theory

In section 7 of chapter 3, we presented the binding theory. We repeat the most important definitions here. The HPSG binding theory focuses on the notion of obliqueness. The relation called obliqueness-command or _o-command_ is defined in the following terms:

- Let _Y_ and _Z_ be _synsem_ objects with distinct _local_ values, _Y_ referential. Then _Y_ _o-commands_ _Z_ just in case _Y_ locally _o-commands_ _X_ dominating _Z_. _Y_ _locally o-commands_ _X_ iff _Y_ is less oblique than _X_.

In allowing the obliqueness relation to be mediated by the dominance relation, the HPSG account effectively incorporates Koster’s (1987) notion of dynasty. In case _X_=_Z_, we have _local o-command_ which is a special case of the more general relation called _o-command_. Using the definition of _o-command_ the definition of _o- or obliqueness-binding_ runs as follows:

- _Y_ (locally) _o-binds_ _Z_ just in case _Y_ and _Z_ are coindexed and _Y_ (locally) _o-commands_ _Z_. If _Z_ is not (locally) _o-bound_, then it is said to be (locally) _o-free_.


The HPSG binding theory is formulated in terms of three principles:

1. Principle A. A locally $\omega$-commanded anaphor (reflexive) must be locally $\omega$-bound.

2. Principle B. A personal pronoun must be locally $\omega$-free.

3. Principle C. A nonpronoun must be $\omega$-free.

We shall be concerned exclusively with Principle A, the Principle governing the distribution of reflexive pronouns. Now let us consider an example:

\[(12)\] neque se$_i$ luna$_i$ mutat.
\[\quad\text{and-not self(acc); moon(nom)$_i$ transforms}\]
\[\quad\text{‘And the moon does not transform itself.’}\]

Plaut., Amph., 274

Is the anaphor $se$ locally $\omega$-commanded? Following our definition of (local) $\omega$-command, we see that in (12) $Y$ of the $\omega$-command definition corresponds to $luna$, and $X=Z$ corresponds to $se$. $luna$ therefore locally $\omega$-commands $se$ because $luna$ is the subject of the sentence and therefore less oblique than the accusative complement $se$. So $se$ is locally $\omega$-commanded. As $se$ and $luna$ are coindexed, $se$ is also locally $\omega$-bound. Let us also have a look at the arg-str of $mutat$ (13):

\[(13)\] \textbf{mutat}
\[
\quad\begin{array}{c}
\text{spr } \langle \text{NP}_{\text{nom}} \rangle \\
\text{comps } \langle \text{NP}_{\text{acc}} \rangle \\
\text{arg-str } \langle \text{NP}_{\text{nom},i}, \text{NP}_{\text{acc},i} \rangle \\
\end{array}
\]

On the arg-str list we see that the NP$_{\text{nom}}$ $luna$ is the least oblique element. Coinlexation of NP$_{\text{nom}}$ and NP$_{\text{acc}}$ shows us that $se$ is correctly locally $\omega$-bound.

We see that the HPSG binding theory correctly predicts binding of the anaphor in (12).

### 6.5 Predictions

In this chapter, we investigate the distribution of the personal reflexive pronoun in A+I and Acl-constructions.\footnote{As we make predictions in this chapter, all examples are marked with a question mark, because we do not know yet whether they will turn out to be grammatical or not.} So, where do we expect the pronoun to appear?
6.5.1 Predictions on the Distribution of the Reflexive Pronoun in A+I-constructions

The A+I is found with transitive object-control verbs. These A+I verbs take two complements, an accusative object (NP_{acc}) and a verbal infinitive (VP_{inf}). The verbal infinitive can be either transitive or intransitive.

Let us adopt the following methodology: first we ask where do we expect the reflexive NP to occur? In a second step we empirically verify whether the reflexive does occur in the expected positions.

- in the position of accusative object of the matrix verb

(14) \(?cogit_i \quad se_i \quad abire.
he-forces; self(acc)_i to-leave.
‘He forces himself to leave.’

In (14), the VP_{inf} is intransitive. The reflexive pronoun is the accusative object of the matrix verb and the accusative subject of the VP_{inf}. The matrix subject is the only immediately available antecedent.

- in the position of an object or PP subcategorized for by the VP_{inf}

(15) \(?cogit_i \quad eum_j \quad se_j \quad occultare.
he-forces; him_j self(acc)_j to-hide.
‘He\(_i\) forces him\(_j\) to hide himself\(_j\).’

In (15), the VP_{inf} is transitive. The reflexive pronoun is the accusative object of the VP_{inf}. Its antecedent is the accusative subject of the VP_{inf} which is the accusative object of the matrix verb.

These are the two positions in which we expect the reflexive pronoun to appear, following our previous analysis of the A+I within the framework of HPSG and following the predictions of the HPSG binding theory.

6.5.2 Predictions on the Distribution of the Reflexive Pronoun in AcI-constructions

The AcI is governed by intransitive verbs. These intransitive verbs are either impersonal constructions or they belong to the semantic group of *verba sentiendi et dicendi*. The AcI was analysed as an infinitival clause. Its VP_{inf} can be either transitive or intransitive. Where do we expect the reflexive pronoun to appear?
6.5. *PREDICTIONS*

- in the position of an object or PP subcategorized for by the VP

(16) ?constat eos\textsubscript{i} sibi\textsubscript{i} panem coemisse  
\hspace*{1em} it-is-certain them\textsubscript{i} self(dat)\textsubscript{i} bread(acc) to-have-bought  
\hspace*{1em} ‘It is certain that they bought bread for themselves.’

In (16), the impersonal verb *constat* subcategorizes for an Acl-clause. *eos* is the accusative subject of the Acl and *coemisse* is its infinitival verb. The reflexive pronoun is *sibi*, an NP\textsubscript{as} that is subcategorized for by *coemisse* as its dative object. *sibi* is coindexed with the clause-internal subject *eos* that is syntactically less oblique than *sibi*.

(17) ?dicit puellam\textsubscript{i} se\textsubscript{i} occultare.  
\hspace*{1em} He-says girl(acc)\textsubscript{i} self(acc)\textsubscript{i} to-hide.  
\hspace*{1em} ‘He says that the girl is hiding herself.’

In (17), the *verbum sentiendi et dicendi dicit* subcategorizes for the Acl-clause *puellam se occultare*. *occultare* is a transitive verb which takes the reflexive pronoun *se* as its direct object. The antecedent of *se* is *puellam*, the Acl-internal subject.

(18) ?notum est puellam\textsubscript{i} secum\textsubscript{i} disputare.  
\hspace*{1em} known it-is girl(acc)\textsubscript{i} self-with(abl)\textsubscript{i} to-argue.  
\hspace*{1em} ‘It is known that the girl talks to herself.’

In (18), the impersonal construction *notum est* subcategorizes for an Acl-clause. *puellam* is the Acl-internal accusative object, serving as an antecedent of the ablative anaphor *se* we find in the PP *secum*.

- in the position of accusative subject of the Acl

As we mentioned above, there is no nominative form of the reflexive personal pronoun. Therefore, we cannot find the reflexive personal pronoun in the position of (nominative) subject of a finite clause. The Acl, however, is an infinite clause which has an accusative subject. So we can expect to find the reflexive as the subject of the Acl, as in (19):

(19) ?dicit\textsubscript{i} se\textsubscript{i} venire.  
\hspace*{1em} he-says\textsubscript{i} self(acc)\textsubscript{i} to-come.  
\hspace*{1em} ‘He\textsubscript{i} says that he\textsubscript{i} is coming.’

Note that in (19) binding crosses the clausal boundaries. As the Acl as a whole is subcategorized for by the matrix verb, the Acl-internal subject, being the least oblique element of the Acl, is more oblique than the subject
of the matrix clause. In the position of subject of an AcI the reflexive would be licensed dynastically, following Koster (1987). As we noted above, the HPSG notion incorporates Koster’s ideas. Binding in (19) is also predicted by the HPSG binding theory. There are many examples of se in embedded VPs which take matrix subjects as antecedents (in spite of intervening, non-controlling embedded subjects). We will sidestep the issue of whether this sort of binding is of a piece with standard syntactic binding theory. See (22) below.

6.6 Empirical Investigations

Our analysis of the A+I and the AcI plus the HPSG binding theory give us clear ideas where to expect the reflexive personal pronoun. We do not expect A+I and AcI to show differences concerning the distribution of the reflexive. Are our expectations proven right or wrong?

6.6.1 The A+I: What Do We Find?

First we focus on the distribution of the reflexive personal pronoun in the A+I. Strangely, we never find se in the position of accusative subject of the VP_{ac} if the VP_{ac} is in active voice. So, examples such as (13) are unattested. However, we do find se as accusative subject of the VP_{ac} if this VP_{ac} stands in passive voice, as in (20):

(20) duci se_{i} exemplum ad consules iubet_{i}
    to-be-led self(acc)_{i} immediately to consuls he-orders_{i}
    ‘He orders that he be led immediately to the consuls.’

Liv., 9, 24, 2

In (20), iubet is the matrix verb. The infinitive is the passive duci ‘to be led’. Note that with object-control verbs there may be semantic differences between active and passive embedded forms.\footnote{For the distinction between raising- and control-verbs, see section 6 of chapter 3.} Note that in (20), the NP_{ac} se can semantically not be the one who receives the order. The one who orders does not give an order to himself, but he gives the order to someone else that he be led. This suggests that we may be dealing with a special variant of
verbal complementation in (20), one closer to the AcI.⁶⁷

As was expected, we do find se in the position of accusative object of the VP_{sp}. Note, however, that in this position the anaphor can have not only one, but two possible antecedents. Observe (21) and (22):

(21) his fere mille effectis centum admiscet; 
these(ABL) almost a-thousand made-out(ABL) one-hundred he-mixes; 
equites; et nocte super castra in montes evadere 
cavalrymen(ACC); and by-night above camp on mountains to-evoke 
ac silvis se; occultare iubet; 
and in-woods self(ACC); to-conceal he-orders; 
‘Having in this way made out near a thousand, he{1} mixed a hundred 
cavalrymen{1} with them and ordered [them{1}] to flee by night into the 
mountains, above the camp and conceal themselves{1} in the woods’

Liv., 7, 14, 8

⁶⁷Flickinger and Nerbonne (1991) discuss similar examples of English adjectival complementation. Normally the for-phrase in construction with an adjective specifies an experiencer that is also the controller of the VP:

It is hard for Pierre to speak English.

But there are examples where the two functions of the for phrase can be teased apart:

It is hard for Pierre for his brother to speak English.

⁷The affinity between sentences like (20) and the AcI seems to be quite close. Let us consider another example here, which was brought to my attention by the student Judith Jurjens:

(20a) an quod non se referri iussit? 
or because not self(ACC) to-be-brought-back he-ordered 
‘...or because he did not order that he be/ to be brought back?’

In (20a) se and iussit are coindexed. Semantically it is clear that he, the subject of iussit, 
does not give the order (to be brought back) to himself.
(22) Consul$_i$ arma capere milites$_j$ iubet et consul(nom)$_i$; weapons(acc) to-take soldiers(acc)$_j$ orders and sequi se$_i$ extra vallum to-follow self(acc)$_i$ outside rampart

'The consul$_i$ ordered the soldiers$_j$ to arm and follow him$_i$ outside the rampart.'

Liv., 10, 35, 5

We expected to find (21). In (21), se is locally o-commanded by equites, the accusative subject of the VP$_{act}$ occultare which is less oblique than the accusative object se. Note that grammaticality of (22) does not follow from the HPSG binding theory. In (22), the anaphor se is locally o-commanded by milites, however, it is bound by the more remote nominative subject of the matrix verb, consul. For such cases we must allow that nonlocal o-commanding elements (in Koster's sense) likewise function as antecedents.

6.6.1.1 More Irregularities Involved with A+I-constructions

In the previous section it has been noted that we do not find the accusative reflexive se in the position of direct object of the matrix verb, if the VP$_{inf}$ is active.\footnote{If we change our analysis in cases such as (20), claiming that in (20) we have no coercion, but that iubet subcategorizes for an Acl instead, we could state that we never find the accusative reflexive se in the position of direct object with A+I constructions. This—alternative—analysis of (20) would thus reduce the number of irregularities noticed with A+I constructions.} Strangely enough, when object-control verbs subcategorize for only an NP$_{acc}$ and no further VP$_{act/fut}$, this NP$_{acc}$ can be the reflexive se, as is attested by (23):

(23) ipsae$_i$ se$_i$ cogit.

this-one$_i$ self(acc)$_i$ he-forces.

'This one forces himself.'

Sen., Ben., 6, 21, 3

Thus se can be the direct object of an object-control verb if this verb subcategorizes for no further VP$_{act/fut}$. If the object-control verb subcategorizes for an NP$_{acc}$ and a VP$_{inf}$ in passive voice, se can be the subject of the VP$_{inf/pass}$. We find no occurrences of an object-control verb subcategorizing for an anaphorical NP$_{acc}$ se and an active VP$_{act/fut}$. This is a peculiar gap in such a large corpus.
6.6. EMPIRICAL INVESTIGATIONS

6.6.1.2 Object-control Verbs Governing Dative Case

With *permittere*, we note the same irregularities we already found with the A+I-verbs, i.e. object-control verbs governing accusative case.

(24) Quis autem vobis permittit inclinare leges et iura
who but you(dat) allows to-bend laws(acc) and rights(acc)
to-move?
‘But who allows you to bend the laws and to change the rights?’

*M. Fabius Quintilianus (dubium), Declamationes minores, 345, 5, 1*

(24) illustrates the regular use of *permittere*. The matrix verb, *permittit*, subcategorizes for an NP_{dat}-object, *vobis*, and two VP_{acc}s, the first one being *inclinare leges* and the second one being *iura transferre*. If we search for occurrences of *permittere* with the reflexive pronoun, we only get examples such as (25):

(25) Illie sibi, plurimum luxuria permittit.
there self(dat), maximum(acc) luxury(nom) allows.
‘There luxury allows itself the maximum.’

*Sen., Ep., 51, 3*

In (25), *permittit* acts as a ditransitive verb, taking a direct object (NP_{acc}), *maximum*, and an indirect object (NP_{dat}) which is the reflexive *sibi*. No examples of forms of *permittere* subcategorizing for the NP_{dat} *sibi* and a VP_{acc} are attested. So the same gap noted for accusative reflexives is continued here.

6.6.1.3 Frequency of Reflexives in A+I-constructions

Our corpus consists of 390,805 sentences, which contains approximately 6,100,000 words. The reflexive pronoun *se* occurs 23,345 times within these 390,805 sentences. From this it follows that we find the anaphor *se* once in about 16.74 sentences. Now a second test corpus was created, comprising 1000 sentences chosen randomly from the BTL corpus. By means of the test corpus, the frequency of the A+I-construction was investigated. The test corpus contains 82 A+I-constructions. If the distribution of the reflexive *se* were regular in A+I-constructions, then we would expect to find it 4.9 times within the A+I-constructions of our test corpus. Actually, however, *se* appears only once with an A+I-construction. From this frequency in an arbitrary sample as well as from the results of this research on the BTL as a
whole, we maintain that there is a strong tendency to avoid the use of se in A+i-constructions. Below we list the A+i-verbs that were tested for possible occurrence with the reflexive pronoun. The numbers indicate how frequently the construction was found with a reflexive. The se might have been either the subject of the VP_{se} or its object.

**Frequency of obj-ctrl verbs co-occurring with the reflexive**

<table>
<thead>
<tr>
<th>obj-ctrl verb with reflexive</th>
<th>English translation</th>
<th>frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>accusare</td>
<td>to accuse</td>
<td>2</td>
</tr>
<tr>
<td>admonere</td>
<td>to admonish</td>
<td>2</td>
</tr>
<tr>
<td>avertere</td>
<td>to avert</td>
<td>2</td>
</tr>
<tr>
<td>cogere</td>
<td>to force</td>
<td>37</td>
</tr>
<tr>
<td>cupere</td>
<td>to want</td>
<td>1</td>
</tr>
<tr>
<td>exigere</td>
<td>to demand</td>
<td>0</td>
</tr>
<tr>
<td>impellere</td>
<td>to impel</td>
<td>2</td>
</tr>
<tr>
<td>imperare</td>
<td>to order</td>
<td>0</td>
</tr>
<tr>
<td>iubere</td>
<td>to order</td>
<td>63</td>
</tr>
<tr>
<td>licere</td>
<td>to be allowed</td>
<td>0</td>
</tr>
<tr>
<td>mandare</td>
<td>to charge with</td>
<td>2</td>
</tr>
<tr>
<td>permittedere</td>
<td>to permit</td>
<td>0</td>
</tr>
<tr>
<td>poscere</td>
<td>to demand</td>
<td>0</td>
</tr>
<tr>
<td>postulare</td>
<td>to postulate</td>
<td>4</td>
</tr>
<tr>
<td>prohibere</td>
<td>to prohibit</td>
<td>1</td>
</tr>
<tr>
<td>timere</td>
<td>to fear</td>
<td>2</td>
</tr>
<tr>
<td>velle</td>
<td>to want</td>
<td>4</td>
</tr>
<tr>
<td>vetare</td>
<td>to disallow</td>
<td>3</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>125</strong></td>
</tr>
</tbody>
</table>

It is striking that the reflexive almost never appears in object-control constructions, except with the verbs cogere and iubere. These are the only verbs with which the accusative reflexive se is found at a higher than marginal frequency. So it is very hard to decide whether the fact that we never found the reflexive as the subject of an active VP_{se} in an object-control construction allows us to conclude that this construction is ungrammatical. It may simply be unattested.

It is also not plausible to assume that the reflexive were semantically peculiar in these sentences. In other languages like English or German object-control constructions with a reflexive in the position of controller are grammatical and are often found:
6.6. **EMPirical investigations**

(26a) He forces himself to do his job.

(26b) Er zwängt sich, seine Arbeit zu tun.

    he forces self(acc), his job to do.

‘He forces himself to do his job.’

It is very strange that in Latin (23) and (25) are attested whilst we find no occurrence of an object-control verb subcategorizing for a reflexive NP and an active VP_{adj}. Compare (27a) to (27b):

(27a) ipse

        se

        cogit.

    this-one self(acc); he-forces.

‘This one forces himself.’

*Sen., Ben., 6, 21, 3*

(27b) ???ipse

        se

        cogit abire.

    this-one self(acc); he-forces to-go.

‘This one forces himself to go.’

The explanation that reflexives do not appear as objects in control constructions due to the semantic implausibility of ‘forcing oneself’ or ‘persuading oneself’ can thus not be generally valid. The size of the sample precludes a statistical evaluation of the explanation.

6.6.2 **The AcI: What Do We Find?**

We have already seen that the HPSG binding theory cannot fully explain the binding phenomena found with the A+I construction. So what about the AcI? Are our predictions proven wrong there as well? We predicted to find local as well as cross-clausal or long-distance reflexivity with the AcI. In local reflexivity, we expect the reflexive pronoun to appear in the position of object or PP, bound by the AcI-internal accusative subject. And indeed, we find what we expect:

(28) Ubi cūm, castris se, tenere Caesar intellexit.

    When him(acc), in-camp self(acc), to-hold Caesar saw

‘When Caesar understood that, he stayed (kept himself) in the camp.’

*Caes., BG, 1, 49, 1*

In (28), *Caesar intellexit* is the main clause, subcategorizing for the AcI *cūm castris se tenerer*. *cūm* and *se* are coindexed, and *se* is bound by the AcI-internal accusative subject *cūm.*
(29) Ne defensionem fecisti, ipsos i sibi i frumentum not defence(acc) you-have-made, these(acc) i self(dat) i corn coemisse to-have-bought 'You did not even make the defence that these persons subsequently bought corn for their own purposes'

_Cic., Verr., 2, 3, 175_

In (29), we have the AcI _ipsos sibi frumentum coemisse_. _coemisse_ is a transitive verb, taking _frumentum_ as its direct object. The verb additionally takes a dative object, the anaphor _sibi_ which is bound by the accusative subject _ipsos._

(30) Non possum estimare plus quemquam i a se; ipsos i quam me not I-can to-conceive more someone(acc) i by self; self i than me a te amari. by you to-be-loved 'I cannot conceive anybody's loving himself more than you love me.'

_Cic., Epist., 15, 21,3_

In (30), we have an AcI with a passive VP_{int} _amari_. The anaphor is the ablative PP _a se ipso_ which is bound by the AcI-internal accusative subject _quemquam_. In all three examples (28)-(30) where local reflexivity is involved, we found exactly what we expected. The anaphor is never in the least oblique position of the clause and it is always bound by the clause-internal (accusative) subject which takes the least oblique position.

Now we investigate long-distance reflexivity. Look at (31):
tion is simply unattested due to lack of data or whether it is ungrammatical. Therefore we concentrate on the distribution of the reflexive pronoun in A+I and AcI-constructions alone.

A less formal presentation of the results given in this chapter can be found in Schoof (2004).

6.2 Analytical Results so Far

Let us repeat: the A+I is found with object-control verbs. It should be analysed as consisting of two constituents, the accusative object (NP\text{oa}) and an infinitival complement (VP_{ac}). The matrix verb exercises a semantic restriction on both complements. The structure of an A+I looks as follows:

\[
\begin{array}{c}
\text{A+I} \\
\text{S} \\
\text{VP} \quad \text{NP} \quad \text{VP} \\
iubeo \quad te \quad venire
\end{array}
\]

The lexical entry for \textit{iubeo} is:

(1) \textit{iubeo} \text{ verb}  \text{ no-adverb}

\[
\begin{array}{c}
\text{arg} \text{st.} \\
\text{index} \\
\text{sem.}
\end{array}
\]

\[
\left< \text{NP} \quad \text{NP} \left[ \text{head case} \right] \quad \text{VP} \left[ \text{vform \text{gf}} \quad \text{gpr} \quad \text{sem} \left[ \text{index} \right] \right] \right>
\]

The AcI is found with intransitive verbs, either with impersonal constructions, such as for example \textit{constat} ‘it is certain’, or with verbs belonging to the semantic group of \textit{verba sentiendi et dicendi}. We analysed the AcI as a nonfinite clause, i.e. as one constituent depending on the matrix verb. No semantic restriction is exercised on this one complement. The structure of an AcI looks as follows:
6.6. **EMPIRICAL INVESTIGATIONS**

(31) dicit se defendere acta.
he-says self(acc) to-defend acts
‘He says that he is defending the acts.’

_Cic., Phil., 5, 7, 77_

We again find what we predict to find. The accusative anaphor _se_ takes the position of accusative subject of the _Acc_. Its antecedent is the nominative subject of the matrix clause which is less oblique than the least oblique element of the subordinate clause. However, we find more examples of long-distance reflexivity in Latin, and these are not predicted by the HPSG binding theory. Look at (32):

(32) Multa a Caesare dicta sunt neque se indicare
many(acc,pl,neutr) by Caesar(abl) said were and-not self(acc)_i
to-judge
‘Caesar said that they were and did not admit ...’

_Caes., BG, 1, 45, 1, example taken from Fruyt (1987)_

In (32), the matrix clause _multa a Caesare dicta sunt_ is in passive voice. The anaphor _se_ takes the position of accusative subject of the _Acc_ _se_ _indicare_. Its antecedent is the PP _a Caesare_, and it is not at all clear whether this PP is less oblique than the clause in which the anaphor _se_ appears.

Note that in long-distance reflexivity not only the _Acc_-internal accusative subject _se_ can be bound by a PP in the higher clause. Contrary to the HPSG binding theory long-distance reflexivity can also occur if the anaphor is not the subject of the _Acc_. Look at (33):

(33) Vos ex M. Favonio audistis Clodium sibi
You(pl) from M. Favonius have-heard Clodium(acc) self(dat)_i
to-have-said
‘You have heard from the lips of Marcus Favonius that Clodium told him ...’

_Cic., Mil., 44, 35, example taken from Fruyt (1987)_

In (33), the dative reflexive _sibi_ is not locally bound by the NP _Acc_ _Clodium_ which is the subject of the _Acc_. Neither is _vos_, the subject of the matrix clause, the antecedent of _sibi_. The anaphor is bound by the ablative PP _ex M. Favonio_, situated in the higher clause.
Surprisingly, however, we never encounter examples of long-distance reflexivity in which *se* is the accusative object of the Acl and the antecedent is found in a higher clause. The following example is unattested and probably ungrammatical:

(34) ??dicit$_{i}$ soldatos$_{j}$ se$_{i}$ sequi
he-says$_{i}$ soldiers(acc)$_{j}$ self(acc)$_{j}$ to-follow
‘He$_{i}$ says that the soldiers$_{j}$ are following him$_{i}$.’

Impersonal constructions are subjectless. So if we have an impersonal construction subcategorizing for an Acl, *se* should not be expected as its accusative subject, according to the HPSG binding theory. Note, however, that a genitive complement of an impersonal construction can serve as antecedent of the anaphor situated in an Acl-clause subcategorized for by the impersonal matrix verb. This is shown in (35):

(35) Aratoris$_{i}$ interest ita se$_{i}$ frumenta habere.
farmer(gen)$_{i}$ interests so self(acc)$_{i}$ crops(acc) to-have
‘To the farmer it is important to have crops’

_Cic., Verr., 3, 147_

In (35), the genitive NP *aratoris* is the antecedent of the anaphor *se*. Yet binding in Latin can take even stranger forms. Let us examine (36):

(36) Nullo loco castra Volscorum
no place(abl) camp(acc,pl,neutr) of-the-Volsci(gen,pl,masc)
esse nec commissuros se$_{i}$ proelio apparuit
to-be and-not to-join(Inf,Fut.) self(acc)$_{i}$ battle(dat) it-was-evident
‘It was evident that the Volsci$_{i}$ had no camp anywhere so that therefore they$_{i}$ did not propose to risk a battle.’

_Liv., 4, 59, 2_

In (36), the impersonal construction *appear* subcategorizes for two Acls. The first one is *nullo loco castra Volscorum esse*. The second one is *commissuros se proelio*. *Se* is the accusative subject of the second Acl. Its antecedent is the genitive specifier *Volscorum* of the accusative subject *castra* of the first Acl. So we see that the antecedent of the anaphor does not even need to be an argument.
6.6.3 Frequency of Reflexives in AcI-constructions

Recall from the previous section that we found out that there is a strong tendency in Latin not to use the reflexive pronoun in object-control constructions. We find the reflexive *se* approximately once in 16.74 sentences in the BTL corpus. Our test subcorpus, comprising 1000 sentences randomly chosen from the BTL corpus, is also used to check the frequency of the AcI-clause. It contains 212 AcI-constructions. Assuming the distribution of the reflexive *se* to be regular in AcI-clauses, we expect to find *se* 12.67 times within these constructions. However, *se* actually appears 21 times within AcIs in our test corpus. So there is a tendency to use the reflexive more often than independently expected within the AcI. The regular distribution of *se* is about 6%, whilst in AcI-clauses it reaches 10%. But is this increased use also statistically significant? The standard deviation is calculated by means of the following formula:

\[ sd = \sqrt{n \times p(1-p)} \]

\(sd\) is the standard deviation; \(n\) is the number of sentences; and \(p\) is the probability of occurrence of *se*. The number of sentences used in the subcorpus is \(n = 1000\). *se* appears once in 16.74 sentences. So \(p = \frac{1}{16.74} = 0.06\). With these values, we get a result of \(sd = \sqrt{1000 \times 0.06 \times 0.94} = 7.5\). The z-value indicates how many standard deviations the result differs from what was expected. The formula for the z-value is as follows:

\[ z = \frac{\text{actual result - expected result}}{\text{standard deviation}} = \frac{21-12.67}{7.5} = 1.11. \]

The p-value tells us the probability of observing a value that extreme (or more). For \(z=1.11\) the according p-value which can be checked in a table\(^9\) is 0.1357 or 13.57%. Although this is already a remarkable result, in statistic tests the p-value is only considered to be significant if it is 0.05 ( = 5 %) or lower. So we have no hard statistical argument that *se* appears more frequently in the AcI.

---

\(^9\)See, for example, DeVeaux and Velleman (2004) for tables of p-values. These tables are also included in most books on statistics.
• Frequency of Acl-verbs subcategorizing for the reflexive *se*

<table>
<thead>
<tr>
<th>Acl-verb</th>
<th>Engl. translation</th>
<th>se subj</th>
<th>se obj</th>
</tr>
</thead>
<tbody>
<tr>
<td>ait</td>
<td>to say (defective)</td>
<td>454</td>
<td>3</td>
</tr>
<tr>
<td>apparet</td>
<td>it appears</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>argueru</td>
<td>to argue</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>audire</td>
<td>to hear</td>
<td>57</td>
<td>0</td>
</tr>
<tr>
<td>bonum est</td>
<td>it is good</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>cernere</td>
<td>to perceive</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>coargueru</td>
<td>to prove</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>confirmande</td>
<td>to confirm</td>
<td>47</td>
<td>0</td>
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<td>constat</td>
<td>it is certain</td>
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<td>3</td>
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<td>constituere</td>
<td>to constitute</td>
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<td>convenit</td>
<td>it is convenient</td>
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<td>dicere</td>
<td>to say</td>
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<td>discere</td>
<td>to learn</td>
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<td>0</td>
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<tr>
<td>existimare</td>
<td>to conceive</td>
<td>45</td>
<td>2</td>
</tr>
<tr>
<td>facere</td>
<td>to say</td>
<td>34</td>
<td>0</td>
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<tr>
<td>ignorare</td>
<td>to ignore</td>
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<td>0</td>
</tr>
<tr>
<td>intellegere</td>
<td>to realize</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>interessse</td>
<td>to be in the interest</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>loqui</td>
<td>to say</td>
<td>5</td>
<td>0</td>
</tr>
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<td>notum est</td>
<td>it is known</td>
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<td>2</td>
</tr>
<tr>
<td>oportet</td>
<td>one must</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>praeentire</td>
<td>to suspect</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>putare</td>
<td>to believe</td>
<td>377</td>
<td>7</td>
</tr>
<tr>
<td>scire</td>
<td>to know</td>
<td>121</td>
<td>7</td>
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<tr>
<td>scribere</td>
<td>to write</td>
<td>90</td>
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<td>sentire</td>
<td>to feel</td>
<td>61</td>
<td>3</td>
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<tr>
<td>significare</td>
<td>to mean</td>
<td>67</td>
<td>4</td>
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<tr>
<td>spectare</td>
<td>to watch</td>
<td>51</td>
<td>2</td>
</tr>
<tr>
<td>sperare</td>
<td>to hope</td>
<td>71</td>
<td>3</td>
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<tr>
<td>verum est</td>
<td>it is true</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

**Totals** 2677 90

We see that there is a great difference with regard to the frequency of the reflexive in Acl- and A+I-constructions. The reflexive is abundantly used as accusative subject of the Acl-clause. Note that the use of the reflexive as accusative object of the VP, is marginal in comparison with its use as accusative subject. Note also that the reflexive is used much more with the
semantic group of *verba sentiendi et dicendi* than with impersonal constructions. *facere* constructs both as an A+I-verb, as well as an ACl-verb. As an A+I-verb, it means ‘to make someone do something’, whilst as an ACl-verb it means ‘to say’. According to the predictions made by the HPSG binding theory, we never encountered *se* as accusative subject of an ACl taking an impersonal construction as its antecedent. In all instances listed above in which *se* was found in the position of accusative subject of an ACl subcategorized for by an impersonal construction, the antecedent is either an accusative subject of another ACl coordinated with the one in which *se* is found, or the antecedent is a genitive specifier of an accusative subject of a coordinated ACl.

### 6.7 Attempt to Formalize the Empirical Results

We are aware of the fact that binding phenomena in Latin turn out to be highly complex. Therefore it is not our aim to come up with a fully elaborate binding theory in this place. At least one thing is clear so far: the HPSG binding theory is not sufficient to explain binding in Latin. From the literature overview we see that previously attempts to analyse the Latin binding phenomena have already been made. The classical grammarians differentiated between direct and indirect reflexivity. Direct or clause-internal reflexivity more or less corresponds with our notion of local reflexivity. Indirect reflexivity is referred to as long-distance reflexivity in modern grammatical theories, such as HPSG. Fruyt and Szajder stated that direct reflexivity is determined in syntactic terms. They also pointed out that the Latin pronoun generally referred to as the reflexive pronoun is morphologically one pronoun which contextually serves two different functions: that of reflexive pronoun (in direct reflexivity) and that of logophoric pronoun (in indirect reflexivity).

The HPSG binding theory is a syntactically driven binding theory. If the pronoun is used as a reflexive, it follows syntactic binding conditions, according to Fruyt and Szajder. This should be the case in all instances where binding does not cross clausal boundaries. The A+I is not analysed as involving two clauses. Hence we might conclude that binding within the A+I should always be explainable in syntactic terms. The ACl, on the contrary, is a clause. That means that, following Fruyt and Szajder, we should find clause-internal as well as clause-external binding with the ACl. Clause-internal binding within the ACl should also be explained only in syntactic terms. We should only encounter the “second” reflexive pronoun, Fruyt and
Sznajder refer to as logophoric pronoun, or logophoric use of the reflexive pronoun if the clausal boundaries of the Acl are crossed.

### 6.7.1 First Conclusion

Summarizing, the HPSG binding theory can explain neither binding within the A+I nor binding within the Acl. The collection of data adduced in the previous section shows us that the reflexive can take various antecedents. When we carried out empirical investigations concerning the A+I, we found out that binding is always syntactically conditioned. The antecedent is always less oblique than the anaphor. Our empirical investigations done on the Acl also allow us a first step towards formalization: Acl-internal binding is strictly syntactic, satisfying the criteria of the HPSG binding theory. Only cross-clausal binding cannot be described in the simple syntactic terms.

### 6.7.2 A+I Binding Revisited

In the A+I, the accusative anaphor *se* is not found in the position of accusative object of the matrix verb, if the VP<sub>inf</sub> is in active voice. We argue that probably the form is simply unattested. Note that we have only a corpus of written, highly literate Latin. Maybe it did not seem elegant to write that somebody gives orders to himself, asks himself, makes suggestions to himself etc. But this does not automatically mean that the occurrence of *se* in the position of accusative subject of an active VP<sub>inf</sub> is ungrammatical. We leave this problem open here.

Note that we found *se* in the position of accusative subject of the VP<sub>inf</sub>, if the VP<sub>inf</sub> is in passive voice. (20) is repeated here as (37):

\[
\begin{align*}
(37) \quad & \text{duci} \quad \text{se}_{i} \quad \text{exemplo} \quad \text{ad} \quad \text{consules} \quad \text{iubet}_{i} \\
\text{to-be-led} \quad \text{self(acc)}_{i} \quad \text{immediately} \quad \text{to} \quad \text{consuls} \quad \text{he-orders}_{i} \\
\text{‘He orders that he be led immediately to the consuls.’}
\end{align*}
\]

*Liv., 9, 24, 2*

As noted already, an object-control verb has not the same semantics with an active VP<sub>inf</sub> as it does have with a passive VP<sub>inf</sub>. Following Pollard and Sag (1994:314) we analyse (37) as a case of coercion. Although syntactically *se* is the accusative subject of the VP<sub>inf</sub> *duci* in (37), semantically this subject is not the controlled element. In order to adequately describe the situation we find with coerced A+I constructions such as (37) we introduce the following lexical rule triggering coercion:
(38) Coercion Lexical Rule

*iubet, uncoerced*

\[
\begin{align*}
\text{arg-str} & \left( \text{NP}_{1}, \text{NP}_{2}, \text{VP} \right) \\
\text{sem} & \left( \begin{array}{c} \\
\text{index} \ s \\
\text{restr} & \left( \begin{array}{c} \\
\text{reln} & \text{iubere} \\
\text{sit} & s \\
\text{iubens} & \text{ref} \\
\text{iussus} & \text{ref} \\
\text{iussum} & \text{0} \\
\end{array} \right) \\
\end{array} \right)
\end{align*}
\]

\[\Longrightarrow\]

*iubet, coerced*

\[
\begin{align*}
\text{arg-str} & \left( \text{NP}_{1}, \text{NP}_{2}, \text{VP} \right) \\
\text{sem} & \left( \begin{array}{c} \\
\text{index} \ s \\
\text{restr} & \left( \begin{array}{c} \\
\text{reln} & \text{iubere} \\
\text{sit} & s \\
\text{iubens} & \text{ref} \\
\text{iussus} & \text{ref} \\
\text{iussum} & \text{0} \\
\end{array} \right) \\
\end{array} \right)
\end{align*}
\]

This rule\(^{10}\) shows us that coercion takes place if the VP \(_{iub}\) subcategorized for is in passive voice. Let us discuss a simple example to better understand how the rule works.

\(^{10}\)Note that this rule is of course very specific. Further research has to be done on coercion in Latin in order to determine whether this rule needs to be reformulated so that it can cope with the phenomenon in more general terms, as well.
(39a) Puer virum ducit.
    boy(nom) man(acc) he-leads.
    ‘The boy is guiding the man.’

(39b) Vir a puero ducitur.
    man(nom) by boy(abl) is-led.
    ‘The man is guided by the boy.’

(39c) Iubet puerum virum ducere.
    he-orders boy(acc) man(acc) to-lead.
    ‘He orders the boy to lead the man.’

(39d) Iubet virum duci a puero.
    he-orders man(acc) to-be-led by boy(abl).
    ‘He orders the man to be led by the boy.’

In both (39a) and (39b) the semantics is the same. Embedding of (39a) and (39b) in an object-control construction, however, creates a change in semantics, if you look at (39c) and (39d). Now look at the semantic value of the VP\textsubscript{nr} in (38): coercion does not change that value. The thing that changes is the semantic value of the whole structure. Whilst ruus\textsubscript{us} in the uncoerced form is an individual referred to, ruus\textsubscript{um} in the coerced form has scope over the action or state expressed by the VP\textsubscript{nr}. Of course, we encounter the phenomenon of coercion with all A+I structures subcategorizing for a passive VP\textsubscript{nr}, regardless of whether the direct object of the matrix verb is a reflexive NP or not. I leave the question open here whether there is a relation between the distribution of the reflexive se in A+I structures and coercion.

Let us reconsider (22), repeated here as (40):

(40) Consul\textsubscript{i} arma capere milites\textsubscript{j} iubet et
    consul(nom)\textsubscript{i} weapons(acc) to-take soldiers(acc)\textsubscript{j} orders and
    sequi se\textsubscript{i} extra vallum
    to-follow self(acc)\textsubscript{i} outside rampart
    ‘The consul\textsubscript{i} ordered the soldiers\textsubscript{j} to arm and follow him\textsubscript{i} outside the
    rampart.’

Liv., 10, 35, 5

In (40), milites locally o-commands se, but se is not locally o-bound by milites. The antecedent of se is the nominative subject of the matrix clause, consul. In order to describe this phenomenon correctly, we slightly enlarge Principle A of our binding theory:
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- Principle A, revised:
  A locally o-commanded anaphor must be locally o-bound or must be
  o-bound, i.e. bound by a nonlocal antecedent.

Note that the “or” in this definition is not meant exclusively. If you look
once again at (12), you see that the first element of the ARC-STR list of the
highest verb is the local o-binder, because there is only one verb. Of course,
this more liberal formulation also predicts a great deal more ambiguity than
we normally appreciate. It is clear that supplementary principles predicting
preference in binding are also needed.

6.7.3 AcI-Binding Revisited

If no clausal boundaries are crossed, binding within the AcI is strictly syn-
tactic. In all three examples (28)-(30), the antecedent of the reflexive is
the AcI-internal accusative subject. Thus local reflexivity within the AcI is
correctly described by the HPSG binding theory, and also by our slightly
modified binding theory with the enlarged Principle A.

Examples (37)-(39) illustrate long-distance reflexivity: the boundaries of
the AcI are crossed. Following Fruyt and Szajder, we should claim the
existence of a second pronoun, morphologically identical with the reflexive
pronoun. Whilst the reflexive pronoun is clause-internally bound, this pro-
noun is only clause-externally bound. As the A+I is not a clause, we cannot
encounter this pronoun in the A+I construction.

Remember that the AcI is found with verba sentiendi et dicendi as well
as with impersonal constructions.\(^{11}\) The clause-externally bound pronoun, if
used with verba sentiendi et dicendi, normally has a logophoric interpretation.
Look at (37)-(39), repeated here as (41)-(43):

(41) dicit se defendere acta.
  he-says self(acc) to-defend acts
  ‘He says that he is defending the acts.’

*Cic., Phil., 5, 7, 77*

\(^{11}\)Fruyt (1987) and Szajder (1995) only mention that the AcI appears with verba sentiendi
et dicendi.
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(42) Multa a Caesare dicta sunt neque se,
many(acc.pl,neutr) by Caesar(abl) said were and-not self(acc)i
to-judge
‘Caesar spoke at length, ... and hei did not admit ...’

Caes., BG, 1, 45, 1

(43) Vos ex M. Favonio audistis Clodium sibi
You(pl) from M. Favoniusi have-heard Clodius(acc) self(dat)i
to-have-said
to-have-said
‘You have heard from the lips of Marcus Favoniusi that Clodius told
himi ....’

Cic., Mil., 44, 35

In all three sentences (41)-(43) we have the same situation: the matrix
verb is a *verbum sentiendi et dicendi*, subcategorizing for an AcI. The ana-
phor is found in the AcI, and the antecedent is a constituent of the matrix
clause which, regardless of its syntactical status, indicates the SOURCE of the
utterance.

(44), (45), and (46) are the grammatical representations of the tokens
dicit, dicta sunt, and audistis in (41), (42), and (43).

(44) dicit se defendere acta

(45) multa a Caesare dicta sunt
6.7. ATTEMPT TO FORMALIZE THE EMPIRICAL RESULTS

\[(46) \text{ vos ex M. Favonio audistis} \]
```
\begin{array}{c|c|c|c}
\text{reln} & \text{audire} \\
\text{source} & \text{M. Favonius} \\
\text{goal} & \text{vos} \\
\end{array}
```

In all three cases the antecedent is SOURCE, the speaker. In (44), the speaker is the unrealized nominative subject of the matrix verb dicit, in (45) and (46) the source is realized in terms of a PP; the PP \textit{a Caesare} in (45), the PP \textit{ex M. Favonio} in (46).\(^{12}\)

Yet the newly discovered pronoun appears also outside a logophoric context. Look at (35), repeated here as (47):

\[(47) \text{ Aratoris, interest ita se: frumenta habere.} \]

\quad ‘To the farmer it is important to have crops’

\textit{Cic., Verr., 3, 147} \(\ldots\)

In (47), we have an impersonal construction, and not a \textit{verbum sentiendi et dicendi}. (47) is not an incidence of indirect speech or \textit{oratio obliqua}. As was noted by Szmagier (1995:138), the antecedent of \textit{se} has to be \textsc{+animate} and the genitive NP \textit{aratoris} is the only suitable candidate fulfilling this criterion in the matrix clause.

Let us repeat: AcI-constructions are subcategorized for by \textit{verba sentiendi et dicendi} and impersonal constructions. A necessary semantic condition of the cross-clausally bound anaphor is that its antecedent is \textsc{+animate}.

\(^{12}\)If \textit{se} takes the position of accusative subject of the AcI, we could also argue that it is syntactically bound. The syntactical binding of \textit{se} would be grammatical according to the “standard” HPSG binding theory. In these cases, the notion of logophority would not be needed. However, we need logophority in order to explain long-distance binding of the reflexive pronoun in cases where the reflexive is not the accusative subject of the AcI.

Seeking for a general theory, we argue that the notion of logophority should be applied to all instances of long-distance binding of the reflexive occurring in the AcI with a matrix \textit{verbum sentiendi et dicendi}, including those in which \textit{se} is the accusative subject of the AcI.
With *verba sentiendi et dicendi*, we often have more than one NP fulfilling this condition. Therefore normally the antecedent additionally has to be source and the anaphor receives a logophoric connotation.

With impersonal constructions, the minimum binding criterion *+animate* seems to be sufficient. Here, the anaphor has no logophoric connotation.

Let us also discuss (36), repeated here as (48):

(48) Nullo loco castra Volscorum

no place(abl) camp(acc,pl,neut) of-the-Volsci(gen,pl,masc)

esse nec commissuros se proelio appanuit
to-be and-not to-join(Inf,Fut.) self(acc); battle(dat) it-was-evident

'It was evident that the Volsci had no camp anywhere so that therefore they did not propose to risk a battle.'

*Liv.*, 4, 59, 2

In (48), as well as in (47), the matrix verb is an impersonal construction. This means that we have no logophoric context. The anaphor takes the only available antecedent that is *+animate*, *Volscorum*, the genitive specifier of the accusative subject *castra* of the first AcI.

Benedicto discusses a similar example. (45) is repeated here as (49):

(49) Cannum i tam fida custodia quid significat
dogs(gen); such trusty watchfulness(nom,sg,fem) what means
alid nisi se ad hominum commoditatis esse
else except self(acc); for men(gen) comfort(acc) to-be

created(acc,pl,masc) ?

'The trusty watchfulness of the dogs, what else does it mean, except that they were created for human comfort?'

*Cic.*, *N.D.*, 2, 158

If we compare these two odd examples, we see striking similarities. In both cases, we have no logophoric context. The anaphor in (48) as well as in (49) is *se*, being the accusative subject of an AcI (*se proelio commissuros* in (48), *se esse generatos* in (49)). As *se* is the subject of a clause, it cannot be locally bound. Note that in both cases (48) and (49) the VP_{inf} of the AcI in which *se* is the subject is specified for number and gender. In (48), the antecedent of *se* has to be *Volscorum*, as it is masculine and plural. The

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13 Look at (44) where we have three: *eos, Marcus Favonius and Clodius*
subject *castra* is neuter, thus syntactically it cannot be the antecedent of *se*. The same situation is found in (49): *generatos* is specified for masculine, plural, as is *canum*.

Unfortunately, I have not been able to discover further examples of this kind. I do not consider it appropriate to stipulate a binding principle just from these two examples. However, I find it important to mention and describe this phenomenon which has not been discussed earlier in the literature.

### 6.8 Conclusion

In this chapter, we studied the distribution of the reflexive personal pronoun in A+I and Acl-constructions. We came across very surprising results, contradicting the HPSPG binding theory. If bound clause-externally, the reflexive pronoun follows syntactic binding rules. Syntactic binding is almost compatible with the HPSPG binding theory which only needs a slight extension so that it can fully cope with the data encountered with the A+I. If bound clause-externally, we probably have a second pronoun which is morphologically identical with the reflexive pronoun. This pronoun is never found with the A+I, because there no clausal boundaries are crossed. The antecedent of the cross-clausally bound anaphor has to be \[+ animate\] (semantic condition). If the pronoun is used with a *verbum sentiendi et dicendi* as matrix verb, the antecedent additionally has to be *source* and the pronoun takes a logophoric connotation. No syntactic binding criteria are valid for this pronoun. Most extra-clausal antecedents could be successfully treated as cases of (nonlocal) α-binding in the HPSPG sense. But, in contrast to the standard HPSPG treatment, this analysis would need to be general in the case of Latin Acl's.

The investigation in this chapter is incomplete. However, the results we came across give us further evidence for the fact that we have two very different structures A+I and Acl. The A+I construction hardly ever uses the reflexive pronoun, and never uses it with *se* as controlling NP. Acl-clauses, on the contrary, show abundant occurrences of *se* as accusative subject of the Acl. Interestingly, the position of accusative object of the Acl is only very marginally realized within the Acl. So if we have a look at the frequency alone in which the reflexive is used, we clearly see that Acl and A+I differ from each other. They are morphologically identical, but there are great syntactic differences. The excursion into the field of reflexivity shows us that the differences reach even further. Although we expected A+I and Acl to behave syntactically in identical ways concerning the distribution of the reflexive pronoun, we see now that this is not the case. Our syntactically motivated
research made us touch on the regions of SEMANTICS and CONTEXT in this chapter.