

Non-finiteness in Latin



Marius L. Jøhndal
Trinity Hall
University of Cambridge

This dissertation is submitted for the degree of
Doctor of Philosophy

June 2012

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except where specifically indicated in the text.

The dissertation does not exceed the word limit of 80,000 words.

Abstract

Non-finiteness in Latin

Marius L. Jøhndal

This dissertation offers a description of a selection of syntactic phenomena concerning non-finite complements, non-finite purpose clauses and binding into non-finite clauses. The analysis is set within Lexical Functional Grammar and is based on data from Early and Classical Latin.

The syntax of complements in Latin revolves around a contrast between subjects that are controlled and subjects that are not. One type of infinitival complement has a subject that is obligatorily identified with a matrix argument, with which it shares all features including case. This type of complement is found in raising and obligatory control. Another type of infinitival complement has a subject that cannot be controlled and is assigned accusative case by the infinitive. Non-obligatory control, in contrast, is not realised in infinitival complementation, and its closest correlate is in finite complements. This means that infinitival complements are used when there is no strong semantic dependency between a matrix verb and its complement.

In infinitival complements, the reflexive *sē* can be a local anaphor or a logophoric reflexive. More generally, the reflexive can also express empathy. The domain of the logophoric reflexive tends to correspond to complement clauses expressing an indirect report. Verbs that select such complements can also designate one of their arguments as the antecedent for the logophoric reflexive. The logophoric reflexive is therefore largely lexically licensed.

Non-finite purpose clauses can be realised as infinitival clauses but then require a distinct non-finite verb form. Greater flexibility is shown by purpose clauses headed by the gerundive, a participle-like verb form. Such clauses have a distribution that is comparable to that of English purpose clauses but their control properties differ. The gerundive has passivised argument structure, but its demoted subject still shows the same pattern of coreference that the obligatory null subject of an infinitive does in English purpose clauses.

Contents

Acknowledgements	ix
Abbreviations	xi
1 Introduction	1
2 Background	5
2.1 Sources	5
2.2 Theoretical assumptions	8
2.2.1 C-structure	8
2.2.1.1 Exocentricity	9
2.2.1.2 Structure in the clausal domain	10
2.2.1.3 Structure in the nominal domain	13
2.2.1.4 Long-distance dependencies	14
2.2.1.5 <i>Pro</i> -drop	15
2.2.2 Case and grammatical functions	17
2.2.2.1 Idiosyncratic and semantic case	20
2.2.3 Subjecthood	22
2.2.3.1 Subject-predicate agreement	22
2.2.3.2 Subject tests	23
2.2.3.3 Non-canonical subjects and default agreement	23
2.2.4 The passive	27
2.2.4.1 Agent phrases	28
2.2.4.2 Subjectless passives	28
2.2.4.3 Deponents	30
2.2.5 Lexical Mapping Theory	31
2.2.5.1 Morphosemantic and morphosyntactic operations	33
2.2.5.2 Subjectless passives	34
2.2.5.3 Ditransitives and secondary objects	35
2.2.5.4 Complementation	37
2.2.6 Control and raising	38
2.2.6.1 The control relation	38
2.2.6.2 Split, exhaustive and partial control	39
2.2.6.3 Discourse and arbitrary control	39
2.2.6.4 Controller choice and variable control	40

2.2.6.5	Obligatory and non-obligatory control	40
2.2.6.6	Functional and anaphoric control	42
2.2.6.7	The control/raising distinction	43
2.2.6.8	Identifying functional control	44
2.2.7	The verbal system	45
2.2.7.1	The infinitives	46
2.2.7.2	The auxiliary	47
2.2.7.3	Complement-taking predicates	48
3	Non-finite complements	51
3.1	Raising and control	51
3.1.1	Distinguishing raising and control	51
3.1.2	Object control	54
3.1.3	Formalising raising and control	56
3.2	The accusative and infinitive	61
3.2.1	Syntactic properties	61
3.2.1.1	Tense	62
3.2.1.2	Subject properties	63
3.2.1.3	Subcategorisation	64
3.2.1.4	Passivisation	66
3.2.1.5	Word order	67
3.2.2	Previous work	68
3.2.2.1	The traditional explanation	68
3.2.2.2	Raising to object	69
3.2.2.3	Exceptional Case Marking	71
3.2.2.4	Clause-internal analyses	71
3.2.3	Discussion	76
3.2.4	A clause-internal account	79
3.2.5	Passivisation	81
3.3	Control complements and AcIs	83
3.3.1	Finite complements	83
3.3.1.1	<i>Quod, quia</i> and <i>quoniam</i> -complements	83
3.3.1.2	<i>Quin</i> and <i>quominus</i> -complements	84
3.3.1.3	<i>Ut</i> and <i>nē</i> -complements	85
3.3.1.4	<i>Wh</i> -complements	88
3.3.2	Previous work	89
3.3.3	Discussion	90
3.3.3.1	Control and coreference	93
3.3.3.2	Object control and the AcI	94
3.3.3.3	Obligatory and non-obligatory control	95
3.4	Conclusion	96

4	Binding into non-finite clauses	99
4.1	Local and long-distance reflexives	100
4.1.1	Local <i>sē</i>	100
4.1.1.1	Obliques and adjuncts	103
4.1.1.2	NP-internal binding	104
4.1.1.3	Infinitival complements	104
4.1.1.4	Appositions	105
4.1.1.5	Reciprocal interpretation	105
4.1.1.6	Intensifiers	106
4.1.2	Long-distance <i>sē</i>	107
4.1.2.1	Multiple embedding	108
4.1.2.2	Mood and finiteness	109
4.1.2.3	Lack of subject orientation and complementarity	111
4.1.3	Reported speech	112
4.2	Previous work	113
4.2.1	Syntactic approaches	113
4.2.2	Non-syntactic approaches	116
4.2.3	Summary	117
4.3	A binding theory	118
4.4	Logophoricity	121
4.4.1	Lexicalised logophoricity	122
4.4.2	An implementation	125
4.4.3	Non-complementarity	130
4.4.4	Non-argument logocentres	131
4.4.5	Reported speech	134
4.5	Point of view	136
4.6	Conclusion	139
5	Purpose clauses	141
5.1	Theoretical background	142
5.1.1	Typological properties	142
5.1.2	Non-finite purpose clauses in English	143
5.1.2.1	Purpose clauses	144
5.1.2.2	Control of OPCs	146
5.1.2.3	Control of SPCs	148
5.1.2.4	<i>In order</i> -clauses	149
5.2	Clauses with an <i>um</i> -supine	150
5.2.1	The data	150
5.2.2	Nominalisation or clause	151
5.2.3	Control and controller choice	154
5.2.4	Argumenthood	155
5.2.5	Periphrases	157
5.2.6	Purposive infinitives	158

5.3	Purposive <i>nd</i> -forms without <i>ad</i>	159
5.3.1	The data	160
5.3.2	Previous work on the <i>nd</i> -form	161
5.3.3	The traditional analysis	164
5.3.4	Discussion	165
5.3.5	Causatives	167
5.4	<i>Ad</i> -clauses	170
5.4.1	The data	171
5.4.2	Discussion	174
5.5	Conclusion	179
6	Conclusions	181
	Bibliography	183

Acknowledgements

Many people have helped me in various ways in the course of the research leading up to this dissertation, but there are three people in particular to whom I owe a debt of gratitude.

First and foremost I would like to thank my supervisor David Willis who has supported me academically and personally since the day I first came up to Cambridge. Without his gentle nudging and his patience with his student, who more often than not could not see the forest for the trees, this dissertation would never have been completed. It has been a privilege working with him.

I also wish to thank Dag Haug who commented on drafts and helped me understand certain aspects of LFG. More importantly, he was the one who originally introduced me to LFG, and he is the genius behind the corpus-approach to Latin that I have made use of. Needless to say, this dissertation would have been very different – and I dare say less interesting – without his influence.

Finally, I am immensely grateful to my fellow PhD student Elliott Lash, who read early drafts of my work, always encouraged me despite the obvious flaws in my thinking and fuelled my enthusiasm for historical linguistics through his own enthusiasm for the subject.

Cambridge, June 2012

Abbreviations

1PL	first person plural	N	neuter
1SG	first person singular	NcI	nominative and infinitive
2PL	second person plural	ND	<i>nd</i> -form (i.e. gerund or gerundive)
2SG	second person singular	NEG	negated
3PL	third person plural	NOC	non-obligatory control
3SG	third person singular	NOM	nominative
ABL	ablative	OC	obligatory control
ACC	accusative	OLD	Oxford Latin Dictionary
AcI	accusative and infinitive	OPC	object-gap purpose clause
AUX	auxiliary verb	PAP	present (active) participle
CL	Classical Latin	PASS	passive
COMPL	complementiser	PAST	past
DAT	dative	PCL	particle
EL	Early Latin	PC	purpose clause
F	feminine	PERF	perfect
FAP	future (active) participle	PL	plural
FUT	future	PLUPERF	pluperfect
FUTPERF	future perfect	PPP	past (passive) participle
GEN	genitive	PRES	present
IMP	imperative	Q	question particle
IMPF	imperfect	REFL	reflexive
INF	infinitive	REL	relative
INTENS	intensifier	SG	singular
IOC	<i>in order</i> -clause	SPC	subject-gap purpose clause
LOC	locative	SUBJ	subjunctive
LOG	logophoric pronoun	SUP	supine
M	masculine	VOC	vocative

A hyphen (-) in text and glosses indicates a morphological boundary. An equality sign (=) indicates the attachment of a clitic. Clitic attachment is always indicated, morphological boundaries only when relevant. Verse breaks are indicated by a solidus (/), and omitted phrases or sentences by ellipsis (...). Text references are given using the OLD's system.

1 Introduction

The Latin language has been studied as a linguistic object since antiquity, and the literature on the subject includes several monumental grammars from the beginning of the twentieth century whose scope and thoroughness will remain hard to outdo. Our understanding of the syntax of Latin is nevertheless full of gaps. Progress has been made by applying insights from generative grammar and other branches of modern linguistics but the lacunae in our knowledge still cluster around the phenomena that were hard to describe and understand using the methods of traditional grammar.

The grammars contain vast amounts of information, but some types of information one would need to support a syntactic argument is not there. In other cases the information is actually there, but it is not obvious to someone who does not have the opportunity to engage fully with the data how it relates to key notions in modern syntactic theory. Descriptive groundwork therefore remains to be done and my aim in this dissertation is to take one small step in the direction of an improved formal description of Latin syntax.

The formalism I use is Lexical Functional Grammar (LFG). LFG encourages the linguist to formulate an explicit description of his data rather than directly attempt to ‘explain’ it. My approach is not free of theoretical assumptions or stipulations about the workings of the language I study, but I hope that by following this approach my work will have slightly longer shelf-life and be more accessible to linguists of different persuasions.

While my main aim is description, I focus on topics that are of theoretical interest in the hope that my work can provide another data point for future theoretical work. A good description is a prerequisite for integrating language-specific findings into theoretical work, and it is equally important to describe the phenomena that welcome generalisations as those that defy them due to structural ambiguity or paucity of evidence.

I have chosen non-finiteness as a common denominator precisely because of its theoretical significance. The syntax of non-finiteness in Latin revolves around case, control and binding — key research topics throughout the history of generative grammar, and today. In the remainder of this section I will outline three subtopics that the dissertation focuses on, their broader context and what the Latin data tell us.

The first subtopic, discussed in chapter 3, is non-finite complementation. (1) illustrates that infinitival complements can show case agreement. The secondary predicate in the complement has dative case in agreement with the null subject of the infinitive, and the null subject in turn has dative case because its controller has dative case.

(1) licet illis_i [Δ_i incolumibus discedere].
may.3SG they.DAT unharmed.DAT.PL depart.INF

‘They may depart safely.’

Case agreement is known from Russian, Icelandic and Ancient Greek, and its existence in Latin has been documented before, yet the result has not been absorbed in the literature. This is important because case agreement in Latin is robust and systematic, because it appears to be the only way control is realised in infinitival complementation in the language, and because it makes control and raising virtually indistinguishable in syntactic terms. The result is therefore directly relevant to ongoing debates about the theoretical relation between raising and control, and the nature of obligatory control.

Complementation in Latin is more generally organised around a distinction between complements whose subjects are fully identified with a matrix argument and complements whose subjects are not. The latter is the structure known as the accusative and infinitive (AcI). An AcI superficially looks like Exceptional Case Marking or raising to object but the case of the infinitival subject is not assigned by the matrix verb. Case is instead assigned by the infinitive, just like finite verbs assign nominative case.

When an infinitive assigns case, it supports any type of subject, be it an overt NP, a null referential pronoun or a null generic pronoun. The infinitive also expresses relative tense and its temporal interpretation is not restricted by the matrix verb. AcIs are in this sense more like prototypical finite clauses than subjunctive complements are, since subjunctive complements are subject to restrictions on their temporal interpretation and clausal structure. Surprisingly, then, it is the AcI, a non-finite clause, that is the distributional equivalent of *that*-complements in English.

Chapter 4 looks at binding in non-finite clauses. The traditional grammars make a distinction that broadly corresponds to a distinction between locally bound reflexives and long-distance reflexives. They also recognise that the antecedent of a long-distance reflexive tends to be a participant whose speech or thoughts are reported, and that long-distance reflexives tend to be found in AcIs, as in (2).

(2) *Andromenes_i dixit [se_i Ciceronem vidisse].*
Andromenes.NOM say.PERF.3SG REFL.ACC Cicero.ACC see.PERF.INF

‘Andromenes said he had seen Cicero.’

Early work on logophoricity in West-African languages compared logophoric pronouns to the Latin reflexive for this very reason. Latin is since then routinely mentioned in literature on long-distance binding as a language with logophoric reflexives, but no attempt is usually made to engage with the data.

While it is undeniable that discourse structure plays a role, logophoric reflexives are surprisingly dependent on the presence of specific lexical items in the matrix clause. I propose an analysis that makes this lexical dependency explicit and makes the licensing of the logophoric reflexive similar to its licensing as a local reflexive. The key to this is to recognise that there are two types of long-distance reflexive in Latin. One is licensed by logophoricity, the other by a phenomenon known as empathy.

Finally, in chapter 5 I look at clauses that have a purpose interpretation. A typical definition of the term infinitive will include its role in complementation and its role in expressions of purpose. The Latin infinitive, however, is only marginally attested in purpose clauses. Purpose clauses instead require other non-finite verb forms. Most frequent is the gerundive, which has passive

argument structure. In (3) this means that the subject of the gerundive is understood to be the accusative pronoun *hos*, which in the English translation is rendered as the object of an infinitive.

(3) [ad hos opprimendos] proficiscitur.
to them.ACC.PL.M crush.ND.ACC.PL.M set out.3SG

‘Afranius sets out to crush them.’

This looks peculiar at first sight, but it fits well with what we know about control in functionally similar clauses in English. The syntactic subject of the Latin gerundive is often an overt NP but it can be null, in which case it is obligatorily controlled by a theme argument in the matrix clause. The English counterpart to this is an obligatory long-distance dependency between the object of an infinitive and an obligatorily controlled pronoun. The counterpart of the demoted subject of the Latin gerundive in an English purpose clause is a subject that is obligatorily null but shows non-obligatory control. Thus the same complex semantic dependencies are manifested, but they are reflected in syntax in two quite different ways.

2 Background

This chapter starts with a brief look at my sources, the rationale for choosing the texts I have chosen and my view of them as objects of linguistic study.

The rest of the chapter is devoted to explaining my theoretical assumptions and the stipulations I make to compensate for our sometimes sketchy understanding of Latin syntax.

2.1 Sources

This study is based on evidence from Plautus, Terence, Caesar and Cicero. Included are all 6 preserved plays by Terence, 20 of the 21 preserved plays by Plautus,¹ Cicero's letters to Atticus and the *Civil War* by Caesar. Table 2.1 shows approximate dates of composition and the size of each sample.

Text	Time of composition	Size
Plautus	205 BC – 199 BC ^a	164941
Terence	166 BC – 160 BC	50050
Caesar, <i>Civil war</i>	c. 45 BC	32338
Cicero, <i>Letters to Atticus</i>	68 BC – 44 BC	122920
Total		370249

^a For most of the plays we do not know the year of composition or when the first performance was. Plautus lived c. 254–184 BC.

Table 2.1: Text sources with the approximate year of composition or first performance (according to the *Thesaurus Linguae Latinae*) and their size measured as the number of words including clitics like *-que* and *-ne*.

My sources span the time from the start of the Early Latin (EL) period to the middle of the Classical Latin (CL) period.² I have chosen this time span because the distribution of non-finite forms is known to change in this time span. The *um*-supine, for example, is known to be more frequent and showing more variation in EL than in CL. By allowing some time depth, there is therefore more variation in the data set and a greater range of phenomena can be compared. The choice of the works of Plautus as the oldest texts makes sense because the texts that predate Plautus are short, fragmentary or known only through quotations. My choice of the death of Cicero in 43 BC as an end-point is of a more practical nature. By doing this, and by excluding all epic and lyric poetry, I limit variation in the data set to a manageable range.

¹ The excluded play is the fragmentary *Vidularia*.

² I use the following terms from Cuzzolin and Haverling (2009: 20) for periods of the Latin language: Archaic Latin (before c. 240 BC), Early Latin (c. 240 BC–c. 90 BC), Classical ('Golden Age') Latin (c. 90 BC–AD 14), Postclassical ('Silver Age') Latin (14–c. 200), and Late Latin (c. 200–c. 600).

Within this time span I could have chosen a different permutation of texts or diversified my sample by including selections from other authors. A sensible alternative to work by Plautus or Terence would have been Cato's *On agriculture* (c. 160 BC), and it would have been interesting to include data from the works of Varro (116–27 BC). The decision not to do so was mainly practical because reliable electronic texts that were suitable for my use were unavailable.

Since my corpus contains data from two periods of the language, the question arises as to whether my data is comparable. Let us assume a hypothetical grammar that generates the Plautine corpus as it would be if it were free of any transmission errors. Let us also assume that it is possible to reason meaningfully about this grammar by applying philological and linguistic methods to the Plautine texts as they have been preserved. What we can do then is to use the data from the Plautine texts to say something meaningful about the abstract syntactic properties of Latin. But this is the Latin of a single speaker of Latin (and a hypothetical one if the author Plautus was not a single individual); there is no guarantee that it is representative of other speakers of EL.

Let us call the Plautine grammar G_p and the grammar that generates the Ciceronian corpus G_c . Although the evidence we use to make deductions about G_p unquestionably predates the evidence for G_c , it is by no means certain that G_c descends from G_p by way of a number of intermediate grammars. The situation is probably more like the one illustrated in fig. 2.1¹ where the horizontal axis represents time and the dashed lines represent descent relationships via intermediate grammars.

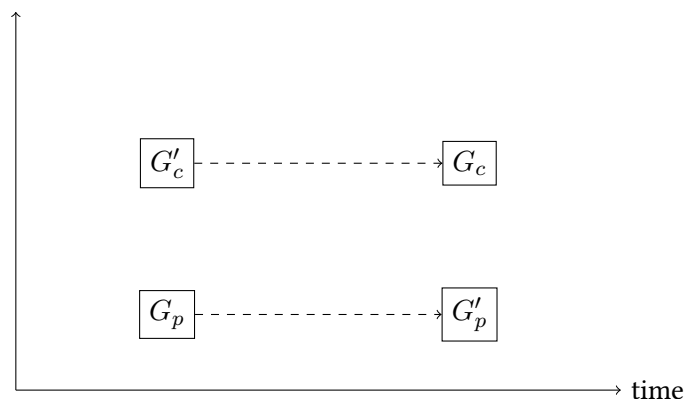


Figure 2.1: The relation between the hypothetical Plautine grammar G_p and the Ciceronian grammar G_c .

The vertical axis represents a range of sociolinguistic factors whose impact is hard to judge. Language standardisation, differences in social class and perhaps also differences in dialect may play a role. Since Greek was a prestige language in a society with many bilinguals, language contact may also have mattered (Brenous 1895, Calboli 2009, Clackson and Horrocks 2007, Coleman 1975). The vertical axis also represents the fact that the Plautine and Ciceronian texts belong to very different genres, which are subject to different conventions of language use.

As a practical simplification, I choose to ignore some of this complexity by treating the works of Plautus and Terence as generated by a single grammar G_E , and Cicero and Caesar as generated by a grammar G_C . What is clear, at any rate, is that it would be inappropriate to interpret a difference between G_E and G_C as evidence that syntactic change has taken place. It is possible that a difference is due to syntactic change, but not a necessary conclusion. While I will occasionally

¹ This is inspired by an illustration accompanying a similar argument in Hale (2007).

speculate on possible changes when the two composite grammars differ, the focus is on synchronic grammar and the two composite grammars are therefore the proper objects of study.

For systematic access to the data I opted to build an electronic corpus in which each sentence of interest is syntactically annotated. The annotation is a type of dependency-grammar annotation inspired by LFG's *f*-structures (Haug and Jøhndal 2008, Haug, Jøhndal et al. 2009) complemented by anaphoric links for reflexives and null subjects, and tagging of lexical meaning classes for complement-taking predicates (see section 2.2.7.3).

The corpus is used in different ways in different parts of the dissertation. In chapter 3, which looks at non-finite complementation, the corpus plays a secondary role since most of the data is already available from secondary sources, primarily the grammars (Ernout and Thomas 1964, Hofmann and Szantyr 1972, Kühner and Stegmann 1912-1914) but also subject-specific works (Bennett 1910, Lebreton 1901, Lindsay 1907, Perrochat 1932, Saffold 1902) and a previous corpus study on EL complementation (Ross 2005).¹

For chapter 4 and chapter 5, which discuss binding and purpose constructions, the required data is not already available. The reason is that the data collected in existing descriptive work (Aalto 1949, Hahn 1963, Jörling 1879, Lebreton 1901, Odelstierna 1926, Richter 1856-1860, Weisweiler 1890) is classified according to taxonomies that do not provide the type of information needed for syntactic analysis. For *nd*-forms, for example, the data is customarily classified according to the case of the *nd*-form, and there is hardly any information given about the structure the form is embedded in. The focus also tends to be on 'exceptional' data, which is not very useful for studying the 'unexceptional' syntax of these phenomena.

For this reason a subset of the corpus² was searched for every instance of the reflexive, and the sentence containing it, the sentence containing its antecedent and any intervening sentences were annotated. For *um*-supines, every instance in the EL part of the corpus was annotated, and for *nd*-forms every instance in the corpus was classified according to function, and those with a purpose interpretation were annotated.

There are numerous interesting examples — and even more problematic examples — in this data that would have merited discussion. Space constraints prevent me from discussing them individually so this dissertation should not be read as an attempt to document every possible peculiarity found in the data. The generalisations I make are, however, intended to be representative of the variation found, although, as is often the case with corpus data, it is impossible to do so without ignoring several outliers in the data set.

Since I am dependent on electronic texts, my freedom to choose the best edition of the text has also been limited. The most reliable electronic texts that are also unencumbered by restrictions on their use, are provided by the Perseus Foundation. I have used the version of the collection from May 2011 as the basis for my corpus.

The quality of the printed editions that these electronic texts are based on varies (Leo (1895-1896) for Plautus, Parry (1857) for Terence, Purser (1903) for Cicero and du Pontet (1900) for Caesar). In particular the texts for Terence and Plautus have shortcomings that needed to be addressed. To solve this in a practical way, I have opted to update the texts using recently issued editions in the

¹ As a general convention, when I use examples from the Latin-specific linguistic literature or from the grammars, I do so only from the same authors whose works are represented in my own corpus.

² *Pl. Am., Pl. Cas. and Cic. Att.* 5–13.

Loeb series. These editions are not intended for linguistic analysis, but I have found it to be of great practical value when doing syntactic annotation to be able to adhere consistently to a single text edition and to abide by choices made by the editor. The recently issued editions have the advantage of incorporating recent scholarship and are therefore a pragmatic compromise solution. At the time of writing, the texts available are the works of Terence (Barsby 2001) and 17 of 21 plays by Plautus (de Melo 2011-2012). For Cicero I have used Shackleton Bailey (1999), which is equivalent to Shackleton Bailey (1965-1968) except that some conjectures have been promoted to the text.

I have preserved the editor's orthography except that I have normalised punctuation and systematically changed consonantal *u* to *v*. Translations and glosses are my own unless explicitly noted, and I have preferred literal over literary translations, which means that, unless otherwise noted, I have re-translated and re-glossed examples from secondary literature, often with additional context given, in order to present data in a consistent form.

2.2 Theoretical assumptions

The remainder of this chapter is an overview of my theoretical assumptions. I will assume throughout that the reader has general familiarity with LFG. Bresnan (2001), Dalrymple (2001) and Falk (2001) are comprehensive introductions, but Asudeh and Toivonen (2009), an overview article, can provide background for someone with experience from other syntactic frameworks.

Since LFG allows for a fair amount of language-specific variation, I must outline how certain parts of the syntax work and how it interfaces with other components. In particular it is necessary to understand how morphological case, word order and grammatical functions are related, and how null elements are analysed. In addition, there are some particulars of Latin syntax that are best explained early. The text is organised as a broad overview of these areas, but since control and the properties of subjects are particularly important in the following chapters, the sections below go into more detail on these topics, covering others in a more superficial way.

2.2.1 C-structure

The position of a constituent in a Latin sentence does not identify its grammatical function. It is, for example, not possible to tell by inspecting the surface word order if an NP is the subject of a clause. It is instead primarily case marking that carries the burden of encoding grammatical function. This makes Latin a non-configurational language, as the term is defined by Nordlinger (1998: 43).

A fairly standard view is that non-configurational languages tend to have 'free' word order, rich morphology, discontinuous constituents, null anaphora and no VP constituent. The term 'non-configurational language' has, however, been defined in different ways, and consequently the emphasis put on these properties varies. Still, since Latin shows evidence of all these properties to lesser or greater extent, the term is applicable.

At the same time it is clear that these properties are not all as prominent in Latin as in some other languages. Discontinuity is constrained, null anaphora is rare for non-subjects, there is a tendency for a V-final word order, and there are structures that are clearly endocentric. The notion of configurationality is not a binary opposition but a gradient phenomenon, and Latin is not positioned at either extreme end of this scale.

‘Free’ word order means that any permutation of the words of a sentence is possible. This is true for Latin in the sense that no order of verb and arguments is syntactically unacceptable, but it is generally accepted that the surface order of constituents is a function of information structure (Adams 1977, Danckaert 2012, de Jong 1989, Devine and Stephens 2006, Panhuis 1982, Polo 2004, Spevak 2008, 2010). Beyond this there is little agreement, and since Latin is a corpus language, we are at a disadvantage. We lack negative evidence, information about intonation and native-speaker judgements. These are substantial challenges for anyone trying to reason about word order and information structure. Some existing work has also suffered from a failure to distinguish subjective judgements from reproducible observations, a reliance on generalisations based on too small samples, and inconsistent terminology.

The assumptions of LFG restrict the range of evidence deemed relevant to c-structure. Since the theory assumes no fixed, universal correspondence between c-structure and other levels of representation, evidence from other levels of representation is not necessarily relevant to c-structure. Evidence from binding, for example, is not usually relevant since binding is accounted for in f-structure. LFG’s c-structure only describes dominance, precedence and constituency. The relevant evidence is therefore primarily constituency tests and perhaps more general distributional evidence that can be fruitfully represented in terms of syntactic categories. As we are at the mercy of what is attested, it is not easy to apply constituency tests and convincingly argue for categorial distinctions.

Given our generally poor understanding of Latin word order, it is methodologically unsound to use word order as evidence for a particular syntactic analysis. Other evidence must be used first, and only then can one attempt to correlate the results with constituent order. This study will therefore have little to say about constituent order and an articulated theory of c-structure will not be crucial. There are, however, some key questions that must be settled, especially with respect to the left edge of complement clauses and prepositional phrases. This is the purpose of the remainder of this subsection.

2.2.1.1 Exocentricity

In LFG an exocentric category *S* (Bresnan 1982b) is used to model non-configurationality. A definition of *S* for a radically non-configurational language is given in (1). It produces a flat structure in which any permutation of lexical categories (*X*) and phrases (*XP*) can be daughters of *S*.

$$(1) \quad S \rightarrow X^* \\ (\uparrow \text{GF}) = \downarrow$$

The annotation on the right hand side of the rule assigns either the head relation $\downarrow = \uparrow$ or the non-head relation $(\uparrow \text{GF}) = \downarrow$ to constituents (Austin and Bresnan 1996, Simpson 1991), where $(\uparrow \text{GF}) = \downarrow$ is an abbreviation for the disjunction of all assignable grammatical functions:

$$(2) \quad (\uparrow \text{SUBJ}) = \downarrow \vee (\uparrow \text{OBJ}) = \downarrow \vee (\uparrow \text{OBJ}_\theta) = \downarrow \vee (\uparrow \text{OBL}_\theta) = \downarrow \vee (\uparrow \text{COMP}) = \downarrow \vee (\uparrow \text{XCOMP}) = \downarrow \vee \\ (\uparrow \text{ADJ}) \ni \downarrow \vee (\uparrow \text{XADJ}) \ni \downarrow$$

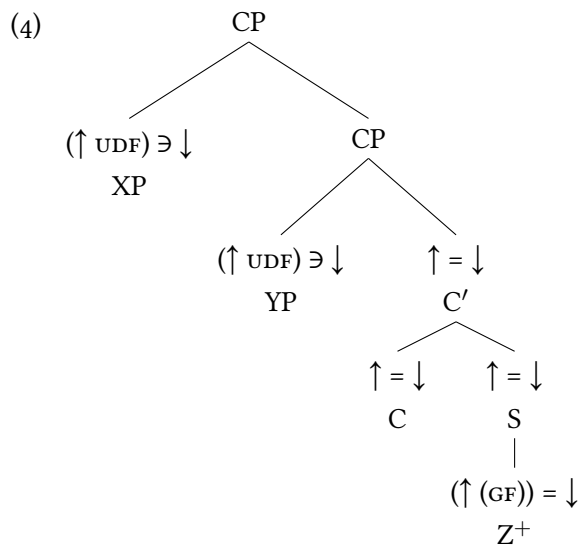
I will assume that *S* is at the core of c-structure in Latin and I will define *X* to be *V*, *NP*, *PP* or *CP*, and require *S* to have at least one daughter.

$$(3) \quad S \rightarrow X^+ \\ (\uparrow(GF)) = \downarrow$$

2.2.1.2 Structure in the clausal domain

There is good evidence for a CP in Latin (see below) and at least finite complements and adverbial clauses with an overt complementiser are CPs. Clauses with a *wh*-word also have a CP. I make no assumptions about a CP in other finite or non-finite clauses but also do not rule out that they have a CP layer.

There is a statistical tendency for verb-final word order and this is particularly pronounced in subordinate clauses (Adams 1976). In analytic constructions it is the auxiliary *esse* that occupies final position if the clause is verb-final. This might motivate positing a head-final IP with the tensed verb in I. It is not clear to me that this makes any relevant predictions so in the absence of evidence to the contrary, it is more economical to assume a flat c-structure below CP regardless of the verb's position. I will therefore assume the skeleton structure in (4) for CPs.



There are multiple left-edge positions in this structure. (5) illustrates the phenomenon this is intended to capture, which Danckaert (2012) calls *left-edge fronting* (LEF), with an example of an NP appearing to the left of the C head *si*.

- (5) ... [argentum [si quis dederit]], ... / ultro ibit nuptum ...
 money.ACC if someone give.FUT.PERF.3SG voluntarily go.FUT.3SG marry.SUP
 ‘if anyone gives her money she will willingly marry him’ (Pl. *Cas.* 85–6)

This is a frequent phenomenon (Marouzeau 1949: 121–36) and it seems that almost any type of material, irrespective of category or level of projection, can appear there. We clearly also need multiple positions (Salvi 2005), as (6) shows.

- (6) ... quae saepe me=cum mentionem fecerat, / [puerum aut puellam alicunde
 REL often me=with mention.ACC make.PLUPERF.3SG boy.ACC or girl.ACC somewhere
 [ut reperirem sibi]] ...
 COMPL find.IMPF.SUBJ.1SG REFL.DAT

‘who had often mentioned to me that I should find her a boy or a girl somewhere’ (Pl. *Cist.* 134–5)

The CP can be an adverbial clause (5), a finite complement (6) or a relative clause, as in the last part of (7).

- (7) ... me ... orabat ..., / ut properarem arcessere hanc huc ad me
 me.ACC ask.IMPF.3SG COMPL hurry.IMPF.SUBJ.1SG bring.INF her.ACC here to me
 vicinam meam, / [liberae aedes [ut sibi essent [Casinam
 neighbour.ACC my.ACC free.NOM.PL.F house.NOM.PL.F so that REFL.DAT be.3PL Casina.ACC
 [quo deducerent]]].
 whither take.IMPF.SUBJ.3PL

‘[he] asked me to hurry bringing this neighbour of mine here to me so that they would have an empty house where they can take Casina.’ (Pl. *Cas.* 531–3)

More radical scrambling is less common but possible as in (8) where material has been moved out of the CP.¹

- (8) a. senex est quidam qui [illam> mandavit mihi / <ut
 old man.NOM be.3SG certain REL her.ACC entrust.PERF.3SG me.DAT COMPL
 emerem — ad istanc faciem].
 buy.IMPF.SUBJ.1SG to this.ACC appearance.ACC

‘There is a certain old man who entrusted me to buy her — someone with her appearance.’ (Pl. *Mer.* 426–7)

- b. [hanc fidem / sibi> me obsecravit, qui se
 this.ACC promise.ACC REFL.DAT me.ACC beg.PERF.3SG in order that REFL.ACC
 sciret non deserturum, <ut darem].
 know.IMPF.SUBJ.3SG not abandon.ACC.SG.M COMPL give.IMPF.SUBJ.1SG

‘She begged me to give her my word so that she would know that I would not abandon her.’ (Ter. *An.* 401–2)

It is clear that information structural functions should be associated with these positions, but since information structure is not discussed in this dissertation, I will leave this unspecified.

Three general remarks about word order and information structure are in order. A common view is that the ‘neutral’ order is SOV or at least V-final order. There are several reasons for such claims. One is the observation that V-final order is the most frequent one (Linde 1923). A stronger argument would be that Latin fits the profile of an OV language by being typologically ‘OV’ in other ordering respects and that it therefore must have ‘underlying’ V-final order. This is not really an empirical argument and must be evaluated in its theoretical context. Finally, one could claim that V-final order is the unmarked or discourse neutral order, which we could define as the order in a ‘broad scope’ sentence. This is the view I will take.

The extent of discontinuity (known as *hyperbaton* in the philological literature) is probably also linked to information structure. Agbayani, Golston and Henderer (2011) suggest that discontinuities ignore some syntactic constraints like the Coordinate Structure Constraint and the Left Branch

¹ I use the notation [...>...<...] to indicate a discontinuous constituent.

Condition (Ross 1967) but respect prosodic constraints. They therefore conclude that discontinuity results from post-syntactic prosodic movement. It seems very likely that prosodic factors play a role in discontinuity, but it is not clear to me why discontinuity should ignore some syntactic constraints but not others. Discontinuity is, for example, contained within CPs, finite clauses (whether these are CPs or not) and PPs, so a purely phonological explanation seems wrong.

A final point related to information structure is a topic-marking strategy that is frequent in my data set. It is illustrated by the *dē*-phrase in (9) and I will call it *left dislocation*.

- (9) *de Philotimo, faciam equidem ut mones.*
 about Philotimus do.FUT.1SG PCL as advice.2SG
 ‘About Philotimus, I shall certainly do as you advise.’ (Cic. *Att.* 7.3.7)

A left-dislocated phrase has a pragmatic function and does not have to be an argument of the verb (Bolkestein 1981, Cabrillana 1999, Somers 1994, Spevak 2010), but with utterance verbs, in particular, left-dislocated phrases can present a problem since the phrase can also be interpreted as an argument expressing the utterance content. In (10a) the *de*-phrase is non-argumental since the propositional argument slot is occupied by a complement clause, but this is not so clear in (10b).

- (10) a. *de Antonio iam antea tibi scripsi non esse eum a me*
 about Antonius already before you.DAT wrote.1SG NEG AUX.INF he.ACC by me.ABL
conventum
 meet.PPP
 ‘As for Antonius, I have told you before that he has not met me.’ (Cic. *Att.* 15.1.2)
- b. *... et de damnatione ferventer loqui est coeptum.*
 and about damnation.ABL fervently talk.INF AUX.3SG begin.PPP
 ‘and he began to talk fervently about damnation.’ (Cic. *Fam.* 8.8.2)

Left dislocation is also found in embedded clauses,¹ as in (11), and there may be a coreferent pronoun somewhere in the string following the left-dislocated element.²

- (11) *sed quod de fratre, ubi eum visuri essemus,*
 but because about brother.ABL where he.ACC see.FAP.NOM.PL AUX.IMPF.SUBJ.1PL
nesciebamus
 not know.IMPF.1PL
 ‘but because as far as my brother was concerned, we did not know where we would be seeing him’ (Cic. *Att.* 3.7.3, Bolkestein (1981: 68))

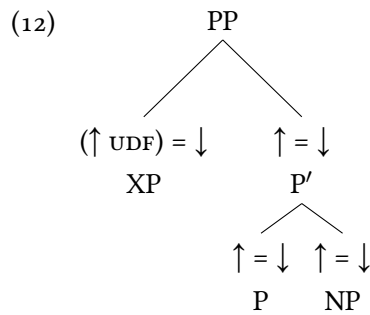
Even though left-dislocated elements must be in clause-initial position (Spevak 2010: 110), left dislocation is different from left-edge fronting. Unlike left dislocation, left-edge fronted elements must be arguments or adjuncts, there cannot be coreferent pronouns in the clause, multiple phrases and parts of phrases can be fronted, and fronting is insensitive to syntactic category (Bolkestein 1981: 72–4).

¹ Maraldi (1986: 97) takes *de*-phrases to have the same status as ‘proleptic’ accusatives with utterance verbs, but this must be wrong since, as Bolkestein (1981: 108, n. 6) observes, a *de*-phrase and a resumptive pronoun can co-occur.

² A different type of left dislocation is known as *nominativus pendens* in the grammars. It too is found in embedded clauses but is infrequent in my material. It often occurs with a resumptive pronoun, and agreement in case between this pronoun and the left-dislocated element is possible.

2.2.1.3 Structure in the nominal domain

In the nominal domain we find head-initial PPs. The proposed structure is given below:



Prepositions cannot be stranded (Bolkestein 2001) so at least one element will occur after the preposition in the surface string. The pre-head position can be occupied by a range of material. Devine and Stephens (2006: 568ff) note the following as common: a conjunct in a coordinated complement NP (13a), a genitive attribute (13b) and an adjectival attribute (13c).

- (13) a. *saxa inter et alia loca periculosa*
 rocks.ACC among and other.ACC places.ACC dangerous.ACC
 ‘among the rocks and other dangerous areas’ (CAES. *Civ.* 3.6)
- b. *suorum in terrore ac fuga*
 their.GEN.PL.M in terror.ABL and flight.ABL
 ‘in the panic and flight of their fellow soldiers’ (CAES. *Civ.* 3.71)
- c. *reliquis ex omnibus partibus*
 other.ABL from all.ABL sides.ABL
 ‘on all the other sides’ (CAES. *Gal.* 7.69)

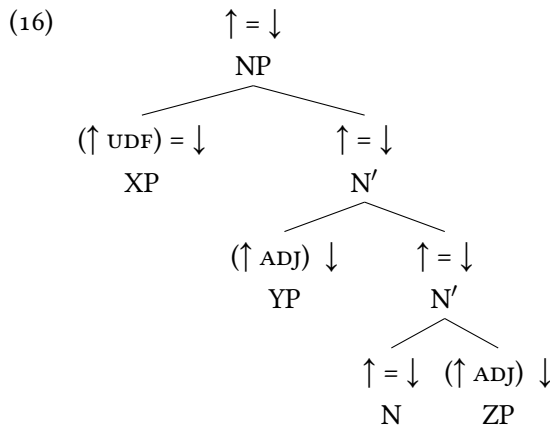
Fronting of multiple words is also possible:

- (14) *compluribus aliis de causis*
 several.ABL other.ABL from reasons.ABL
 ‘for several other reasons’ (CAES. *Gal.* 5.54)

Devine and Stephens (2006) explain this in terms of a discourse-functional projection where *saxa* is focussed. Some ingenuity would be required to properly motivate this in all cases. Even in (13a) it is not obvious in what sense *saxa* is focused. It is also worrying that outside material can intervene in the surface string (15).

- (15) *cum paucis conlocuti clientibus suis*
 with few.ABL confer.PPP.NOM.PL.M clients.ABL their.ABL
 ‘having conferred with a few clients of theirs’ (CAES. *Civ.* 3.60)

In addition to PPs, the language probably has an NP and perhaps an AP, but a higher frequency of discontinuity clouds the picture (cf. Bolkestein (1998, 2001), de Jong (1983)). I assume head-final NPs, but allow nominal modifiers to left-adjoin or right-adjoin to N' . The specifier position is set aside for fronted material.



There are lexical items that contribute features (like DEF(INITENESS)) which would be associated with elements in D in English, but these lexical items have semantic content of their own and thus belong to a lexical category and not a functional category in Latin. There is therefore no reason to posit a DP.

2.2.1.4 Long-distance dependencies

Displaced elements have standardly been represented in f-structure using the functions FOCUS and TOPIC (Bresnan and Mchombo 1987). In the syntactic structure known as topicalisation, for example, the displaced element is given the TOPIC function.

(17) a. [That book]_i, John said he had never read ____i.

b.

TOPIC	<i>f</i>						
SUBJ	“John”						
PRED	‘say<SUBJ, COMP>’						
COMP	<table style="border-collapse: collapse; margin-left: 20px;"> <tr> <td style="border-right: 1px solid black; padding: 5px;">SUBJ</td> <td style="padding: 5px;">“he”</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">PRED</td> <td style="padding: 5px;">‘read<SUBJ, OBJ>’</td> </tr> <tr> <td style="border-right: 1px solid black; padding: 5px;">OBJ</td> <td style="padding: 5px;"><i>f</i>: “that book”</td> </tr> </table>	SUBJ	“he”	PRED	‘read<SUBJ, OBJ>’	OBJ	<i>f</i> : “that book”
SUBJ	“he”						
PRED	‘read<SUBJ, OBJ>’						
OBJ	<i>f</i> : “that book”						

The Extended Coherence condition in (18), ensures that TOPIC and FOCUS are equated with a grammatical function that is subcategorised for. In (17) this is OBJ.

(18) *Extended Coherence condition*

FOCUS and TOPIC must be linked to the semantic predicate argument structure of the sentence in which they occur, either by functionally or by anaphorically binding an argument (Bresnan and Mchombo 1987: 746).

In spite of their names, TOPIC and FOCUS play syntactic roles. In topicalisation, for example, the displaced element has TOPIC function whether it is the pragmatic topic or part of the focus. Bresnan (2001) therefore refers to them as *grammaticalised discourse functions*. There is work that has used the functions for information structural purposes (e.g. King (1995)), but the current view is that information structure should be represented independently (cf. Dalrymple and Nikolaeva (2011) for a recent overview and an implementation).

Asudeh (2004, 2010, 2012) therefore proposes to replace TOPIC and FOCUS with a new function UDF, dedicated to displaced elements. This is the solution adopted in this work, and I assume that the left-edge positions of CPs, NPs and PPs correspond to UDFs. Since there may be several of these, UDF must be a set in f-structure.

(18) must also be reformulated to ensure correct linking of these UDFs (Dag Haug *p.c.*) so that a UDF is linked to some function in the f-structure it is the UDF of. I leave the precise formulation of this to future work.

2.2.1.5 Pro-drop

Pro-drop is pervasive in Latin. What conditions *pro-drop* is beyond the scope of this study, but it is worth emphasising that while finite verbs and participles have agreement features that can identify the intended referent, ‘rich’ agreement features are not a prerequisite for subject *pro-drop*. In clauses with analytic tenses, for example, the auxiliary can be omitted, leaving only the non-finite verb to express agreement, yet agreement is clearly still ‘rich enough’ for *pro-drop*.

The standard approach to subject *pro-drop* in LFG is to equip lexical entries with equations that optionally introduce a subject with a pronominal PRED-feature. The mechanics of the framework will ensure that this PRED-feature only comes into play when no PRED-feature has been contributed by an overt subject NP. The notation is shown in (19) using *dicit* ‘speaks’ as an example.

- (19) *dicit* V (↑ PRED) = ‘dicere <SUBJ, OBJ>
 @PRESENT
 @3SG

This lexical entry uses templates (signalled by the prefix ‘@’) to express lexical generalisations (Asudeh, Dalrymple and Toivonen 2008, Dalrymple, Kaplan and King 2004). This is a notational device. When templates are invoked, a simple substitution is made so grammars with and without templates are identical. The templates used above are the following:

- (20) a. PRESENT = (↑ VFORM) = FINITE
 (↑ TENSE) = PRESENT
 ((↑ SUBJ PRED) = ‘PRO’
 b. 3SG = (↑ SUBJ PERSON) = 3
 (↑ SUBJ NUMBER) = SG

The actual generalisation embodied by @3SG, for example, properly belongs in the morphology as an association between the affix *-t* and the relevant features, but the Lexical Integrity Principle ensures that syntax has no access to sublexical features. Only fully inflected words are therefore represented in c-structure.

The PRO of the PRED-attribute in (20a) requires explanation. The purpose of the PRED-feature in current LFG is two-fold. It ensures (by way of Completeness and Coherence) that all grammatical functions are realised in f-structure and that each function is realised only once. It also prevents (by way of Uniqueness) the unification of f-structures projected by different lexical items with semantic content. The notation PRO is, in a sense, a placeholder representing the semantic content of a pronoun (to be determined in the semantic component), but it is ultimately there only to enforce Completeness, Coherence and Uniqueness.

(21) *Completeness*

Every function designated by a PRED must be present in the f-structure of that PRED (Kaplan and Bresnan 1982).

(22) *Coherence*

Every argument function in an f-structure must be designated by PRED (Kaplan and Bresnan 1982).

(23) *Uniqueness*

Every attribute has a unique value (Bresnan 2001: 47).

PRO is also used as the value of the PRED-attribute for overt pronouns, like *tū* ‘you’:

$$(24) \quad t\bar{u} \quad \text{Prn} \quad (\uparrow \text{PRED}) = \text{'PRO'}$$

@2SG

There is therefore no distinction in f-structure between null referential pronouns (as introduced by *dicit*) or overt pronouns (as introduced by *tū*). PRO is furthermore used to model some controlled subjects, and it is assumed that the semantic component of the grammar determines the reference of all such elements.

LFG’s PRO is therefore a different notion from GB’s and MP’s *pro* and PRO. LFG’s PRO only exists in f-structure, while *pro* and PRO are structural elements with a position in the surface string. An f-structure with PRO will correspond to a terminal node in c-structure (if it is an overt pronoun), but it does not have to (if it is a null referential pronoun or a controlled subject). If it does not correspond to an element in c-structure, it has no realisation in surface structure at all and consequently no position in the surface string.

Note that, as a notational device, I use indexes to indicate coreference in the data. For subject *pro*-drop I place the index on the verb whose subject is null.¹ This is a notational convention without theoretical significance.

Non-subject *pro*-drop is possible in Latin. This is rare in comparison with subject *pro*-drop, but it is not a marginal phenomenon. Luraghi (1997, 2004, 2010) has found that both syntactic and pragmatic constraints play a role in licensing it. The clearest example of a syntactic constraint is conjunction reduction where a null object is obligatory when an object is shared between conjuncts. I use the notation *pro_i* to represent the null object.

$$(25) \quad \text{Caesar} \quad \text{exercitum}_i \text{ reduxit} \quad \text{et} \quad \dots \text{ in hibernis} \quad \text{pro}_i \text{ conlocavit.}$$

Caesar.NOM army.ACC lead back.PERF.3SG and in winter quarters place.PERF.3SG

‘Caesar led his army back and ... placed it in winter quarters.’ (CAES. *Gal.* 3.29.3, Luraghi (2004: 240), ex. 7)

There are other structures that favour null objects, but in general discourse factors ultimately license them. This is not crucial for our purposes, but it is important to emphasise that null objects are referential. They are therefore unlike null objects in Italian of the type discussed by Rizzi

¹ The verb is usually finite, but in section 3.2.1.2 I will claim that tensed infinitives too support subject *pro*-drop.

(1986). Rizzi shows that these should be analysed as *pro* but that they have obligatory generic interpretation.

Non-subject *pro*-drop must also be distinguished from unspecified object deletion. Typical examples are the verbs *esse* ‘eat’ and *bibere* ‘drink’ in (26). This is a lexical process and there is no object represented in the syntax at all.

- (26) *es, bibe, animo opsequere me=cum ...*
 eat.IMP drink.IMP spirit.ABL devote.INF me.ABL=with
 ‘Eat, drink, enjoy yourself with me.’ (Pl. *Mil.* 677, tr. de Melo (2011-2012: iii.213))

2.2.2 Case and grammatical functions

In finite clauses the subject has nominative case and the object accusative case. This relationship between grammatical function and case can be captured in different ways. I will use constructive case (Nordlinger 1997, 1998), which is so named because the case morphology in a sense ‘constructs’ the grammatical function it is associated with.

In a configurational language, argument functions are assigned to constituents by phrase structure. The following rule would assign subject function to the phrase in the specifier position of IP.

- (27) $IP \rightarrow XP \quad I'$
 $(\uparrow \text{SUBJ}) = \downarrow \quad \uparrow = \downarrow$

In a non-configurational language, or more specifically in a constituent belonging to the exocentric category S, this does not work. The intuition captured by constructive case is that it is the case morphology that encodes this information.

It is useful to see this in light of head-marking and dependent-marking strategies for specifying grammatical function.¹ Subject-predicate agreement in Latin is a head-marking strategy for specifying the subject. The head of the clause, the verb, expresses agreement features morphologically, and it is therefore the verb that encodes information about the subject unless an overt subject is also present in c-structure.

As an illustration, the lexical entry for a finite form of *transire* ‘cross’ is given below. It projects an f-structure with a subject with person and number features. If there is no overt subject projecting a PRED-value in the clause, the verb will provide this through the optional specification of a PRED-value (in the expansion of the template @IMPERFECT).

- (28) a. *transirent* V (\uparrow PRED) = ‘transire <SUBJ, OBJ>’
 @IMPERFECT
 @3PL
- b. IMPERFECT = (\uparrow VFORM) = FINITE
 $(\uparrow$ TENSE) = IMPERFECT
 $((\uparrow$ SUBJ PRED) = ‘PRO’)

¹ The terms head-marking and dependent-marking languages were coined by Nichols (1986).

Case marking on nominals, in comparison, is a dependent-marking strategy. Subject function, object function and so on is morphologically marked by morphological case. The idea is to treat this like head-marking. Case marking should therefore project its grammatical function. The accusative *librum* ‘book’ is specified as follows:

- (29) *librum* N (↑ PRED) = ‘liber’
 (↑ CASE) = ACC
 (OBJ ↑)

This projects two f-structures, labelled f and f' in (30). The inside-out designator (OBJ ↑) projects the f-structure f , and within it is the f-structure f' with the values for PRED and CASE.

- (30) $f: \left[\text{OBJ } f': \left[\begin{array}{cc} \text{PRED} & \text{'liber'} \\ \text{CASE} & \text{ACC} \end{array} \right] \right]$

In Nordlinger’s account, inflectional affixes have CASE features and inside-out designators, and a sublexical rule associates a nominal stem with an affix. I will instead use templates to state these generalisations:

- (31) a. NOM = (↑ CASE) = NOM
 (SUBJ ↑)
 b. ACC = (↑ CASE) = ACC
 (OBJ ↑)

To see how constructive case and c-structure rules fit together, it is best to use an example.¹ Our example is (32)² and the lexical entries are shown in (33).

- (32) *hanc si nostri transirent, hostes expectabant.*
 this.ACC if our.NOM.PL cross.IMP.F.SUBJ.3PL enemy.NOM await.IMP.F.3PL

‘The enemy waited to see if our men would cross it [= a swamp].’ (CAES. *Gal.* 2.9.1)

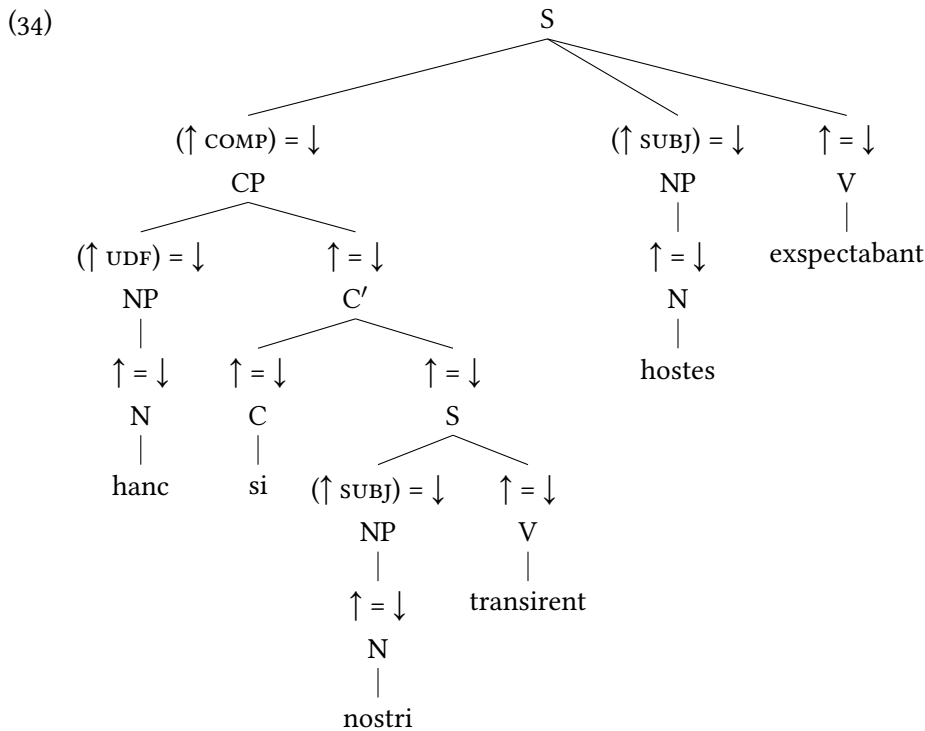
- (33) a. *hanc* N (↑ PRED) = ‘PRO’
 @ACC
 b. *si* C (COMP ↑)
 c. *nostri* N (↑ PRED) = ‘noster’
 (↑ NUMBER) = PL
 @NOM
 d. *transirent* V (↑ PRED) = ‘transire<SUBJ, OBJ>’
 @IMPERFECT
 @3PL

¹ The exposition here is loosely modelled on Nordlinger (1998: 64ff).

² I take the *si*-clause to be an argument of the verb and analyse *nostri* as a noun because of its conventionalised meaning of ‘our men’. Neither assumption is crucial to the analysis.

- e. *hostes* N (\uparrow PRED) = 'hostis'
 (\uparrow NUMBER) = PL
 @NOM
- f. *exspectabant* V (\uparrow PRED) = 'exspectare<SUBJ, COMP>'
 @IMPERFECT
 @3PL

The c-structure is shown in (34). The annotations on CP, C', C, NP, N' and N follow from general principles of X'-bar theory and endocentricity: Heads and bar-level projections have the head relation $\uparrow = \downarrow$, the complement of a functional category is a co-head and therefore also given the head relation, and the specifier of CP is a discourse function.



The phrase-structure rule for S given in section 2.2.1.1 is underspecified with respect to the annotation on daughters of S, but Extended Coherence, Completeness and Uniqueness ensure that only the annotations given in (34) are possible.

Let us look at S in the matrix clause. The V constituent projects the f-structure in (35).

$$(35) \begin{bmatrix} \text{SUBJ} & [] \\ \text{PRED} & \text{'exspectare<SUBJ, COMP>'} \\ \text{COMP} & [] \end{bmatrix}$$

If we assign (\uparrow GF) = \downarrow to it, the f-structure corresponding to V would have to be the value of a GF in a higher f-structure. This higher f-structure would then lack a PRED-value. This violates Extended Coherence. There would additionally be no PRED-value for SUBJ and COMP. This would violate Completeness. Only the head relation $\uparrow = \downarrow$ is therefore possible.

For the NP constituent a similar reasoning applies. If we give NP the head relation $\uparrow = \downarrow$, the f-structure corresponding to NP is unified with that of V. This violates Uniqueness since *hostes* projects its own PRED-value and the f-structure of V already has one.

Several other combinations must be ruled out, but the reasoning is the same and I will not spell it out here (see instead Nordlinger (1998: 64ff)). Let us instead look at the *si*-clause. I propose that complementisers like *si* also construct their grammatical function. Since this complementiser heads complements and adjuncts, a disjunction is required:

$$(36) \quad si \quad C \quad (\text{COMP} \uparrow) \vee (\text{ADJ} \in \uparrow)$$

The object *hanc* of the *si*-clause occupies a left-edge position in CP and is assigned the UDF function by phrase structure, while its morphology projects an argument function. Identification of the two is ensured by Extended Coherence:

$$(37) \quad \left[\begin{array}{l} \text{SUBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'hostis'} \\ \text{CASE} \quad \text{NOM} \end{array} \right] \\ \text{PRED} \quad \text{'exspectare<SUBJ, COMP>'} \\ \text{COMP} \quad \left[\begin{array}{l} \text{UDF} \quad f \\ \text{SUBJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'noster'} \\ \text{CASE} \quad \text{NOM} \end{array} \right] \\ \text{PRED} \quad \text{'transire<SUBJ, OBJ>'} \\ \text{OBJ} \quad f: \left[\begin{array}{l} \text{PRED} \quad \text{'PRO'} \\ \text{CASE} \quad \text{ACC} \end{array} \right] \end{array} \right] \end{array} \right]$$

There are alternative approaches to case in LFG, but constructive case has the advantage of offering a possible account for discontinuity. The general idea is that since case-marked elements come equipped with their own grammatical functions, we need not rely on phrase-structure rules to ensure that the correct elements are joined together. The inside-out constraints combined with general principles will instead ensure that they are brought together in f-structure.

It must be admitted at this point that many complications lack a straightforward solution in this account. A modifier and its head may be separated, for example, and constructive case must ensure that the modifier is an adjunct in f-structure. There may be more structure in an NP, and the question then arises of how to combine (parts of) endocentric NPs and APs with discontinuity.

Discontinuity is frequent in the data I will use but it plays no significant role in the analyses I will propose. I therefore direct the reader to the discussion in Nordlinger (1998: 51ff) for further details.

2.2.2.1 Idiosyncratic and semantic case

The above explanation essentially takes care of *structural case*, which is case that is sensitive to (surface) grammatical functions. There are two other types of case we must account for: Non-arguments can be case-marked, and arguments can appear in cases that do not conform to our structural-case generalisation. I will identify the first type as *semantic case*¹ and the latter as *idiosyncratic* (or *lexical case*).

¹ This is slightly different from Zaenen, Maling and Thráinsson's (1985) use. They say that a semantically restricted grammatical function or adjunct has semantic case.

For semantic case we can assume that case forms are associated with inside-out constraints that specify the function ADJ. The template for the accusative must therefore be changed to the following:

$$(38) \quad \text{ACC} = (\uparrow \text{CASE}) = \text{ACC} \\ (\text{OBJ} \uparrow) \vee (\text{ADJ} \in \uparrow)$$

This also shows that the CASE feature is required in addition to the specification of grammatical function. Adjuncts can have other case forms, and it is only the CASE feature that distinguishes between them (Nordlinger 1998).

Idiosyncratic case presents particular challenges. Nordlinger (1998), if I understand her explanation correctly, posits that a verb with an argument with idiosyncratic case does not subcategorise for the function of the argument, only for its case. This does not fit well with the theory of argument structure that I will adopt in section 2.2.5 which revolves around the principle that predicates subcategorise for their arguments in terms of grammatical functions.

The grammatical function of idiosyncratic-case arguments is not an easy matter to decide on. In section 2.2.3.3 I will argue that Latin does not have subjects with idiosyncratic case ('quirky' subjects). Based on the observation that the third argument of ditransitives and beneficiary-like arguments of a range of other verbs are dative-marked, I will hypothesise that the dative is a third structural case that corresponds to OBJ_θ (see section 2.2.5 for further motivation):¹

$$(39) \quad \text{DAT} = (\uparrow \text{CASE}) = \text{DAT} \\ (\text{OBJ}_\theta \uparrow)$$

This leaves a smaller set of predicates that subcategorise for objects or obliques with accusative, genitive, dative or ablative case, and some verbs that subcategorise for prepositional phrases. I treat these as obliques. This means that the template for accusative case has to be revised again.

$$(40) \quad \text{ACC} = (\uparrow \text{CASE}) = \text{ACC} \\ (\text{OBJ} \uparrow) \vee (\text{OBL}_\theta \uparrow) \vee (\text{ADJ} \in \uparrow)$$

An additional issue is that the subject of an infinitive can have accusative case. This is a traditional insight about the AcI, infinitives in reported speech and some infinitival main clauses with marked illocutionary force. Accusative case in such clauses is neither idiosyncratic nor semantic. It must therefore be subsumed under structural case and the template must be adapted yet again:

$$(41) \quad \text{ACC} = (\uparrow \text{CASE}) = \text{ACC} \\ (\text{SUBJ} \uparrow) \vee (\text{OBJ} \uparrow) \vee (\text{OBL}_\theta \uparrow) \vee (\text{ADJ} \in \uparrow)$$

For ease of reference, I will use the term *subject case* in the following to refer to the nominative case of subjects of finite verbs and the accusative case of subjects of infinitives.

¹ In this I follow the general idea of Zaenen, Maling and Thráinsson (1985) for dative NPs in German and of Kibort (2007) for dative NPs in Polish.

2.2.3 Subjecthood

The traditional view of subjecthood can be stated as in (42).

- (42) The NP that agrees with the predicate of a clause in person, number and, if possible, gender is the subject of the clause.

As an observation, this is essentially correct and uncontroversial but as a definition it is inadequate. This section discusses the conditions under which subject-predicate agreement is a necessary or sufficient condition for subjecthood and then looks at some alternative tests for subjecthood.

2.2.3.1 Subject-predicate agreement

The statement in (42) is inaccurate in two ways. First, a finite clause may have a referential subject even when there is no overt NP agreeing with the verb. It is standard to assume that a null referential subject is present in syntax in such cases and that the finite verb agrees with it. The formulation in (42) must therefore be refined to make reference to either an NP (in c-structure) or a null pronoun (in f-structure).

Second, the subject of a clause can be a conjunction of NPs and the verb sometimes agrees with only one of the conjuncts.¹ The alternative is *feature resolution* (Corbett 2006: ch. 8), which involves the computation of a new set of features from the features of the conjuncts. If all conjuncts have the same gender, this gender is usually used. For mixed-gender conjuncts, the masculine is used if all referents are human, otherwise the neuter (Kühner and Stegmann 1912-1914: i.44, i.51).

The preference is for feature resolution with human referents (43a) and agreement with one conjunct otherwise (43b), but there are exceptions of various sorts. (43c), for example, shows agreement with the nearest conjunct even though all referents are human (Kühner and Stegmann 1912-1914: i.44-53).

- (43) a. ... quam pridem pater / mihi et mater mortui
 how long father.NOM.SG.M me.DAT and mother.NOM.SG.F die.PPP.NOM.PL.M
 essent.
 AUX.IMPF.SUBJ.3PL
 '[She asked] how long my father and mother had been dead.' (TER. *Eu.* 518)
- b. domus, uxor, liberi inventi invito
 house.NOM.SG.F wife.NOM.SG.F children.NOM.PL.M find.PPP.NOM.PL.M unwilling.ABL
 patre.
 father.ABL
 'You have found a home, wife and children against your father's wishes.' (TER. *An.* 891)
- c. ibi Orgetorigis filia atque unus e filiis
 there Orgetorix.GEN daughter.NOM.SG.F and one.NOM.SG.M from son.ABL.PL.M
 captus est.
 take.PPP.NOM.SG.M AUX.3SG
 'There Orgetorix' daughter and one of his sons were captured.' (CAES. *Civ.* 1.26.9)

¹ See Dalrymple and Kaplan (2000), Peterson (2004) for views on how to implement this in LFG.

2.2.3.2 Subject tests

In practice, variation in agreement does not pose a problem for the identification of a subject. The problems arise when the verb's morphology does not express agreement or when agreement and other subject properties conflict.

Tests for subjecthood are language-specific (cf. the diverse range of tests proposed for Tagalog (Kroeger 1993: 20–56), Malayalam (Mohanam 1982: 566–9), Hindi (Mohanam 1994: 148–50) and Icelandic (Andrews 1982, Zaenen, Maling and Thráinsson 1985), for example). There are no known properties that universally identify subjects. Some still recur across languages but very little work has been done on the relevance of such properties to Latin.

In a configurational language we can turn to constituent order for further evidence, but Latin has no subject position. There are, however, three diagnostics that provide evidence for subjecthood independently of agreement and c-structure.

One is binding. Chapter 4 argues that a reflexive in Latin must be bound by the subject of its clause unless the reflexive has logophoric (or empathic) interpretation. The key to applying this diagnostic is therefore to control for logophoric interpretation.

The two other diagnostics are related: Only subjects can be raised, and only subjects can be the target of control in infinitival complements. We do not know if these conditions actually hold for Latin, but it is likely because they appear to hold for a range of genetically unrelated languages — at least those that are uniform subject languages (Falk 2006: ch. 5).

Other possible diagnostics are more problematic. Ellipsis of coreferent subjects in coordinations, for example, which is a reliable test in Icelandic (Rögnvaldsson 1982), does not identify Latin subjects. Other tests that could work, like the interpretation of (subject-oriented) secondary predicates, quantifier float and the syntax of idiom chunks, are impractical because they rely on attestation of specific structures.

Case is also a problematic diagnostic. The subject of a clause will have nominative case whenever the verb is finite.¹ Apart from the fact that there may be other overt nominative NPs in a clause (which means that nominative case alone is not a sufficient condition for subjecthood), it only applies to finite clauses. In non-finite clauses the facts are complex and constitute one of the research questions of this dissertation. The issue of non-canonical subjects, which either do not have case features or have non-nominative case, will be discussed below.

2.2.3.3 Non-canonical subjects and default agreement

The term *non-canonical subject* refers to a subject that has some properties expected of a subject but not all. Some non-canonical subjects typically fail to agree with the verb. Clausal subjects, for example, do not have the required agreement features, so it is unsurprising that agreement fails. Subjects with idiosyncratic case, on the other hand, could in principle be agreement controllers.

In Latin only elements with subject case can be agreement controllers. When agreement is lacking, the verb expresses default agreement, which is third person singular for finite verb forms and nominative-accusative neuter singular for non-finite forms. It is reasonable to assume that the verb also expresses default agreement if there is no subject at all.

¹ The case of null referential subjects can be deduced from the case form of agreeing elements in, for example, copular constructions, analytic constructions and infinitival complements.

Expletives and subjectless verbs The ‘weather verb’ *pluit* ‘it rains’ usually has third person singular features and no overt subject. The standard view for English weather verbs is that they have no thematic arguments and that the subject position is occupied by an expletive, which by definition is athematic. Latin does not have any comparable overt athematic element and such verbs therefore systematically lack a c-structure subject.

In theory it is possible that a null expletive subject is present but it is not clear to me how its presence can be diagnosed. Kibort (2008a: 254–62) proposes an approach to Polish weather verbs that might be relevant. She claims that Polish weather verbs have a null *pro* subject with indefinite reference, primarily because overt NP subjects are acceptable if the circumstances are right. Latin weather verbs too are attested with NP subjects (e.g. Cic. *N.D.* 2.65, where gods or nature personified are subjects). A potential problem is that many weather verbs also have personal uses with slightly different meaning.¹ I leave to future research to establish whether this is comparable to the Polish data.

While it cannot be ruled out that Latin has null expletive subjects, there is at least one construction that lacks a subject. It is traditionally known as the impersonal passive:

- (44) *ita res est, fateor. peccatum a me maxime=st.*
 so affair.NOM is admit.1SG act wrong by me very much=AUX.3SG

‘It is so, I admit. I acted very wrong.’ (TER. *Hau.* 158, Pinkster (1992: 167, ex. 12a))

This construction will be discussed in section 2.2.4.2. What is important in the present instance is that there is no argument of the verb in (44) that can plausibly be its subject. The participant that would be the subject in the active is realised as an *ab*-phrase and the situation has no other participants, so an expletive subject can only be motivated on theory-internal grounds (like LFG’s subject condition or the Extended Projection Principle). Moreover, no examples with non-logophoric reflexives, raising or secondary predicates are known (Pinkster 1992: 163, fn. 8). The lack of positive data could be accidental – and impersonal passives are comparatively rare (Pinkster 1992: 165) – but the evidence favours the view that such verb forms are subjectless at all levels of syntactic representation.

Quirky subjects The grammars observe that certain NPs have subject-like properties like thematic prominence and animacy yet do not have subject case or agree with the verb. The lack of subject case and agreement is traditionally taken to rule out syntactic subjecthood. I will argue that this is correct. Latin is therefore in this respect unlike Icelandic, which has quirky subjects, i.e. syntactic subjects with non-nominative case and no agreement.

Much evidence has been accumulated for quirky subjects in Icelandic (cf. Sigurðsson (2004) for a recent overview) and the language is therefore a natural standard of comparison. (45) is a typical example, whose characteristic property is that the NP *hana* has non-nominative case and does not participate in agreement with the verb. It still behaves like a subject according to (language-specific) syntactic tests for subjecthood such as constituency order, control, raising and reflexivity.

¹ *Fulget* ‘it lightens’, for example, can mean ‘shine’, *pluit* ‘it is raining’ can mean ‘fall like rain’, and *lūcescit* ‘it is growing light’ can mean ‘begin to shine’ (OLD s.vv. *fulgeō, pluō, lūcescō*).

- (45) Hana vantaði peninga.
she.ACC lacked money.ACC

‘She lacked money.’ (Sigurðsson (2004))

There are many Latin verbs, some of which have high token frequency, that show superficially similar behaviour. The argument with the most prominent thematic role, which is typically an experiencer, does not have subject case and does not participate in agreement with the verb. There are, broadly speaking, two types of such verbs. The members of one group never, or only in very few instances, appear with nominative case NPs in agreement with the verb. The other group regularly takes such NPs. The question of quirky subjects is thus more pertinent to the former group than the latter.

Belonging to the first group, (46) shows characteristic examples of the verbs *pudēre* ‘be ashamed’ and *pigēre* ‘be annoyed’, which take accusative experiencer arguments. In (46a) the stimulus is a genitive NP, in (46b) the stimulus is a clause.

- (46) a. fratris me quidem / pudet piget=que.
brother.GEN me.ACC PCL be ashamed.3SG be annoyed.3SG=and

‘I’m ashamed of and annoyed by my brother.’ (TER. *Ad.* 392)

- b. [non dedisse] istum pudet: me [quia non accepi]
not give.PERF.INF he.ACC be ashamed.3SG me.ACC because not receive.PERF.1SG
piget.
be annoyed.3SG

‘He’s ashamed he didn’t pay. I’m annoyed because I didn’t get anything.’ (PL. *Ps.* 282)

The stimulus can have subject case, especially if it is a pronoun, like the relatives in (47).

- (47) nimio id quod pudet facilius fertur quam illud quod piget.
by far that REL be ashamed.3SG easier stand.3SG than that REL be annoyed.3SG

‘It is much easier to handle that which makes one ashamed than that which makes one annoyed.’ (PL. *Ps.* 281)

The examples in (48) are, to my knowledge, unique in EL and CL. (48a) shows plural agreement on the verb, and (48b) shows the experiencer as a *pro* subject.

- (48) a. ei mihi! / non te haec pudent?
PCL me.DAT not you.ACC this.PL be ashamed.3PL

‘Oh dear! Are you not ashamed of these things?’ (TER. *Ad.* 758)

- b. ... ita nunc pudeo atque ita nunc paveo atque ita irridiculo
so now be ashamed.1SG and so now be afraid.1SG and so ridiculed.DAT
sumus ambo.
be.1PL both

‘so much am I ashamed now, so much am I afraid now, and so much have we both made fools of ourselves.’ (PL. *Cas.* 877, tr. de Melo (2011-2012: ii.105))

No solid evidence has to my knowledge surfaced that shows that accusative-experiencer verbs in the constructions in (46) take quirky subjects. Fedriani (2009) claims that *paenitēre* ‘dissatisfy’, ‘regret’, another verb with an accusative experiencer, takes accusative experiencer subjects but cites only a handful examples and analyses only one of them properly. The argumentation is dubious too: Fedriani appears to believe that it is sufficient to point to an example of an accusative experiencer that might be analysed as subject, while the point of the exercise is to show that it must be analysed as subject.

Michaelis (1993: 326f), on the other hand, claims that it is the genitive NP that is the subject of such verbs. She adopts the assumption, generally discredited (see section 3.2), that the accusative subject of an AcI undergoes raising to object. She claims with reference to (49)¹ that the genitive argument of *pudēre* undergoes raising to object.

(49) cuius eos non pudere demiror ...
 which.GEN them.ACC NEG shame.INF marvel.1SG

‘I marvel that they are not ashamed of it’ (Cic. *Phil.* 10.10.22, Michaelis (1993))

She presents no argument in favour of this nor a motivation for suggesting this, which is very peculiar, especially when the embedded accusative *eos* seems a better candidate for raising.

There is a small class of genitive-experiencer verbs, such as *miseret* ‘feel sorry’, whose members regularly appear without obvious subjects. More important to this dissertation is a larger class that takes dative NPs. This class includes verbs, adjectives and adverbs. The dative is often an experiencer, especially if one extends the notion to include modal participants. For a deontic (semi-)modal this participant would be the one on whom the obligation falls, and for an epistemic modal it would be the one from whom the judgement stems. (50) shows the verb *licet* ‘it is permitted’, ‘may’, which often takes a dative experiencer-like NP and a complement clause.

(50) non licet mihi dicere?
 not may.3SG 1SG.DAT say.INF

‘May I not speak?’ (Pl. *Mil.* 1404)

While these NPs have properties that make them subject-like (prominent thematic role, susceptibility to *pro*-drop) there is no syntactic evidence that any of these NPs can be the target of control, can be raised or can bind reflexives.

We should also consider passivisation as a source of quirky subjects. This happens in Icelandic when sentences like (51a) are passivised. The passive in (51b) preserves dative case and the NP still passes tests for subjecthood (Zaenen, Maling and Thráinsson 1985).

(51) a. Ég hjálpaði þeim.
 I.NOM helped them.DAT

‘I helped them.’

b. Þeim var hjálpað.
 them.DAT AUX.3SG helped

‘They were helped.’

¹ Her form of the example includes an antecedent *possessio* of *cuius*, but this belongs to the previous clause.

Latin passives of this sort, like (52), show no evidence for quiriness, as far as I have been able to establish.

(52) studiis autem eorum ceteris commodandi favetur
zeal.DAT PCL their other.DAT be obliging.ND.GEN applaud.PASS.3SG

‘one applauds their zeal for others’ service’ (Cic. *de Orat.* 2.207, Pinkster (1992: 164, ex. 6))

The traditional view is that such passives are a subtype of subjectless passives, which is reasonable in the absence of evidence for the subjecthood of the dative NP.

One should, however, be careful not to make a categorical claim about the absence of quirky subjects as the question has not received much attention until recently. I do, however, find it hard to believe that quirky subjects are pervasive when the verbs in question are frequent and attested in a variety of constructions, yet offer no indication of quiriness.

2.2.4 The passive

The Latin passive is formed synthetically or analytically. The analytic form consists of the auxiliary *esse* and the perfect participle, and the choice of strategy is tied to the morphological stem used. Synthetic forms are formed to the present stem in the *infectum* part of the paradigm, while analytic forms are used in the *perfectum* part of the paradigm.

Passive constructions are detransitivised counterparts to active constructions, and I will take the view that pairs of active and passive constructions are truth-conditionally identical. Passivisation, construed as an operation generating a passive construction from an active construction, is thus a meaning-preserving, morphosyntactic operation.

I will use the terms *logical subject* and *logical object* for the semantic participants in active-passive alternations. The logical subject is the participant that is realised as a subject in surface structure in the active construction, and the logical object is the surface object in the active.¹ The logical subject is usually an agent or an agent-like argument while the logical object is a patient or patient-like argument. This correspondence will be accounted for by a mapping from lexical structure to argument structure, which is conceptually independent from the morphosyntactic operation of passivisation (see section 2.2.5).

Passivisation alters the syntactic realisation of semantic arguments so that the logical object is realised as a surface subject and the logical subject is removed or given a different realisation. One can view this in two ways. Either the logical subject is *demoted* (while the logical object due to some other constraint takes on subject function) or the logical object is *promoted* (while the logical subject changes realisation due to some other constraint). Following Comrie (1977), who argues that the existence of passives of intransitive verbs means that passivisation is possible even when promotion is impossible, passivisation is standardly taken to be demotion of the logical subject.

¹ Blevins (2006) attributes these terms to Jespersen (1924). They have since been in regular use with a similar meaning. In work on Lexical Mapping Theory, the logical subject is often specifically defined in terms of a thematic hierarchy as the highest role of a predicate on this hierarchy (i.a. Bresnan and Moshi (1990)). My definition is independent of thematic prominence, and as such has more in common with Williams’s (1981) notion *external argument*.

2.2.4.1 Agent phrases

In English passives, the demoted subject can optionally be realised as a *by*-phrase. It is conventional to use the term *agent phrase* for this despite the fact that the demoted subject need not be an agent. Agent phrases in Latin are usually PPs headed by the preposition *ab*.

The referent of such a phrase is always animate. The traditional view is that agent phrases with inanimate referents are realised as bare NPs with ablative case. It is hard to evaluate the validity of this view since bare ablative NPs are used also as adjuncts expressing cause or reason with inanimate referents. Conversely, *ab*-phrases have other functions, most notably as source arguments and source adjuncts. Finally, bare dative NPs sometimes appear to realise the logical subject in passive or passive-like constructions. To avoid confusion, I will reserve the term agent phrase for *ab*-phrases with an animate referent and an agent-like thematic role.

If the logical subject of a passive is not realised as an agent phrase, I will take it to be an implicit argument. By implicit argument I mean that the argument is represented in lexical structure but not projected into syntax and therefore absent from all levels of syntactic representation. In this, I follow lexicalist approaches to the passive (i.a. Booij (1992), Jackendoff (1987)) rather than syntactic approaches (i.a. Baker, Johnson and Roberts (1989), Jaeggli (1986), Roberts (1987)), which instead absorb the thematic role in syntax.

2.2.4.2 Subjectless passives

Passivisation of intransitive verbs is possible in Latin, in which case the verb has passive morphology but default agreement.

(53) pugnatur uno tempore omnibus locis ...
 fight.PASS.3SG same.ABL time.ABL all.ABL place.ABL.PL

‘The fight went on simultaneously in all places’ (CAES. *Gal.* 7.84.2, Pieroni (2000: 295, ex. 20))

I claimed above that such passives are subjectless. This is compatible with the view that passivisation is demotion of the logical subject. Since there is no logical object to promote, the clause will be subjectless. Default agreement in turn follows because there is no eligible agreement controller.

This does not preclude realisation of the logical subject as an agent phrase, as shown in (54) and (44) above.

(54) pugnatum est ab utrisque acriter.
 fight.PPP.NOM.SG.N AUX.3SG by both.ABL fiercely

‘The fighting was fierce on both sides.’ (CAES. *Gal.* 4.26.1, Pinkster (1992: 168, ex. 15))

Note that the agent phrase is referential. Agent phrases with subjectless passives are not common, and it seems that lexical semantics and tense play a role in making them available (Pieroni 2000). But even when the agent phrase is absent, subjectless passives can have a referential logical subject (cf. Deckman (1920)), as in (55) where it can be inferred from the situational context that the relevant participant is the addressee.

(55) — quor es ausus subigitare alienam uxorem, impudens? / —
 why AUX.2SG dare.PPP.NOM.SG.M drive under.INF other.ACC wife.ACC shameless.VOC
 ita me di ament, ultro ventum est ad me.
 so me.ACC gods.NOM love.SUBJ.3PL voluntarily come.PPP AUX.3SG to me.ACC

‘— Why did you dare seduce another man’s wife, you villain? — As the gods love me, she came to me of her own accord.’ (PL. *Mil.* 1402-3, Napoli (2010: ex. 9b))

Subjectless passives cannot therefore be characterised as always having an indefinite or non-referential subject. Moreover, while the logical subject tends to be human, it does not have to be (Napoli 2009).

The observation that only unergative verbs form subjectless passives (Perlmutter 1978) appears to hold in most cases. An exception is movement verbs. One might expect the verb *venīre* ‘come’, for example, to be an unaccusative, but (55) and (56) show that it can be passivised.

(56) venitur in eum locum, quem Caesar delegit.
 come.PASS.3SG to this.ACC place.ACC REL.ACC Caesar.NOM choose.PERF.3SG

‘They come to the place that Caesar had chosen.’ (CAES. *Civ.* 1.84.2)

In (56) it is a telic motion verb, which in some languages tips the balance in favour of unaccusativity. Either the verb is not unaccusative or passivisation of unaccusatives is possible in Latin. Although there is a correlation between unaccusativity and volition, agentivity and presentational meaning, we know that semantics is not a perfect predictor of unaccusative syntactic behaviour in a given language (Rosen 1984). We could instead treat unaccusativity as a syntactic classification of intransitive verbs, but that would render the distinction uninteresting since there are no obvious other exponents of unaccusativity in Latin. Moreover, it is known that different syntactic ‘tests’ for unaccusativity pick out overlapping but different sets of verbs in certain languages. The likeliest explanation seems to me to be that the opposition between unergatives and unaccusatives is a syntactic manifestation of a semantic distinction that is ‘fuzzy’ or prototypical as proposed by Dowty (1991: 606ff) in the context of his theory of proto-roles.

Latin subjectless passives behave like similar passives in other languages in functional terms. The Latin subjectless passive stresses the action (Ernout 1909) and defocuses the logical subject either because it is not a good topic or because it is irrelevant. As Pinkster (1992: 168–9) puts it, it is ‘a statement about what happened rather than about who did what’. I agree with Blevins (2006) that this defocusing is a side-effect of the change in grammatical functions (but cf. Siewierska (2008) for important differences in perspective between the syntactic and functional approaches to impersonal passives). Subjects are in general more prominent than objects, and objects more prominent than obliques. Since passivisation changes the mapping to grammatical functions, the relative prominence of participants will also change. In a canonical passive the relative prominence of logical subject and logical object will be inverted, thus producing defocusing or backgrounding of the logical subject and foregrounding of the logical object. For a subjectless passive Blevins (2006) suggests that when the logical subject is demoted, its prominence is reduced so much that the action itself is more prominent.

2.2.4.3 Deponents

A deponent verb has morphologically passive forms that behave as actives in syntax. Table 2.2 illustrates this by comparing forms of the non-deponent verb *amāre* ‘love’ and the deponent *mīrārī* ‘wonder’. The finite part of the paradigm is represented by the present indicative and the perfect indicative.

Form	Non-deponent		Deponent	
	Not passivised	Passivised	Not passivised	Passivised
Present indicative	amō	amor	mīror	
Perfect indicative	amāvī	amātus sum	mīrātus sum	
Present infinitive	amāre	amārī	mīrārī	
Perfect infinitive	amāvisse	amātum esse	mīrātum esse	
Future infinitive	amātūrum esse	amātum īrī	mīrātūrum esse	
Present participle	amāns		mīrāns	
Perfect participle		amātum	mīrātum	
Future participle	amātūrus		mīrātūrus	

Table 2.2: Comparison of the paradigms of the non-deponent verb *amāre* ‘love’ and the deponent verb *mīrārī*. The two finite forms given are representative of all indicative, subjunctive and imperative forms (both synthetic and composed of the perfect participle and the auxiliary). The columns labelled ‘not passivised’ and ‘passivised’ refer to syntactic passivisation, not its morphological expression.

When there is an active-passive opposition in the paradigm of *amāre*, the passive-marked form appears in the paradigm of *mīrārī*. This is the case whether the form is synthetic or analytic. When there is no opposition in the paradigm of *amāre*, the only available form is used in the paradigm of *mīrārī*. The future infinitive is an exception, but evidence shows that the distribution of verbal forms used to express future relative tense changed between EL and CL (specifically, future infinitives in the AcI and periphrases for a future subjunctive in embedded questions), so it is not surprising that this is where there is an anomaly.

All three participles are systematically active in periphrases of deponent verbs. In addition to the analytic forms shown in table 2.2, there are active periphrases with the auxiliary and the present participle and the future participle.¹ At first glance, it seems remarkable that the perfect participle should have active syntax. After all, this introduces a type of participle that is otherwise lacking for all non-deponent verbs. The system shows some variation because some deponent verbs have perfect participles with passive argument structure, and we know that perfect participles in other IE languages, including English, vary in voice in similar ways.

Deponency is not systematically derivable from lexical semantics (cf. Baldi (1976)). It is also not stable across the historical record, so some verbs that are deponent in one time period are not deponent in others. Still, there is a level of stability within the same time period and a verb that is deponent in one syntactic environment tends to be deponent in all others. It is therefore safe to say that deponency is a fixed, idiosyncratic lexical property. Since there are also verbs (semi-deponents) whose deponency is limited to either the present or perfect stem, deponency

¹ These periphrases are not well-studied. They generally function to express a progressive or prospective nuance, except for periphrases with the future participle and the subjunctive of the auxiliary, which develop as a substitute for a missing future subjunctive in embedded questions in CL. The grammars do not provide relevant evidence on other peripheral analytic forms so more descriptive work would be needed to shed more light on this.

appears to be encoded in the morphology. As such, deponency is a mismatch between morphology and argument structure. A deponent verb has a morphological feature that triggers expression of passive morphology but fails to trigger passivisation in argument structure. This feature also blocks the lexical derivation of forms with passivised argument structure.

The important observation for our purposes is that deponency is an idiosyncratic morpholexical property and that its relation to passivisation is subject to some lexical variation in the non-finite part of the paradigm.

2.2.5 Lexical Mapping Theory

Lexical Mapping Theory (LMT) (Bresnan and Kanerva 1989, Bresnan and Moshi 1990, Bresnan and Zaenen 1990) is the component of LFG that maps thematic roles to grammatical functions. The idea is that this can be mediated by two features that represent the information about arguments of a predicate that is relevant to syntax. The features are $[\pm o]$, which distinguishes non-objective and objective GFs, and $[\pm r]$, which distinguishes thematically unrestricted and restricted functions.

Subjects and objects are unrestricted in the sense that they can have (almost) any thematic role or be athematic. Obliques and secondary objects, on the other hand, do not show this freedom. The objective/non-objective distinction is less easy to justify (Alsina 1996: 19). The standard view is that objects and secondary objects show object-like behaviour, in contrast to subjects and obliques. As such, the features function as an underspecified representation of grammatical functions and partition grammatical functions into natural classes (Bresnan and Kanerva 1989: 25), as shown below, where OBL_θ and OBJ_θ stand for multiple functions differentiated by thematic role.

- (57) a. $[-r]$ = SUBJ, OBJ
 b. $[+r]$ = OBJ_θ , OBL_θ
 c. $[-o]$ = SUBJ, OBL_θ
 d. $[+o]$ = OBJ, OBJ_θ

Patient and patient-like roles are canonically realised in syntax as subjects or objects. A patient-like role is therefore $[-r]$. An agent is canonically not an object and will be realised as a subject or an oblique (in ergative languages) and is therefore given the feature $[-o]$ (Bresnan and Kanerva 1989).

The exact choice of grammatical function is determined by mapping rules that essentially specify a priority among grammatical functions. At this point it must be mentioned that there are several versions of LMT (see Butt (2006: 117–49)). The version adopted here was developed by Kibort (2001, 2004, 2006, 2007, 2008a,b). It makes a distinction between a level of lexical-conceptual representation, which I will call θ -structure (after Falk (2001)), and argument structure or a-structure. A-structure is a syntactic representation of arguments in terms of the features $[\pm r]$ and $[\pm o]$ with an internal ordering of these arguments. In informal terms, one can think of θ -structure as the locus of thematic roles and a-structure as a representation of syntactic valency.

Both Jackendoff's (1983, 1990) theory of conceptual structure and Dowty's (1991) theory of proto-roles have been used in LFG. Kibort specifically commits to Dowty's theory (following precedents in Ackerman and Moore (2001), Alsina (1996), Zaenen (1993)). In this theory thematic roles are a second-order property; at the core of argument selection are instead entailments of

the predicate with respect to each argument. Among such entailments, some are prototypical of agents and others of patients.

Informally, the idea is that a participant is a proto-agent if it has more agent properties than patient properties, and conversely for a proto-patient. The main properties listed by Dowty (1991: 572ff) for proto-agents are volitional involvement, perception or sentience (with respect to the denoted event or state) and causation. Proto-patients undergo a change of state (including coming into and going out of existence), are incremental themes and are causally affected. Movement relative to another participant is an agent-property, but only when not caused by another participant. Conversely, being stationary relative to another moving participant is a patient-property.

Argument slots in Kibort's a-structure correspond to types of predicate entailments. Kibort maps a proto-agent onto the first argument slot in a-structure, a proto-patient onto the second slot, and proposes that a proto-beneficiary (cf. proto-recipient in Primus (1999)) should be mapped onto the third slot. Remaining arguments are mapped onto slots four and up. If a predicate does not have the entailments required for one of the proto-roles, the argument slot in question is absent.

Each numbered slot is in turn specified with the syntactic features $[\pm r]$ and $[\pm o]$ in the following way:

$$(58) \quad \langle arg_1 \quad arg_2 \quad arg_3 \quad arg_4 \quad \dots \quad arg_n \rangle \\ [-o]/[-r] \quad [-r] \quad [+o] \quad [-o] \quad \quad \quad [-o]$$

A quirk in this system is that the $[-o]$ feature in the first slot goes with syntactically unergative verbs, while the $[-r]$ feature goes with syntactically unaccusative verbs. This detail will not be important in this study.

The mapping from a-structure to f-structure is regulated by the principle given in (59). It makes reference to the markedness hierarchy in (60), which is derived by assuming that the negatively specified features $[-r]$ and $[-o]$ are less marked than the positively specified features $[+r]$ and $[+o]$ (Bresnan and Moshi 1990: 167). Note also that the result is subject to function-argument bi-uniqueness (61) (Bresnan 2001: 311) and that the mapping must apply to each argument slot from left to right.

(59) *A-to-f-structure mapping principle*

The ordered arguments are mapped onto the highest (i.e. *least* marked) compatible function on the markedness hierarchy (Kibort 2007).

(60) *Markedness hierarchy for argument functions*

SUBJ > OBJ, OBL_θ > OBJ_θ

(61) *Functional bi-uniqueness*

Each a-structure role must be associated with a unique function, and conversely.

Other versions of LMT use more complex mapping principles but the key insights that have been the focus of LMT research are captured in the same way. The advantage of the version adopted here is that it paves the way for an empirically credible account of impersonal and subjectless verb forms. This will be explained below.

2.2.5.1 Morphosemantic and morphosyntactic operations

Because θ -structure is conceptualised in terms of proto-roles, the θ -to-a-structure mapping is not fixed. It is, for example, possible for a participant to be conceptualised as a proto-patient in one situation and a proto-beneficiary in another. This makes it possible to make a principled distinction between morphosemantic and morphosyntactic operations (Ackerman and Moore 2001, Sadler and Spencer 1998). Morphosemantic operations are meaning-changing operations that involve the mapping between θ -structure and a-structure. Morphosyntactic operations are meaning-preserving operations that alter a-structure.

Morphosyntactic operations that alter a-structure are monotonic – features can only be added, not deleted or changed. It is therefore impossible for such an operation to change the feature $[-o]$ of the first argument slot to $[+o]$. Kibort stipulates that only positively specified features can be added. This means that the only possible morphosyntactic operation involving the first argument slot is to add $[+r]$. This is passivisation.

Take the transitive verb *scribere* ‘write’. In the active, the writer appears as subject and what is written appears as object. In the schema below, I use the symbol a for the writer and the symbol p for the other participant. The participant a is a proto-agent and p a proto-patient. a is therefore mapped to arg_1 and p to arg_2 . By the mapping principle (59) these will be mapped to SUBJ and OBJ in f-structure:

(62)	a	p
	< arg_1 ,	arg_2 >
	[$-o$]	[$-r$]
	SUBJ	OBJ

Now we apply passivisation to the a-structure. The θ -to-a-structure mapping is unchanged, but the feature $[+r]$ is added to arg_1 . This produces a different a-to-f-structure mapping. It is no longer SUBJ but OBL_θ that is the highest grammatical function that arg_1 can be mapped to. This, in turn, means that SUBJ is now the highest possible function for arg_2 .

(63)	a	p
	< arg_1 ,	arg_2 >
	[$-o$] [$+r$]	[$-r$]
	OBL_{ag}	SUBJ

This assumes that agent phrases are oblique arguments, but this is not uncontroversial. Agent phrases show ambiguous behaviour with respect to adjunction and argumenthood. One LFG account of the passive treats agent phrases as adjuncts that are linked to the original logical-subject argument by coindexation (Zaenen and Engdahl 1994: 193). Kibort (2001) finds this problematic since it introduces another argument in the structure when there clearly is only one agent-like argument. I agree with her and it seems to me that the oblique analysis is the best compromise.

There is another complication. The agent phrase is clearly optional, but the mapping above says nothing about optionality. One can assume, as it appears that Kibort does, that agent phrases are optional by virtue of their obliqueness. I do not share this intuition, which appears to be based on the idea that it is an intrinsic property of obliques that they are optional.

The verb *scribere*, for example, can take a third argument, realised as an oblique argument, expressing the recipient. It may be that this oblique is optional or it may be that *scribere* has multiple subcategorisation frames. But it does not follow from either that all obliques are intrinsically optional; to reach that conclusion one would first of all need a method for distinguishing between the two analyses, which is tricky enough. This question cannot be settled here so I will follow Kibort's intuition and stipulate that OBL_{ag} is always optional.

2.2.5.2 Subjectless passives

(64) shows an example of the intransitive verb *currere* 'run' with a goal argument.

- (64) strenue / curre in Piraeum ...
 quickly run.IMP to Piraeus
 'run quickly to Piraeus' (Pl. *Trin.* 1103)

It is reasonable to assume that *currere* is unergative since the runner participant, labelled *a* in the mapping below, is a volitional agent in control of the action. I take this to mean that *a* is a proto-agent and should be mapped to arg_1 . The goal argument fits none of the proto-roles and is mapped to the first available slot for such arguments, which is arg_4 . The result is as follows:

- (65)
- | | |
|--|----------------------------|
| <i>a</i> | <i>g</i> |
| | |
| $\langle \text{arg}_1, \text{arg}_4 \rangle$ | |
| [- <i>o</i>] | [- <i>o</i>] |
| | |
| SUBJ | OBL_{goal} |

The passivisation rule trivially derives the subjectless passive that we find in (66).

- (66) curritur ad praetorium ...
 run.PASS.3SG to governor's headquarters
 'there was a rush to the governor's headquarters' (Cic. *Ver.* 2.92)

The mapping is shown below:

- (67)
- | | |
|--|----------------------------|
| <i>a</i> | <i>g</i> |
| | |
| $\langle \text{arg}_1, \text{arg}_4 \rangle$ | |
| [- <i>o</i>] [+ <i>r</i>] | [- <i>o</i>] |
| | |
| OBL_{ag} | OBL_{goal} |

The subject condition Other versions of LMT, like Bresnan's (2001) version, incorporate a subject condition. (68) is the formulation of the condition proposed by Bresnan (2001: 311).

(68) *Subject condition*

Every predicator must have a subject.

The universality of this is routinely questioned (i.a. Bresnan and Kanerva (1989: 28, fn. 37), Bresnan and Zaenen (1990: 51, fn. 10), (Bresnan 2001: 321, fn. 9)). Kibort (2006, 2007) points out that making it a parameter of language variation is no solution since a language can have specific constructions that are subjectless. Latin is a case in point, as I have argued, since it has subjectless constructions but also constructions that require a subject.

We also cannot pursue a solution along the lines of Berman (1999), who argues the following way to explain German impersonal passives: The inflectional affix on the verb in (69) encodes subject-verb agreement. Since a (thematic) subject can never be omitted, the affix provides no PRED-value for the subject (neither an optional one as in *pro*-drop nor an obligatory one as in incorporation).

(69) ... weil **(er)* lacht
because he laughs

'because he laughs' (Berman (1999))

The affix is an instance of head-marking in that the head of the clause specifies features of the subject. In a passive like (70) the affix of the verb actually introduces a SUBJ into f-structure by way of specifying its third-person singular features.

(70) ... weil gestern im Wald getanzt wurde.
because yesterday in the woods danced was

'because there was dancing in the woods yesterday' (Berman (1999))

Since this SUBJ has no PRED-value, it is an expletive. Null expletive subjects are thus an automatic result of subject-verb agreement. Such passives in German (as well as verbs that lexically do not subcategorise for a subject) consequently obey the subject condition. The lack of expression in c-structure is largely an orthogonal issue and can be made to follow from the principle of economy of expression. There are some drawbacks including the need to reformulate the principle of Coherence, which would otherwise rule out a non-subcategorised subject, but the proposal otherwise seems to salvage the subject condition.

The crucial difference is that Latin thematic subjects can be omitted. Transferring the above reasoning to Latin, we would end up with a passive with a *pro*-subject. My solution is to reject the subject condition and assume that third person singular finite verbs have an alternate specification for the subjectless form. This form does not include any specification for subject-verb agreement and therefore no SUBJ features are introduced.

2.2.5.3 Ditransitives and secondary objects

(71) shows the ditransitive *dare* in the active and passive. Both situations have three participants, an agent, a theme and a recipient, but only the accusative object, corresponding to the theme, can be promoted to subject in passivisation.

- (71) a. eum libellum Caesari dedi.
 this.ACC document.ACC Caesar.DAT give.PERF.1SG
 ‘I gave Caesar the document.’ (CIC. *Att.* 16.16A.2)
- b. ... datur mi epistula a sororis tuae filio ...
 give.PASS.3SG me.DAT letter.NOM from sister.GEN your.GEN son.ABL
 ‘I letter was given to me from your nephew’ (CIC. *Att.* 13.38.1)

This is straightforwardly accounted for in (72) where *a*, *t* and *r* here stand for the three participants of the situations.

- (72) a. *a* *t* *r*
 | | |
 <*arg*₁, *arg*₂, *arg*₃>
 [−*o*] [−*r*] [+*o*]
 | | |
 SUBJ OBJ OBJ_θ
- b. *a* *t* *r*
 | | |
 <*arg*₁, *arg*₂, *arg*₃>
 [−*o*] [+*r*] [−*r*] [+*o*]
 | | |
 OBL_{ag} SUBJ OBJ_θ

There is, however, another fact that needs to be explained. (73) shows similar examples with the ditransitive verb *mittere* ‘send’, distinguished by the use of a dative or *ad* + accusative for the recipient argument.

- (73) a. et tibi ego misi mulierem.
 and you.DAT I.NOM send.PERF.3SG girl.ACC
 ‘And I sent you the girl.’ (PL. *As.* 171)
- b. meus gnatus me ad te misit ...
 my.NOM son.NOM me.ACC to you.ACC send.PERF.3SG
 ‘My son sent me to you’ (PL. *Trin.* 442)

Only the accusative shows object-behaviour by being able to appear as the subject in passivisation. The pair of examples resembles the ‘dative alternation’ in English, shown in (74).

- (74) a. John gave Mary the book.
 b. John gave the book to Mary.

Indeed, (74b) has comparable a-structure to (73b), but (74a) and (73a) differ. The English ‘shifted dative’ in (74a) allows promotion of the recipient argument in the passive, but Latin datives never do. The analysis below, which is taken from Kibort (2008b), captures this. (75a) and (75b) correspond to the Latin examples (73a) and (73b). In both cases the predicate projects sets of entailments

that align the *t* participant with the second argument slot, which makes it behave like an object. The contrast between the two examples is in the alignment of the *r* participant with either the third or the fourth argument slot.

(75)	a.	<i>a</i>	<i>t</i>	<i>r</i>
		< <i>arg</i> ₁ ,	<i>arg</i> ₂ ,	<i>arg</i> ₃ >
		[− <i>o</i>]	[− <i>r</i>]	[+ <i>o</i>]
		SUBJ	OBJ	OBJ _θ
	b.	<i>a</i>	<i>t</i>	<i>r</i>
		< <i>arg</i> ₁ ,	<i>arg</i> ₂ ,	<i>arg</i> ₄ >
		[− <i>o</i>]	[− <i>r</i>]	[− <i>o</i>]
		SUBJ	OBJ	OBL _θ

Since the contrast involves realignment of participants, a semantic difference is predicted. I will not go into this, but see Panhuis (1982: 117–49) and Spevak (2010: 131–44) for discussion of the distribution of ditransitives in CL.

A number of other verbs that are not three-participant predicates also take dative arguments. I will systematically take such datives to be secondary objects irrespective of whether their thematic role is a beneficiary (*favēre* ‘approve of’, ‘favour’), maleficiary (*nocēre* ‘harm’) or a recipient (*imperāre* ‘order’). The mapping for the active use of *favēre* in (76), for example, is therefore as in (77) and leads to a subjectless construction in the passive.

(76)	nam illi	faveo	virgini.
	PCL	this.DAT	favour.1SG girl.DAT
	‘I’m fond of the girl.’ (TER. <i>Eu.</i> 916)		

(77)	<i>a</i>	<i>b</i>
	< <i>arg</i> ₁ ,	<i>arg</i> ₃ >
	[− <i>o</i>]	[+ <i>o</i>]
	SUBJ	OBJ _θ

2.2.5.4 Complementation

Complementation has never been properly treated within LMT. I support the view put forward by Zaenen and Engdahl (1994) that COMP is a variant of OBL_θ, but not to get sidetracked by technicalities, I have opted to adapt a solution proposed by Falk (2001). This is to add a feature [+*c*] to the argument slot of such arguments, which I take to occupy *arg*₄ or higher. This feature forces a mapping to COMP or XCOMP. All other arguments automatically have the feature [−*c*], which rules out this mapping. Note that this mapping has the effect of ruling out complements being subjects and objects. The application of this feature will be illustrated in chapter 3.

2.2.6 Control and raising

LFG's control theory is designed around a distinction between *functional control* and *anaphoric control* (Andrews 1982, Bresnan 1982b, Mohanan 1983, Neidle 1982). Functional control, in particular, makes very specific predictions about syntactic properties that should cluster together. Some work in LFG therefore exclusively focusses on this distinction. This would be an oversimplification and the distinction is only one element in a proper theory of control. The literature on control is vast and the following is by necessity an eclectic overview of notions relevant to the present work.

2.2.6.1 The control relation

Control is a referential relation between a hypothesised null element, the *controllee*, and another element, the *controller*. The controllee is typically the subject of a non-finite verb in an embedded or adjoined clause, and the *controller* is typically an argument of the verb in the matrix clause. (78) shows an example:

(78) John_i tried [Δ_i to thank Mary].

I use the notation Δ_i for the controllee. The subscript indicates the referential identity between controller and controllee.

The control relation involves coindexation or token identity. In either case, the relation goes beyond mere coreference between NPs. The controllee is always unpronounced,¹ yet participates in syntactic phenomena like binding. The acceptability of the reflexive in (79a) and the pronoun in (79b), for example, is explained by positing a subject in the adverbial clause (examples from Kroeger (1993: 103–4)). This means that the clauses must have syntactically represented subjects.

- (79) a. [Δ_i while shaving himself_i/*herself_j], John_i told his daughter_j about his trip.
 b. [Δ_i while dressing #him_i/her_j for the party], John_i was tickled by his daughter_j.

The example shows another characteristic of control. In control, the syntax forces coindexation or token identity onto certain elements in a way that that other components of the grammar would not do on their own. The effect in (79) is to ensure that the subjects of the adverbial clauses above must be identified with *John*.

The controller in a control relation can be overt (as above), a null referential pronoun (*pro*) (80a) or a null controllee in another control relation (80b). We may think of (80b) as involving two distinct control relations or a single control relation with two controllees. This detail is of no consequence in the following.

- (80) a. *pro*_i try [Δ_i to thank Mary]!
 b. John_i [wanted Δ_i to try [Δ_i to thank Mary]].

¹ I will not pursue resumption, in which the controllee is an overt element, or backward control, in which the control relation is (hierarchically/structurally) reversed, since neither phenomenon is relevant to my data.

2.2.6.2 Split, exhaustive and partial control

There may be multiple controllers in a control relation. (81) shows an example of *split control* (Williams 1980: 218) in which the subject of *leave* is understood to be identical to *John* and *Mary* at the same time and neither individually.

(81) John_i persuaded Mary_j [Δ_{i+j} to leave together].

A related notion is *partial control* (or *imperfect control*), which is contrasted with *exhaustive control*. The examples in the previous section with a single controller, a single controllee and complete identity between them constitute exhaustive control. (82) shows partial control. The interpretation is that the controller performs the action together with somebody else.

(82) John_i wanted [Δ_{i+} to meet at 6]. (Landau (2000: 4))

This contrast was brought to prominence in work by Landau (see e.g. Landau (2000)), but there is no consensus yet on what the generalisations about split and partial control are (Boeckx, Hornstein and Nunes (2010), Hornstein (2003) and Culicover and Jackendoff (2005: 460) for views on this).

2.2.6.3 Discourse and arbitrary control

We can also find non-finite verb forms with null subjects that lack a controller in the sentence. The controller may instead be found in another sentence (*discourse control* or *pragmatic control*), as in (83a), be a speech-act participant (83b), or lack reference and instead have a generic interpretation (*arbitrary control*) (83c). Principled distinctions between these are not trivial to make and it depends on one's perspective on control whether it makes sense to refer to this as control. The historical reason for treating this as part of control theory is that the null subject was identified as PRO and the challenge was to derive the distribution of PRO.

- (83) a. Brandeis_i is in a lot of trouble, according to today's newspaper. Apparently, Δ_i firing the football coach has turned off a lot of potential donors. (Bresnan (1982b))
- b. Here's the thing: Δ undressing myself/yourself/ourselves in public could cause a scandal. (Cantrall (1974))
- c. It is unclear [who [Δ_{arb} to thank]].

(84) shows *implicit control*, which Landau (2000) argues is different from arbitrary control. The point is that an implicit argument of *difficult* functions as the controller of the infinitival subject. The practical upshot of this is that while one might debate how best to model the properties of *difficult* and its hypothetical implicit subject, it seems if there is an implicit matrix subject, then it can control the embedded subject just like other controllers can.

(84) It was difficult [Δ to leave].

2.2.6.4 Controller choice and variable control

In infinitival complementation in particular, the controller may be determined lexically by the matrix verb. This is not an uncontroversial view and others have sought to derive it from other facts. A standard approach is to formulate a minimal-distance principle of some sort (Hornstein 1999, Landau 2000, Larson 1991, Rosenbaum 1967) to the effect that the element structurally closest to the controllee is the controller. A classical problem with this is the following minimal pair, which shows that controller choice is not exclusively structural:

- (85) a. John_i promised Mary_j [Δ_i to wash himself_i/*herself_j].
 b. John_i persuaded Mary_j [Δ_j to wash *himself_i/herself_j].

The alternative is to derive the identity of the controller from lexical semantics (Farkas 1988, Jackendoff 1985, Jackendoff and Culicover 2003), but the price of this is precision and motivating semantic notions.

Both approaches have mainly concerned themselves with infinitival complementation, but it is known that controller choice in adjoined clauses involves similar problems, which we will return to in section 5.1.

Additional wrinkles in the theory arise due to *variable control* (or *controller shift*), which is illustrated for German in (86).

- (86) Ich_i habe ihm_j angeboten [$\Delta_{i/j}$ mich zu erschießen].
 I have him offered me to shoot
 ‘I offered him to shoot myself/that he could shoot me.’ (Wurmbrand (2003))

Variable control is sensitive to both lexical semantics and pragmatics (Wurmbrand 2003) and shows that a general explanation of controller choice must also take pragmatics into account.

2.2.6.5 Obligatory and non-obligatory control

It is widely recognised that a distinction should be made between obligatory control (OC) and non-obligatory control (NOC) (i.a. Bresnan (1982b), Chomsky (1981), Chomsky and Lasnik (1977), Hornstein (1999), Landau (2000), Manzini (1983), Williams (1980)). It is less clear what the distinction actually involves. The consensus is that (87a) (an instance of exhaustive control) is OC, but (87b) and (87c) are treated variously;¹ (87b) may be seen as NOC because an overt *for*-phrase can replace the controllee, and (87c) because arbitrary control is possible (examples modified from (Landau 2000: 4)).

- (87) a. John_i tried [Δ_i /*for Mary/* Δ_{arb} to win the game].
 b. John_i wanted [Δ_i /for Mary/* Δ_{arb} to win the game].
 c. John_i wondered [how [Δ_i /*for Mary/ Δ_{arb} to win the game]].

¹ Landau (2000) treats all complement infinitives as OC, Chomsky (1981), Manzini (1983) treat (87b) as OC, and Chomsky and Lasnik (1977) denies that (87c) is NOC.

The classical description of OC is Williams (1980: 211f). His descriptively most useful criteria for OC are that 1) PRO cannot be replaced by an overt NP, 2) the controller must be overt, and 3) the controller must be grammatically or thematically unique (i.e. it is always the same argument of the verb that acts as controller). This clearly excludes split, implicit and variable control from OC, and probably also partial control. Hornstein (1999) adds to this list that the control relation must be local. *Long-distance* control, as in (88), is therefore excluded from his point of view.

(88) John_i knew that it damaged Mary_j [Δ_i to perjure himself].

Landau (2000), on the other hand, essentially equates OC with local control, thus including partial, split and implicit control within OC. Across these views, NOC is an otherwise-case. Whatever does not fit the criteria for OC, is classed as NOC, and it is not always clear how NOC is supposed to work.

Two issues must be kept in mind when comparing theories of control. One is a distinction between types and tokens of control. OC and NOC are generally thought of as types of control. The status of arbitrary control, for example, is less clear. It may be a subtype of NOC or it may be a particular instantiation of the properties associated with NOC. In either case, OC and NOC as types of control reflect the observation that control properties tend to cluster together, and a key aim of control theory is to identify the clustering of properties that makes the optimal number of predictions.

The other issue concerns terminology. There are several things that could, in principle, be ‘obligatory’ in obligatory control (Mohan 1983). It could mean that there is a restriction in the grammar that requires any null element of the right type to have a controller (but without imposing any requirement on the presence of the null element):

(89) John_i discussed politics [while Δ_i / $^*\Delta_{arb}$ scratching himself/ * oneself].

‘Obligatory’ might also refer to a requirement imposed by the matrix element. In (90), for example, the matrix verb *tried* requires not only the presence of a complement but one that has a null element that the argument of *tried* can control.

(90) John_i tried [Δ_i / $^*\Delta_{arb}$ to scratch himself/ * oneself].

Yet another sense of ‘obligatory’ refers to the presence of null elements, as there are positions where a null element may occur (91a), cannot occur (91b) and must occur (91c) (Mohan 1983: 642).

- (91) a. [(John) having left Boston], Mary grew depressed.
 b. John expected [that * (Mary) would win].
 c. It is unclear [who (* John) to thank].

These interpretations are intrinsically linked to ideas about licensing of control. Mainstream approaches¹ presuppose a taxonomy of null elements (PRO, *pro*, traces) and the goal of control

¹ This includes a range of implementations that derive the distribution of control in various ways: the PRO theorem/PRO is a case resistant element (Bouchard 1984, Chomsky 1981), control is binding (Manzini 1983), control is a special case of Case theory (Chomsky 1995, Chomsky and Lasnik 1993, Martin 1996, 2001), OC is A-movement (Hornstein 1999), control is attraction of features (Manzini and Roussou 2000), control is a local agreement relation (Landau 2000).

theory is to justify their existence and to explain their distribution and antecedents. Another approach (i.a. Jackendoff and Culicover (2003)) relates control, and in particular OC, to the lexical items that subcategorise for constituents involved in control. Under this view, control is seen as imposed on a constituent by constraints that are ultimately derived from lexical semantics.

The final word on OC has not been said, but I find an approach that takes OC to be imposed on complements by lexical items to be the more convincing approach. Since such lexical items subcategorise for a complement anyway, it is not unreasonable to think that the relevant constraints are part of their lexical specification. OC is thus in essence a semantic phenomenon. Controller choice too is best given a semantic explanation under this view.

This does not mean that control in general is exclusively a semantic phenomenon. Even when a lexical item imposes control on its complement, there may be additional syntactic constraints that influence the outcome.

This makes OC orthogonal to other contrasts mentioned above. It is, for example, possible for a predicate to specify that an argument obligatorily participates in a control relation yet leave it unspecified whether this involves exhaustive or partial control. OC does rule out arbitrary control and discourse control since these, by definition, lack a sentence-internal controller. Since subcategorisation is local, I will also stipulate that OC rules out long-distance control. Variable control and implicit control, on the other hand, are not inherently incompatible with OC.

2.2.6.6 Functional and anaphoric control

Control relations in LFG obtain only in f-structure. This contrasts with Minimalism, where a controller is paired with an unpronounced element with a structural position. In LFG's functional control the control relation is captured by having the controller and controllee share the same f-structure. In anaphoric control the f-structures are separate, and the controllee is the semantically vacuous element *PRO*.

The *PRO* element is the same as that projected by overt pronouns and in *pro*-drop. The reference of the pronominal in anaphoric control is therefore resolved by the semantic component in the same way as for null referential pronouns and overt pronouns. Anaphoric control can therefore model discourse control and arbitrary control (since a pronoun does not require an antecedent), and split control (since a pronoun can take split antecedents).

Functional control is a syntactic identification of controller and controllee, while anaphoric control is a semantic one. As such, functional control has very specific effects on f-structure (since this is where syntactic information is represented). It entails complete identity of features. This means, for example, that controller and controllee must have the same case. There is nothing that in principle prevents this from happening in anaphoric control too (since a pronoun usually agrees with its antecedent in certain features), but it does not automatically follow from the formalisation.

While there is only one f-structure for the structure-shared element in functional control, the element can be assigned multiple grammatical functions. In anaphoric control two elements are involved, each with its own grammatical function. This also means that if both grammatical functions are thematic in functional control, the same element will correspond to two thematic roles. This, again, will never happen in anaphoric control.

Since functional control requires complete identity, it implies exhaustive control and excludes partial, split, discourse and arbitrary control. In anaphoric control, since there are two elements in-

volved, none of the consequences of identity are relevant: Feature expression need not be identical, there can be multiple ‘spell-outs’, complete identity of reference is not required etc. Alternation between a controlled null element and overt material in the same position might therefore indicate anaphoric control:

- (92) a. (His) praising himself got John into trouble.
 b. (*He/*him) hearing the warning, John dodged the falling brick.

But this is not the only possible conclusion. A verb may have an COMP/XCOMP alternation, for example, where the former involves anaphoric control and the latter functional control.

Functional/anaphoric control and OC/NOC are logically independent distinctions. I will stipulate that in infinitival complementation, functional control implies OC since functional control requires the presence of an unexpressed controllee in the embedded clause, but there is no reason why anaphoric control could not also be obligatory.

(93a) shows a complement-taking verb with specifications for functional control and (93b) shows lexically specified obligatory anaphoric control. Anaphoric control is modelled using a PRO subject and identification of the semantic structure of the embedded subject with the semantic structure of the matrix subject. As a notational convenience I will instead often put indexes on PRO in f-structures to show anaphoric control.

- (93) a. *try* V (↑ PRED) = ‘try<SUBJ, XCOMP>’
 (↑ XCOMP SUBJ) = (↑ SUBJ)
- b. *agree* V (↑ PRED) = ‘agree<SUBJ, COMP>’
 (↑ COMP SUBJ PRED) = ‘PRO’
 ((↑ COMP SUBJ)_σ ANTECEDENT) = (↑ SUBJ)_σ

One quirk that deserves mention is implicit control, which, in my view, is compatible with functional control if the structurally shared element is a pronoun with generic or discourse-determined reference. Empirically it requires that the same set of referents is picked out from all possible referents by both controller and controllee.

Functional control is an f-structural notion and does not itself say anything about c-structural realisation. Since only one element is involved, any lexical items corresponding to the f-structure of this element must contribute only a single PRED-value. This rules out multiple realisations of the same element with semantic content in c-structure, but it does allow for the expression of f-structure features in multiple structural positions. I will not make specific provisions for regulating this correctly.

2.2.6.7 The control/raising distinction

The distinction between control and raising pertains by definition to semantic roles. If the matrix verb that selects an infinitival complement assigns a thematic role to the shared argument, the relation is a control relation. If the matrix verb does not assign a thematic role, it is a raising relation. Section 3.1 will look at ways in which this difference is manifested in Latin.

Raising is modelled using functional control and an XCOMP complement. It is a requirement that an XCOMP has its subject specified by the predicate that selects it. This is accomplished by a local

equality equation. Raising is thus a lexically specified local dependency. This means that raising and OC are both formally obligatory functional control. The only difference is that one has an athematic controller and the other a thematic controller.

- (94) a. He_i seems [*t_i* to be reading a book]. (raising, obligatory functional control)
 b. He_i tries [Δ_i to read a book]. (control, obligatory functional control)

2.2.6.8 Identifying functional control

(95) are made-up examples (based on a full example from section 3.1.3) showing the required pattern for identifying functional control in Latin.

- (95) a. ego_i videor [*t_i* stultus]
 1SG.NOM seem.1SG stupid.NOM.SG.M
 ‘I seem stupid’
 b. me_i videri [*t_i* stultum]
 1SG.ACC seem.INF stupid.ACC.SG.M
 ‘I seem stupid’

The speaker is male, and the embedded predicate, the adjective *stultus*, expresses masculine singular features in agreement with its subject. If (95a) is functional control, agreement follows directly since the subjects are the same. If it involves anaphoric control, the embedded subject is a pronominal, and we expect all pronominals in Latin to agree in number and gender with their antecedents. Number and gender features therefore do not discriminate between the analyses. The crucial difference is the distinction in case. In (95b) the matrix subject has accusative case, and this is expressed by the embedded predicate too. While this does not rule out anaphoric control, it is not expected of a pronominal to agree in case with its antecedent. A functional-control analysis, on the other hand, predicts this.

The heuristic I will use is the following: If morphology and other syntactic properties indicate that all features are, without exception, identical, and there is positive evidence for agreement in case, then the most likely analysis is functional control. If these conditions are not present, the most likely analysis is anaphoric control.

Let us run through the details of a functional-control analysis of (95a). Part of the f-structure corresponding to the sentence is given in (96).

- (96)
$$\left[\begin{array}{l} \text{SUBJ} \quad f: \left[\begin{array}{ll} \text{PRED} & \text{'PRO'} \\ \text{CASE} & \text{NOM} \\ \text{PERSON} & 1 \\ \text{NUMBER} & \text{SG} \\ \text{GENDER} & \text{MASC} \end{array} \right] \\ \text{PRED} & \text{'vidēī<XCOMP>SUBJ'} \\ \text{TENSE} & \text{PRES} \\ \text{XCOMP} & \left[\begin{array}{ll} \text{SUBJ} & f \\ \text{PRED} & \text{'stultus<SUBJ>'} \end{array} \right] \end{array} \right]$$

The matrix subject is a pronoun with the PRED-value PRO. Structure sharing is identified by the label *f* on the f-structure of the matrix subject and the embedded subject. Agreement follows directly from this since the subject of the matrix verb and the embedded predicate have the same features. The morphological expression of the features of the subject *ego* are thus distributed between the matrix verb, the matrix subject and the embedded predicate. *Ego* contributes case, person and number, *videor* person and number, and *stultus* case, number and gender. A mismatch in any values would violate Uniqueness (see (23)).

Note that it is of no consequence to f-structure whether the complement is an infinitival complement or an adjective. In either case, the complement would have the grammatical function XCOMP. Other parts of the grammar must ensure that XCOMP can correspond to an infinitival complement or an AP in c-structure.

2.2.7 The verbal system

The Latin verbal system is organised around a morphological distinction between the *infectum* (present or imperfective) system and the *perfectum* (perfect or perfective) system. In the *infectum* system the present stem is used, in the *perfectum* system the perfect stem is used for active forms while passive forms are analytic and based on the third (supine) stem.

The relationship between semantic tense, aspect and morphology is complex.¹ I assume that neither stem has any intrinsic semantic, temporal or aspectual features. Tense is a function of stem and affixes, and aspectual value is primarily conditioned by oppositions within this system, in particular the contrast between the imperfect (an imperfective past tense form in the *infectum* system) and the perfect (a form in the *perfectum* system, one of whose functions is as a perfective past tense). Verbs also have inherent aspect (*Aktionsart*) and conflicts between *Aktionsart* and aspect favour particular types of phasal interpretations like the conative and iterative (Oldsjö 2001).

Subjunctives and infinitives usually express relative tense in the sense of Comrie (1985). This refers to the temporal marking of a verbal form so that the event it denotes is situated in time relative to a reference point. The reference point can be the moment of speech, but in complementation structures it will quite often be in the past or future. There are three relative tense relations: anterior, simultaneous and posterior.

For subjunctives the relevant empirical generalisation is standardly formulated as rules for sequence of tense (SOT) or *cōnsecūtiō temporum*. Sequence of tense obtains in various subordinated clauses and is as a type of tense agreement between clauses. The agreement involves copying tense features from the higher to the lower clause, but it is sensitive to the temporal interpretation of the higher clause and therefore not a mechanical copying of formal morphological features. The rules that apply in CL are relatively uncontroversial (cf. Kühner and Stegmann (1912-1914: ii.174-97)), and de Melo (2007: 51-91) has shown that the rules for EL are essentially the same.

Sequence of tense distinguishes between non-past and past reference points. If the matrix verb has non-past temporal semantics, i.e. it establishes a non-past reference point, then the perfect subjunctive, the present subjunctive and the present periphrastic subjunctive (*dictūrus sim*) are used ('primary sequence'). If the matrix verb has past temporal semantics, the pluperfect subjunctive, imperfect subjunctive and imperfect periphrastic subjunctive (*dictūrus essem*) are used

¹ See Haverling (2009), Oldsjö (2001), Pinkster (1983), Vincent (2011) for bibliography, general discussion and specific proposals.

(‘secondary’ or ‘historical sequence’). In the passive there is no distinction between simultaneity and posteriority, and it depends on clause type whether a distinction between simultaneity and posteriority is made in the active, or if only the forms for simultaneity are used.

2.2.7.1 The infinitives

All infinitives have formal (morphological) tense marking, and their temporal interpretation is relative except in certain main-clause constructions where an infinitive appears to substitute for a finite verb. Ignoring this type of main clause infinitive, we can say that the form conventionally called the present infinitive indicates simultaneity with respect to the reference point established by the matrix verb, and that the perfect infinitive indicates anteriority. The distinction in relative tense is reflected by different affixes and different verbal stems. (97) shows lexical entries for the present and perfect infinitives of the verb *dīcere* ‘say’. The value of the attribute TENSE reflects the contrast in relative tense, and the value INFINITIVE of the attribute VFORM groups infinitives together as a class for selectional purposes.

- (97) a. $\text{INFINITIVE}(t) = \begin{matrix} (\uparrow \text{VFORM}) & = & \text{INFINITIVE} \\ (\uparrow \text{TENSE}) & = & t \end{matrix}$
- b. *dīcere* V $(\uparrow \text{PRED}) = \text{‘dīcere <SUBJ, OBJ>’}$
 $\text{@INFINITIVE(SIMULTANEOUS)}$
- c. *dixisse* V $(\uparrow \text{PRED}) = \text{‘dīcere <SUBJ, OBJ>’}$
 $\text{@INFINITIVE(ANTERIOR)}$

Infinitives have passive forms. The passive present infinitive is synthetic.

- (98) *dīci* V $(\uparrow \text{PRED}) = \text{‘dīcere <SUBJ>’}$
 $\text{@INFINITIVE(SIMULTANEOUS)}$

The passive perfect infinitive is analytic. It consists of the perfect (passive) participle (PPP) and the auxiliary *esse*, which is omissible. The participle agrees with its subject in gender, number and case. I will ignore the complication of the omissible auxiliary and use the following specification on the passive participle itself:

- (99) *dictum* V $(\uparrow \text{PRED}) = \text{‘dīcere <SUBJ>’}$
 $\text{@INFINITIVE(ANTERIOR)}$

There is also an analytic active ‘future’ infinitive. It is based on the future (active) participle (FAP), which unlike other participles is not regularly used attributively or adverbially.¹ The participle is instead found in periphrases with the auxiliary (Vincent and Bentley 2001) where it expresses intention, predestination or imminent future (cf. Garuti (1954) on EL), which have been taken to be due to its ‘prospective’ aspect (Fleischman 1982: 35ff). The participle also expresses irrealis mood, usually in the apodosis of an irrealis condition (Steele 1913: 474ff).

¹ Only *futūrus* ‘future’ and *ventūrus* ‘venturous’ are regularly found as attributes and are probably adjectival conversions. There are other EL attestations but the text is problematic. The most convincing example is Pl. As. 634. See Coleman (1971: 222) for early Ciceronian examples. Adverbial use is, to my knowledge, unattested in EL and very rare in CL.

It also appears with a present infinitive auxiliary in ACIs where it is in paradigmatic opposition to the perfect and the present infinitive and expresses posterior relative tense. In a parallel fashion, it is found in embedded questions, which are subject to sequence of tense, where a periphrasis with the present subjunctive of the auxiliary fills the paradigmatic gap where a synthetic future subjunctive should be.

A peculiarity is that there are some disputed examples without subject-verb agreement.¹ In (100) the *pro* subject of *occisurum* refers to *Casina* yet the participle lacks feminine agreement features.

(100) [altero te / occisurum> ait, <altero vilicum hodie].
one.ABL you.ACC kill.FAP.ACC.SG says other.ABL overseer.ACC today

‘She [= *Casina*] says she’ll kill you with one [sword] and the overseer with the other today.’
(PL. *Cas.* 692-3)

Because of this, and since the auxiliary is absent from 80% of the attested infinitival tokens (Lease 1919), it has been proposed that the future participle in EL is an infinitive and not a participle (Postgate 1891, 1894, 1904). But the fact of the matter is that neither the label infinitive nor the label fully classifies the FAP.

I will again compromise and give the participle itself the specification it needs for its role in ACIs where it expresses posterior relative tense.

(101) *dicturus* V (↑ PRED) = ‘dicere <SUBJ>’
@INFINITIVE(POSTERIOR)

2.2.7.2 The auxiliary

The verb *esse* has multiple functions. It appears in constructions ranging from unquestionably copular constructions (identity, class membership, predication/attribution of property and relation) to existential and possessive constructions, where *esse* has an a-structure of its own with a SUBJ and OBJ_θ. Systematic relations between existential constructions (*there is a book on the table*), locative constructions (*on the table is a book*) and possessive constructions (*John has a book*) are known from many languages (cf. Allen (1964), Clark (1978), Freeze (1992), Heine (1997), Lyons (1967), Stassen (2009) generally, and Baldi and Nuti (2010), Havers (1911), Nuti (2005) for Latin).

Of interest here is its use as an auxiliary. Its primary use is to form analytic passives with the PPP in the *perfectum* system (both finite forms and the perfect passive infinitive). It also appears in periphrases with the present participle, with the FAP and the *nd*-form. Across such periphrases it appears that the auxiliary is present primarily to mark tense and mood, and that it has no semantic content or a-structure of its own. The mood of the analytic construction as a whole is that of the auxiliary. The tense and aspect of the construction is a non-trivial composition of the formal tense form of the auxiliary and some feature of the accompanying participle. In the lexical entry in (102), showing the third person indicative form of the auxiliary, I therefore omit the tense feature. I also make no attempt to ensure that the auxiliary is paired correctly with a participle. Both issues, tense computation and the selection of the main verb, are well-known problems whose solutions remain debated (see Butt et al. (1999), Dyvik (1999), Falk (1984, 2003, 2008), Frank and Zaenen (2002) for discussion), and they need not concern us here.

¹ These occur particularly in EL but some are also found in CL. Only PL. *Cas.* 671, PL. *Truc.* 400 and (100) are found in my corpus.

(102) *est* Aux (↑ MOOD) = INDICATIVE
 @3SG

Forms of *esse*, whether copular or auxiliary, are quite freely omitted in Latin. It appears to be more common for the auxiliary when *esse* has a finite present tense form or the present infinitive form (and for copular *esse*, when paired with a stative predicate). If this observation is correct it would seem that there is some mechanism that assigns a default present tense value when the auxiliary is absent. Perhaps this same mechanism also marks the mood as indicative or infinitive. A way of representing this would be to equip participles with a defeasible specification of present tense and indicative mood, but this is likely to have undesired side-effects beyond the relevant analytic constructions. Further research is needed to settle these questions (cf. Dalrymple, Dyvik and King (2004) on copula omission in LFG).

Analytic tenses with the auxiliary show full subject-predicate agreement, which means that both auxiliary and main verb agree with the subject. This agreement follows trivially whether *esse* is analysed as only contributing features or if it is analysed as a raising verb. In either case the f-structures of both auxiliary and participle will contain a SUBJ that triggers expression of agreement features.¹

Note also that the third person singular form of *esse* is often found in the form *-st*, which is probably an enclitic morphological variant form of *est*, at least in EL (Pezzini 2011). The second person singular is sometimes also orthographically reduced to *-s*.

I will also treat the invariant form *īrī* as an auxiliary. Its morphology is transparently that of a passive infinitive of *ire* ‘go’ but its distribution is as a passive infinitive auxiliary expressing posteriority.

(103) *īrī* Aux (↑ VFORM) = INF
 (↑ VCOMP VFORM) =_c UM-SUPINE

2.2.7.3 Complement-taking predicates

This final subsection will describe a taxonomy of complement-taking predicates that will be of use in the following when lexical properties of matrix predicates are discussed. Several such taxonomies have been proposed (e.g. Dixon 2006, Ransom 1986) and each emphasises overlapping but different semantic properties of complementation. This study will use the system proposed by Noonan (2007), which is aimed at cross-linguistic descriptive work. Table 2.3 lists the classes and representative English examples. The remainder of this section will exemplify each class in Latin. Note that some of the terminology used by Noonan (2007) is quite cumbersome; the term *knowledge predicates* has therefore been used instead of *knowledge and acquisition of knowledge predicates*, *perception predicates* instead of *immediate perception predicates*, and *desiderative predicates* covers both *desiderative predicates* and *fear predicates*.

An *utterance predicate* describes the transfer of information by an agent to an explicit or implicit addressee. The complement of the utterance predicate expresses the information transferred.

¹ Yet another technical difficulty arises here: Since the auxiliary can be omitted, should the participle carry the optional specification of a *pro* subject? The answer is probably yes since the participle, as indicated above, must also carry optional specifications for tense and mood.

Semantic class	English examples
Utterance predicates	say, tell, report, promise, ask
Knowledge predicates	know, discover, realise, find out, forget; see, hear
Perception predicates	see, hear, watch, feel, sense, smell; imagine
Propositional attitude predicates	believe, think, suppose, assume, claim, guess; doubt, deny; it is certain, possible
Manipulative predicates	cause; force, make, persuade, tell, threaten, let, cajole; command, order, request, ask
Commentative predicates	regret; be sorry, sad, ashamed; it is odd, significant, important, silly, absurd
Desiderative predicates	hope; fear, worry; be afraid, anxious; wish; want, desire
Phasal predicates	begin, start, continue, keep on, finish, stop, cease; repeat, resume
Pretence predicates	imagine, pretend, make believe; fool into thinking
Deontic modal predicates	can, be able, ought, should, may, be obliged
Achievement predicates	manage, chance, dare, remember, happen; try, forget, fail, avoid

Table 2.3: Semantic classes of complement-taking verbs, adjectives and nouns based on Noonan (2007).

Utterance predicates differ in the degree to which they specify the manner of the transfer. Utterance verbs like *dicere* ‘say’, *loqui* ‘talk’ and *scribere* ‘write’ are in a sense generic utterance verbs when compared to, for example, *clamāre* ‘shout’, *prōmittere* ‘promise’ or *rogāre* ‘ask’.

Knowledge predicates describe a state of knowledge, like *scīre* ‘know’, or the acquisition of knowledge, like *intelligere* ‘discover’, ‘realise’, as well as its inverse *oblīviscī* ‘forget’. Such predicates take an experiencer argument and a propositional theme. The experiencer is mapped either to a subject, a subject-like dative or is left implicit. The propositional theme is mapped to a complement whose contents is semi-factive and presupposed to be true.

Perception predicates denote direct sensory perception of an event, like *vidēre* ‘see’ and *audīre* ‘hear’. They have an experiencer argument and a stimulus argument denoting the event perceived.

Verbs like *crēdere* ‘believe’, *dubitāre* ‘doubt’ and *negāre* ‘deny’ (but not in its more common use as a negated utterance verb) are *propositional attitude predicates*. These express an attitude to the truth value of the proposition contained by its complement. Note that under this definition, epistemic predicates, like *certum est* ‘it is certain’, *verisimile est* ‘it is probable’, *necesse est* ‘it is certain’ and *fieri potest* ‘it may happen’, which express degree of certainty, are included too. In general, the holder of the propositional attitude is an experiencer, which may be mapped to a subject but can also often be unexpressed or mapped to a secondary object.

Manipulative predicates express a relation between an agent or cause, a patient and a resulting situation. The patient is often a participant in the resulting situation, and the manipulative predicate then encodes a situation in which the agent influences or manipulates the patient into performing an action or assuming a state.

Defined this way manipulative predicates span a range of meanings including permissive verbs (including relevant modal or semi-modal verbs) like *sinere* ‘allow’, *licēre* ‘may’, prohibitive verbs like *prohibēre* ‘prevent’, jussive verbs like *imperāre* ‘order’ and causative verbs like *facere* ‘cause’ and *postulāre* ‘enforce’, in addition to a large number of verbs that straddle several of these sub-

categories, e.g. *orāre* ‘ask (to)’.

Commentative predicates are equivalent to the class of factive predicates. They denote an emotional reaction to or an evaluation of the proposition contained by the complement, which is itself factive and presupposed. Latin predominantly uses stative verbs like *gaudēre* ‘be happy’ and subjectless verbal expressions like *opportune evenit* ‘it is very convenient’ to express this.

Desiderative predicates express a desire that the complement proposition should be realised. They have experiencers mapped to subjects or secondary objects. There is a natural grouping of desiderative predicates into four subgroups. *Hope*-type verbs like *sperāre* ‘hope’ and *fear*-type verbs like *metuēre* ‘fear’ are opposites in that *fear*-type verbs express a concern for the realisation of the complement proposition. *Wish*-type verbs like *orāre* ‘pray’ and *want*-type verbs like *velle* ‘want’, *cupere* ‘desire’ and *studēre* ‘desire’ generally do not have lexicalised negative forms except for *nolle* ‘not want’.

The remaining predicate classes are of less importance in this study. *Phasal predicates*, often called aspectual verbs, which refer to the phase of an action or state, are probably raising verbs. *Pretence predicates*, which are characterised by allowing complements whose propositions describe a world that is not the real world, involve a general implication that the proposition is false. *Deontic modal predicates* are those that express moral obligation or moral necessity and those expressing ability. *Achievement predicates* (or implicatives), finally, refer to the manner or realisation of achievement, or to the manner or reason for the lack of an achievement in the complement predication.

3 Non-finite complements

Latin non-finite complements are interesting for a number of reasons, one being the behaviour of their subjects. This chapter aims demonstrate three points about these subjects. First, that in raising and control, the infinitival subject agrees in case with its controller. Second, that the accusative case of overt subjects in non-finite complements is assigned by the infinitive. Third, the syntax non-finite complements is organised around this distinction between controlled and non-controlled subjects. A corollary to this final point is that the AcI can be characterised as ‘more finite’ than infinitival control complements because its lack of restrictions on tense and its overt subject are properties typically associated with finite clauses.

The contrast between raising and control and the evidence for case agreement will be discussed in section 3.1. Section 3.2 provides a descriptive overview of the AcI and proposes a formal description of the mechanism that assigns accusative case to AcI subjects. Section 3.3, finally, explains the relationship between control and infinitival complementation, and then explores some consequences of the idea that the AcI is ‘more finite’ than control complements.

3.1 Raising and control

Latin, like English, has a contrast between raising verbs and control verbs. The first part of this section will substantiate this claim and discuss the type of evidence that reliably and practically distinguishes control from raising. I will then argue that both raising and control should be formalised as functional control since there is systematic agreement in case between the controller and the embedded subject.

To limit the scope of this section, I will use only the verbs *vidēri* ‘seem’, *velle* ‘want’, *cōgere* ‘force’ and *licēre* ‘may’ as evidence. I have chosen these particular verbs because they are very frequent and because they represent all combinations of raising, control and the grammatical function of the controller, which are the variables that my theory takes into account. Despite this limitation of scope, I believe that the empirical observations can be extrapolated to other verbs and that the generalisations I propose reflect general principles of raising and control in Latin.

3.1.1 Distinguishing raising and control

(1) shows the verbs *vidēri* and *velle* with infinitival complements. In the matrix clause a nominative NP agrees with the finite verb, which means that the NP is the subject of the matrix verb. There is no overt infinitival subject, but it is understood to be identical to or have the same reference as the matrix subject.

- (1) a. ... omnes_i videntur [_i scire] ...
all.NOM.PL seem.3PL know.INF

‘everyone seems to know’ (PL. *Aul.* 114)

b. ego_i volo [Δ_i ire].
I.NOM want.1SG go.INF

‘I want to go.’ (PL. *Cist.* 112)

The difference between the examples is that *velle* is a control verb and *vidēri* a raising verb. The evidence that *velle* is a control verb is negative evidence. The verb is frequent so absence of evidence to the contrary is a strong indication that the following are genuine restrictions imposed by the verb and not accidents of attestation.

First, the subject is consistently sentient or can be construed as a sentient entity. *Velle* does not always express volition – it can also be used to express an impatient reaction (Pinkster 1985: 187–90) – so volition is not required, but it is required that the participant in question is capable of volition or reacting to an event.

Second, the verb restricts the temporal interpretation of the event or situation denoted by the complement to simultaneity or posteriority with respect to the temporal interpretation of the matrix verb. This is reflected morphologically by the use of present infinitives. Future infinitives are, to my knowledge, unattested.¹ But perfect infinitives are, against expectations, attested. Some perfect infinitives are morphological idiosyncrasies. *Nōvisse* in (2) is a verb whose *perfectum*-forms distribute as if they were *imperfectum*-forms. This deviation is therefore not peculiar to control complements.

(2) ego te non novi neque novisse adeo volo.
I.NOM you.SG.ACC not know.PERF.1SG and not known.PERF.INF even want.1SG

‘I don’t know you and I don’t even want to know you.’ (PL. *Men.* 296)

(3), in contrast, cannot be explained away in this way.

(3) di me perdant, si ego tui quicquam apstuli ... / nive
gods.NOM me.ACC destroy.SUBJ.3PL if I.NOM your.GEN anything steal.PERF.1SG nor
adeo apstulisse vellem.
PCL steal.PERF.INF want.IMPF.SUBJ.1SG

‘May the gods destroy me if I stole anything from you. Nor would I wish to have stolen anything.’ (PL. *Aul.* 645–6)

This phenomenon is very rare in the period that concerns us² and some examples occur in passages that consciously emulate a particular style and are deliberately archaising. This reduces our chances of making judgements about this evidence and the interaction of tense and aspect that it might exemplify (Pinkster 1990: 236). I therefore still maintain that *velle* imposes a restriction on the infinitive but concede that the precise formulation of this restriction remains to be worked out.

¹ Ross (2005: 143) lists two infinitives with ‘[+future] tense’ in her EL sample, but one is an ‘extraparadigmatic infinitive’ (see section 3.2.1.1) and the other a misclassified present infinitive.

² Ross (2005: 143) lists 23 perfect infinitives from a total of 1013 subject-control infinitives in an EL sample. Most involve *velle* and its derivatives. I do not agree that all 23 instances are control infinitives. She lists instances of *posse* ‘be able’ and *incipere* ‘begin’, for example, which are probably raising structures. In later authors this phenomenon is more frequent; Howard (1890) lists numerous examples.

The raising verb *vidēri* lacks these properties. The verb imposes no semantic restrictions on its subject. Specifically, the subject does not have to be sentient (4a). The verb also does not restrict the tense of the embedded infinitive. (4b) shows a perfect infinitive with an anterior interpretation.¹

- (4) a. mihi istaec videtur praeda_i [_i praedatum irier] ...
 me.DAT that.NOM seem.3SG loot.NOM loot.SUP AUX.PASS.INF
 ‘That loot appears to me to be about to be looted’ (PL. *Rud.* 1242)
- b. sol_i ... [_i excidisse> mihi <e mundo] videtur.
 sun.NOM fall out.PERF.INF me.DAT from world seem.3SG
 ‘The sun seems to me to have fallen out of the heavens.’ (CIC. *Att.* 9.10.3)

The standard view is that this reflects a difference in thematic structure. The control verb assigns thematic roles to both subject and complement, while the raising verb only assigns a role to the complement. Because of this, replacing an active infinitive in the complement of a raising verb with a passive infinitive should not change truth conditions. This is conventionally tested by using a pair of sentences like (5) and native-speaker judgements about coreference and acceptability.

- (5) a. The doctor_i seems [to _i examine John] = John_j seems [to _j be examined by the doctor].
- b. The doctor_i tries [to Δ_i examine John] ≠ John_j tries [to Δ_j be examined by the doctor].

This is impossible to replicate unless (almost) minimal pairs happen to be attested. Idiom chunks, another standard test, are also not practical since these too are too infrequent in corpus data.

There is, however, another difference between *vidēri* and *velle* that relates to their thematic structure. Both verbs subcategorise for several complement types. (6) shows that the AcI is an alternative to raising since there is no agreement between *videtur* and the accusative NP *virtutem*, and *videtur* has the agreement morphology of a subjectless verb.

- (6) non mihi videtur [ad beate vivendum satis posse virtutem].
 not I.DAT seem.3SG to well live.ND.ACC enough can.INF virtue.ACC.SG.F
 ‘It does not seem to me that virtue can be enough to live happily.’ (CIC. *Tusc.* 5.12, Schoof (2004: 151))

In a similar vein, if the embedded infinitive is subjectless, there is no element that can be raised and *vidēri* is subjectless.

- (7) [aequom> videtur tibi, <ut ego, alienum quod est / meum esse
 fair.NOM seem.3SG you.SG.DAT COMPL I.NOM someone.GEN REL be.3SG mine be.INF
 dicam]?
 say.SUBJ.1SG
 ‘Does it seem right to you that I should say that what is someone else’s is mine?’ (PL. *Rud.* 1230-1)

¹ I add no examples with a future infinitive because the examples in my corpus happen to be ambiguous between raising and an AcI.

From negative evidence we can reason that *velle* does not allow this. This is expected since *velle* assigns a thematic role to its subject. What is attested for *velle* is the construction shown in (8) with a thematic matrix subject and an AcI.

- (8) a. miles quom huc adveniat, te volo / me amplexari.
 soldier.NOM when here come.SUBJ.3SG you.ACC want.1SG me.ACC embrace.INF
 ‘When the soldier comes here, I want you to embrace me.’ (PL. *Bac.* 76-7)
- b. omnium primum iste qui sit Sosia, hoc dici volo.
 all.GEN first this REL be.SUBJ.3SG Sosia.NOM this.ACC say.PASS.INF want.1SG
 ‘First of all I want it to be said who that Sosia is.’ (PL. *Am.* 609)

In other words, both *velle* and *vidēri* subcategorise for AcIs, but *velle* requires a thematic subject while *vidēri* need not have one.

Much evidence is ambiguous between raising/control and AcI-complementation. This typically happens when the subject NP does not distinguish nominative and accusative case (9a), when the whole construction is embedded within an AcI (9b), or when the subject is a null pronoun (9c).¹ (9) shows *vidēri*; similar ambiguity is found with *velle*.

- (9) a. senatus consultum ... non mihi videtur esse valiturum.
 senate.GEN decree.NOM not me.DAT seem.3SG AUX.INF succeed.FUT.INF
 ‘It does not seem to me that the senatorial decree will succeed.’ (CIC. *Att.* 4.16.5)
- b. si non faciat, eum adversus rem publicam facturum videri
 if not do.SUBJ.3SG he.ACC.SG.M against republic.ACC do.FAP.ACC.SG.M seem.INF
 ‘If he failed to do so, he should be considered to be mediating treason against the republic.’ (CAES. *Civ.* 1.2)
- c. vix videtur continere lacrimas.
 hardly seem.3SG contain.INF tears.ACC
 ‘He barely seems able to contain his tears.’ (PL. *Mos.* 822)

It may be that c-structure evidence could be used to disambiguate or that there is a pragmatic difference between raising and non-raising. At present, these are not usable strategies for disambiguating.

3.1.2 Object control

Control is not restricted to subject control. Bolkestein (1976a) argues that Latin has two types of infinitival complements consisting of an infinitive and an accusative NP, one is the AcI and the other object-control complements. One might expect a symmetric system where object control is opposed to raising to object just like subject control is opposed to raising to subject. In fact, the AcI is a good candidate for raising to object precisely because it has same surface structure as object control and lacks the semantic restrictions of control. But, as section 3.2 will conclude, on balance, there is no raising to object in Latin.

¹ AcIs systematically permit *pro*-drop. See section 3.2.1.2.

Bolkestein (1979: 21) offers the judgements in (10) to illustrate the semantic restrictions that the object-control verb *cōgere* imposes on its patient. The judgements are intended to show that the embedded event or situation must be controllable and that the accusative NP must be able to control it.

- (10) a. *cogo portam_i [Δ_i patere].
force.1SG door.ACC be open.INF
'I force the door to be open.'
- b. *cogo te_i [Δ_i laudari].
force.1SG you.ACC praise.PASS.INF
'I force you to be praised.'

My own data does not contradict these judgements although 'controllability' is not always easy to decide on. Easier to verify is the fact that object-control verbs restrict the tense of the infinitive. With *cōgere* as matrix verb, future and perfect infinitives are not attested. With other object-control verbs the evidence is trickier because many also subcategorise for an AcI. In instances that are reasonably taken as object-control (that is with no overt embedded subject but coreference and a 'controllable' embedded event or state), future and perfect infinitives do not occur.¹

Passivisation evidence shows that the accusative NP is an object of the matrix verb. In (11a) a passive form of *cōgere* is found with the patient promoted to subject. The corresponding subjectless passivisation, with the patient left as an accusative subject of the infinitive (11b), is unattested.

- (11) a. ... cum cogar_i [Δ_i exire de navi] ...
when force.PASS.1SG leave.INF from ship
'when I am forced to leave the ship' (CIC. Att. 2.7.4)
- b. *[me exire] cogitur.
me.ACC leave.INF force.PASS.3SG

In addition to object-control verbs, we find predicates with a dative experiencer or experiencer-like argument which controls the infinitival subject. I will use the verb *licēre* to illustrate this:

- (12) nunc licet mi_i [Δ_i libere quidvis loqui].
now may.3SG me.DAT freely anything say.INF
'Now I may say anything freely.' (PL. Am. 393)

The dative NP has subject-like properties, but it is not a subject (see section 2.2.3.3) and I take it to be a secondary object. The reasons for treating *licēre* as a control verb are the same as for subject-control and object-control verbs: The tense of the embedded infinitive is restricted and the controller has to be capable of controlling the embedded event or situation. This is reflected by the infinitive being a present infinitive and the referent of the dative NP being animate.

Licēre can take an AcI, as in (13), but it is not as widely attested as with subject-control verbs, object-control verbs and raising verbs.

¹ Ross (2005) lists 5 perfect infinitives amongst 275 object-control infinitives in her EL sample. Whether this is correct or not is probably not possible to say since the verbs in question, *sinere* 'allow' and *pati/perpeti* 'allow', 'put up with' also take AcIs, and her examples could be AcIs with *pro* subjects.

- (13) sed non licet [me isto tanto bono, iudices, uti], non licet.
 but not may.3SG me.ACC this.ABL such.ABL good.ABL judges.VOC use.INF not may.3SG
 ‘But I may not use this strong support, judges, I may not.’ (Cic. *Ver.* 5.154, Kühner and Stegmann (1912-1914: i.679))

Since *pro*-drop of subjects is possible in embedded infinitival complements, the complement in (12) could in theory be of the same type as in (13). The reason why I treat them as different is that the overt dative NP in (12) and the overt accusative NP in (13) never co-occur.

On the other hand, structural ambiguity arises when neither NP is overt, as in (14). I analyse (14) as involving matrix *pro*-drop since the speech-act parenthetical *opsecro* (literally ‘I beg’) makes it clear that the statement is speaker-oriented, and I prefer control because this is the more frequent of the two structures. But in principle an analysis with *pro*-drop in the embedded clause is also possible.

- (14) licet=ne *pro*_i, opsecro, [Δ _i bitere] an non licet?
 may.3SG=Q PCL go away.INF or not may.3SG
 ‘Please, may I leave or not?’ (Pl. *Ps.* 254)

The empirical generalisation is therefore that Latin infinitival complements allow raising to subject, control by subjects, control by objects or control by secondary objects. Subcategorisation for non-finite complements is idiosyncratic and we will later see that there is at least one verb (*iubēre* ‘order’) that can take object-control complements or AcIs. This means that there exist verbs of all types that alternatively subcategorise for an AcI.

3.1.3 Formalising raising and control

As explained in section 2.2.6.7, raising is formalised as functional control. The effect is that the f-structure that corresponds to the subject of *vidēri* is the same as that corresponding to the infinitival subject.

Because of this, any embedded predicate that agrees with the embedded subject must express the same agreement features as the matrix subject. The data systematically supports this. In (15a), where the speaker is male and the complement predicate is an adjective, the adjective is in the nominative singular masculine in agreement with the raised subject. (15b) similarly shows masculine plural agreement with embedded nouns.

- (15) a. hercle vero serio, / quamquam ego_i tibi videor [t_i stultus],
 PCL PCL PCL although I.NOM.M you.DAT seem.1SG stupid.NOM.SG.M
 gaudere aliqui me volo.
 have fun.INF somehow me.ACC want.1SG
 ‘Really, although I do seem stupid to you, I want to enjoy myself somehow.’ (Pl. *Truc.* 922)
- b. heus tu, quamquam nos_i videmur tibi [t_i plebeii et
 PCL you although we.NOM seem.1PL you.SG.DAT plebeians.NOM.PL and
 pauperes] ...
 poor.NOM.PL
 ‘Hey you, although we seem plebeian and poor to you ...’ (Pl. *Poen.* 515)

The f-structure below corresponds to the relevant part of (15a). Note how the features of the SUBJ f-structure come in part from the matrix subject *ego* and in part from the agreement features of the embedded predicate *stultus*.

(16)	[SUBJ	f:	<table style="border-collapse: collapse; margin: 0 auto;"> <tr><td style="padding: 2px 10px;">PRED</td><td style="padding: 2px 10px;">‘PRO’</td></tr> <tr><td style="padding: 2px 10px;">CASE</td><td style="padding: 2px 10px;">NOM</td></tr> <tr><td style="padding: 2px 10px;">PERSON</td><td style="padding: 2px 10px;">1</td></tr> <tr><td style="padding: 2px 10px;">GENDER</td><td style="padding: 2px 10px;">MASC</td></tr> <tr><td style="padding: 2px 10px;">NUMBER</td><td style="padding: 2px 10px;">SG</td></tr> </table>	PRED	‘PRO’	CASE	NOM	PERSON	1	GENDER	MASC	NUMBER	SG]
PRED	‘PRO’														
CASE	NOM														
PERSON	1														
GENDER	MASC														
NUMBER	SG														
		PRED		‘vidērī<OBJ _{exp} , XCOMP>SUBJ’											
		OBJ _{exp}		“tibi”											
		XCOMP		<table style="border-collapse: collapse; margin: 0 auto;"> <tr> <td style="padding: 2px 10px;">SUBJ</td> <td style="padding: 2px 10px;"><i>f</i></td> </tr> <tr> <td style="padding: 2px 10px;">PRED</td> <td style="padding: 2px 10px;">‘stultus<SUBJ>’</td> </tr> <tr> <td style="padding: 2px 10px;">TENSE</td> <td style="padding: 2px 10px;">SIMULTANEOUS</td> </tr> </table>	SUBJ	<i>f</i>	PRED	‘stultus<SUBJ>’	TENSE	SIMULTANEOUS					
SUBJ	<i>f</i>														
PRED	‘stultus<SUBJ>’														
TENSE	SIMULTANEOUS														

I suggest that subject control, like raising, is functional control. The agreement data in (17) follows the same pattern as raising: In (17a) the adjective *liber* agrees with the implicit subject of the complement across the copula. The first person singular speaker is a male, so the adjective has masculine singular features. In (17b) the speaker is female and the adjective expresses female gender.

- (17) a. *ego quoque volo_i [Δ_i esse liber].*
 I.NOM too want.1SG be.INF free.NOM.SG.M

‘I too wish I was free.’ (Pl. *Trin.* 440)

- b. ... [*molesta Δ_i ei esse*] *nolo_i.*
 bothersome.NOM.SG.F her.DAT be.INF not want.1SG

‘I don’t want to be a nuisance to her.’ (Pl. *Cas.* 545)

The f-structure below corresponds to the sentence in (17b) and tells the same story as raising except that the matrix subject is thematic.

(18)

SUBJ	<i>f</i> :	<table style="border-collapse: collapse; width: 100%;"> <tr><td style="padding: 2px 5px;">PRED</td><td style="padding: 2px 5px;">‘PRO’</td></tr> <tr><td style="padding: 2px 5px;">CASE</td><td style="padding: 2px 5px;">NOM</td></tr> <tr><td style="padding: 2px 5px;">PERSON</td><td style="padding: 2px 5px;">1</td></tr> <tr><td style="padding: 2px 5px;">NUMBER</td><td style="padding: 2px 5px;">SG</td></tr> <tr><td style="padding: 2px 5px;">GENDER</td><td style="padding: 2px 5px;">FEM</td></tr> </table>	PRED	‘PRO’	CASE	NOM	PERSON	1	NUMBER	SG	GENDER	FEM
PRED	‘PRO’											
CASE	NOM											
PERSON	1											
NUMBER	SG											
GENDER	FEM											
PRED	‘nolle<SUBJ, XCOMP>’											
TENSE	PRES											
XCOMP		<table style="border-collapse: collapse; width: 100%;"> <tr><td style="padding: 2px 5px;">SUBJ</td><td style="padding: 2px 5px;"><i>f</i></td></tr> <tr><td style="padding: 2px 5px;">PRED</td><td style="padding: 2px 5px;">‘molestus<SUBJ, OBL_θ>’</td></tr> <tr><td style="padding: 2px 5px;">OBL_θ</td><td style="padding: 2px 5px;">“ei”</td></tr> <tr><td style="padding: 2px 5px;">FIN</td><td style="padding: 2px 5px;">—</td></tr> <tr><td style="padding: 2px 5px;">VFORM</td><td style="padding: 2px 5px;">INF</td></tr> </table>	SUBJ	<i>f</i>	PRED	‘molestus<SUBJ, OBL _θ >’	OBL _θ	“ei”	FIN	—	VFORM	INF
SUBJ	<i>f</i>											
PRED	‘molestus<SUBJ, OBL _θ >’											
OBL _θ	“ei”											
FIN	—											
VFORM	INF											

The subject-control data could also be explained as anaphoric control since a pronoun is expected to agree with its antecedent in number and gender. To discriminate between anaphoric and functional control, it would be helpful to have evidence showing case agreement as this would follow automatically from functional control but would need a separate explanation in the case of anaphoric control.

(19) is precisely this type of evidence, but because *velle* can subcategorise for an AcI, the example is in theory ambiguous between an AcI embedded under *velle* and a control complement with accusative case agreement. I think it is most likely that the example shows control by the accusative pronoun *me* and case agreement between a null infinitival subject of *esse* and the accusative adjective *diligentiorem*.

(19) quam si ad me perscripseris, intelleges me_i neque [Δ_i
REL.ACC.SG.F if to me write in full.PERF.SUBJ.2SG understand.FUT.2SG me.ACC neither
diligentiorem esse] voluisse quam tu esses neque
more attentive.ACC be.INF want.PERF.INF than you.NOM be.IMPF.SUBJ.2SG nor
neglegentiorem fore quam tu velis.
more careless.ACC be.FUT.INF than you.NOM want.SUBJ.2SG

‘If you will explain them [= what Atticus wishes Cicero to do] to me you will see that, while I did not want to pay more attention to the matter than you did, I shall pay no less than you desire.’ (Cic. *Att.* 1.5.5, tr. Shackleton Bailey (1999: i.31))

Another reason is that control is obligatory. This requires explanation. One could interpret the fact that *velle* is attested with AcIs as showing precisely the opposite, that control is non-obligatory. My interpretation is instead that *velle* has two subcategorisation frames, one for an AcI (COMP), the other for a control complement (XCOMP), and it is when it subcategorises for a control complement that it imposes obligatory control. That this is the correct way of looking at the data is hard to substantiate at this point. I hope that when further facts have been explained, the reader will agree that this is the more plausible interpretation.

The case for object-control being obligatory control is similar. The reason is that, as has been mentioned, object-control complements and AcIs are surface identical and a number of verbs ac-

tually subcategorise for both types of complement. I will later argue that it is still desirable to maintain that the verbs in question are obligatory control verbs, but for now this too must remain a stipulation.

The argument for functional control is stronger. Agreement evidence of the type in (20a) is compatible with functional control. We see that the embedded subject-oriented secondary predicate *invitos* ‘unwilling’ has agreement features that are compatible with the controller being *viatores* ‘travellers’. But more importantly, when the object-control verb is passive in (20b), its subject still controls the subject of the complement and now the secondary predicate has nominative case. This case agreement favours a functional-control analysis.

- (20) a. ...uti et viatores_i [etiam invitos Δ_i consistere]
 .COMPL and travellers.ACC.PL.M even unwilling.ACC.PL.M stop.INF
 cogant et...
 force.SUBJ.3PL and
 ‘that they both force travellers to stop even against their will and...’ (CAES. Civ. 4.5)
- b. ...neu quis_i [invitus sacramentum Δ_i dicere]
 nor that anybody.NOM.SG.M unwilling.NOM.SG.M oath of allegiance.ACC say.INF
 cogatur...
 force.SUBJ.PASS.3SG
 ‘nor that anybody should be forced to take the oath of allegiance against his will’
 (CAES. Civ. 1.86)

A partial f-structure corresponding to (20a) is shown in (21).

- (21) $\left[\begin{array}{l} \text{SUBJ} \quad \text{“PRO”} \\ \text{PRED} \quad \text{‘cōgere<SUBJ, OBJ, XCOMP>’} \\ \text{OBJ} \quad f: \left[\begin{array}{l} \text{PRED} \quad \text{‘viator’} \\ \text{CASE} \quad \text{ACC} \\ \text{NUMBER} \quad \text{PL} \\ \text{GENDER} \quad \text{MASC} \end{array} \right] \\ \text{XCOMP} \quad \left[\begin{array}{l} \text{SUBJ} \quad f \\ \text{PRED} \quad \text{‘consistere<SUBJ>’} \\ \text{FIN} \quad \text{—} \\ \text{VFORM} \quad \text{INF} \\ \text{XADJ} \quad \left\{ \left[\begin{array}{l} \text{SUBJ} \quad f \\ \text{PRED} \quad \text{‘invitus<SUBJ>’} \end{array} \right] \right\} \end{array} \right] \end{array} \right]$

Moving on to control by dative NPs, we find systematic case agreement. In (22), which is from a passage of reported speech and therefore has the form of an Acl, the secondary predicate *incolumibus* ‘unharmed’ has dative case in agreement with the matrix controller.

- (22) licere illis_i [Δ_i incolumnibus> per se <ex hibernis
 may.INF them.DAT unharmed.DAT.PL through REFL from winter quarters.ABL
 discedere ...]
 go away.INF

‘That they would allow them to depart safely from winter quarters ...’ (CAES. *Gal.* 5.41.6)

In keeping with the way I have reasoned above, this should support a functional-control analysis. The standard assumption is that the controller in functional control must have a term grammatical function (Bresnan 1982a). Since I take the dative NP to be a secondary object, this is unproblematic. The following f-structure, which corresponds to the sentence in (22), reflects this view.

(23)	<table style="border-collapse: collapse; width: 100%;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘licēre<OBJ_{exp}, XCOMP>’</td> </tr> <tr> <td style="padding: 5px;">OBJ_{exp}</td> <td style="padding: 5px;"> <table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">f:</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘PRO’</td> </tr> <tr> <td style="padding: 5px;">CASE</td> <td style="padding: 5px;">DAT</td> </tr> <tr> <td style="padding: 5px;">PERSON</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">NUMBER</td> <td style="padding: 5px;">PL</td> </tr> </table> </td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px;">XCOMP</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘discedere<SUBJ>’</td> </tr> <tr> <td style="padding: 5px;">FIN</td> <td style="padding: 5px;">—</td> </tr> <tr> <td style="padding: 5px;">VFORM</td> <td style="padding: 5px;">INF</td> </tr> <tr> <td style="padding: 5px;">XADJ</td> <td style="padding: 5px;"> <table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘incolumnis<SUBJ>’</td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px;">ADJ</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">{</td> <td style="padding: 5px;">[“ex hibernis”]</td> <td style="padding: 5px;">}</td> </tr> </table> </td> </tr> </table> </td> </tr> </table>	PRED	‘licēre<OBJ _{exp} , XCOMP>’	OBJ _{exp}	<table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">f:</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘PRO’</td> </tr> <tr> <td style="padding: 5px;">CASE</td> <td style="padding: 5px;">DAT</td> </tr> <tr> <td style="padding: 5px;">PERSON</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">NUMBER</td> <td style="padding: 5px;">PL</td> </tr> </table> </td> </tr> </table>	f:	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘PRO’</td> </tr> <tr> <td style="padding: 5px;">CASE</td> <td style="padding: 5px;">DAT</td> </tr> <tr> <td style="padding: 5px;">PERSON</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">NUMBER</td> <td style="padding: 5px;">PL</td> </tr> </table>	PRED	‘PRO’	CASE	DAT	PERSON	3	NUMBER	PL	XCOMP	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘discedere<SUBJ>’</td> </tr> <tr> <td style="padding: 5px;">FIN</td> <td style="padding: 5px;">—</td> </tr> <tr> <td style="padding: 5px;">VFORM</td> <td style="padding: 5px;">INF</td> </tr> <tr> <td style="padding: 5px;">XADJ</td> <td style="padding: 5px;"> <table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘incolumnis<SUBJ>’</td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px;">ADJ</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">{</td> <td style="padding: 5px;">[“ex hibernis”]</td> <td style="padding: 5px;">}</td> </tr> </table> </td> </tr> </table>	SUBJ	f	PRED	‘discedere<SUBJ>’	FIN	—	VFORM	INF	XADJ	<table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘incolumnis<SUBJ>’</td> </tr> </table>	SUBJ	f	PRED	‘incolumnis<SUBJ>’	ADJ	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">{</td> <td style="padding: 5px;">[“ex hibernis”]</td> <td style="padding: 5px;">}</td> </tr> </table>	{	[“ex hibernis”]	}
PRED	‘licēre<OBJ _{exp} , XCOMP>’																																			
OBJ _{exp}	<table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">f:</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘PRO’</td> </tr> <tr> <td style="padding: 5px;">CASE</td> <td style="padding: 5px;">DAT</td> </tr> <tr> <td style="padding: 5px;">PERSON</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">NUMBER</td> <td style="padding: 5px;">PL</td> </tr> </table> </td> </tr> </table>	f:	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘PRO’</td> </tr> <tr> <td style="padding: 5px;">CASE</td> <td style="padding: 5px;">DAT</td> </tr> <tr> <td style="padding: 5px;">PERSON</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">NUMBER</td> <td style="padding: 5px;">PL</td> </tr> </table>	PRED	‘PRO’	CASE	DAT	PERSON	3	NUMBER	PL																									
f:	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘PRO’</td> </tr> <tr> <td style="padding: 5px;">CASE</td> <td style="padding: 5px;">DAT</td> </tr> <tr> <td style="padding: 5px;">PERSON</td> <td style="padding: 5px;">3</td> </tr> <tr> <td style="padding: 5px;">NUMBER</td> <td style="padding: 5px;">PL</td> </tr> </table>	PRED	‘PRO’	CASE	DAT	PERSON	3	NUMBER	PL																											
PRED	‘PRO’																																			
CASE	DAT																																			
PERSON	3																																			
NUMBER	PL																																			
XCOMP	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘discedere<SUBJ>’</td> </tr> <tr> <td style="padding: 5px;">FIN</td> <td style="padding: 5px;">—</td> </tr> <tr> <td style="padding: 5px;">VFORM</td> <td style="padding: 5px;">INF</td> </tr> <tr> <td style="padding: 5px;">XADJ</td> <td style="padding: 5px;"> <table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘incolumnis<SUBJ>’</td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px;">ADJ</td> <td style="padding: 5px;"> <table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">{</td> <td style="padding: 5px;">[“ex hibernis”]</td> <td style="padding: 5px;">}</td> </tr> </table> </td> </tr> </table>	SUBJ	f	PRED	‘discedere<SUBJ>’	FIN	—	VFORM	INF	XADJ	<table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘incolumnis<SUBJ>’</td> </tr> </table>	SUBJ	f	PRED	‘incolumnis<SUBJ>’	ADJ	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">{</td> <td style="padding: 5px;">[“ex hibernis”]</td> <td style="padding: 5px;">}</td> </tr> </table>	{	[“ex hibernis”]	}																
SUBJ	f																																			
PRED	‘discedere<SUBJ>’																																			
FIN	—																																			
VFORM	INF																																			
XADJ	<table style="border-collapse: collapse; border-left: 1px solid black; border-right: 1px solid black;"> <tr> <td style="padding: 5px;">SUBJ</td> <td style="padding: 5px;">f</td> </tr> <tr> <td style="padding: 5px;">PRED</td> <td style="padding: 5px;">‘incolumnis<SUBJ>’</td> </tr> </table>	SUBJ	f	PRED	‘incolumnis<SUBJ>’																															
SUBJ	f																																			
PRED	‘incolumnis<SUBJ>’																																			
ADJ	<table style="border-collapse: collapse;"> <tr> <td style="padding: 5px;">{</td> <td style="padding: 5px;">[“ex hibernis”]</td> <td style="padding: 5px;">}</td> </tr> </table>	{	[“ex hibernis”]	}																																
{	[“ex hibernis”]	}																																		

Finally, a few words must be said about passives. Passivisation of an object-control verb follows directly from the LMT rule for passivisation. (24a) shows the lexical entry for the active verb and (24b) for the passive.

- (24) a. *cogere* V (↑ PRED) = ‘cōgere <SUBJ, OBJ, XCOMP>’
 (↑ OBJ) = (↑ XCOMP SUBJ)
- b. *cogi* V (↑ PRED) = ‘cōgī <SUBJ, OBL_{ag}, XCOMP>’
 (↑ SUBJ) = (↑ XCOMP SUBJ)

What is crucial is that the controller must be a term function. When the verb is passivised, the OBJ controller is promoted to SUBJ. Since both are term functions, functional control remains possible.

In the case of control by a secondary object, assuming a verb like *imperāre* ‘order’, which can take a subject, a secondary object controller and a control complement, the passivised version is predicted to be possible since the OBJ_θ controller is unaffected by passivisation:

- (25) a. *imperāre* V (↑ PRED) = ‘imperāre <SUBJ, OBJ_θ, XCOMP>’
 (↑ OBJ_θ) = (↑ XCOMP SUBJ)
- b. *imperārī* V (↑ PRED) = ‘imperārī <OBJ_θ, OBL_{ag}, XCOMP>’
 (↑ OBJ_θ) = (↑ XCOMP SUBJ)

If, on the other hand, a raising verb or a subject-control verb is passivised, the SUBJ controller in the active is demoted to OBL_{ag}, which therefore rules out the control relation and leads to unacceptability. This is the correct result.

3.2 The accusative and infinitive

The AcI is a non-finite complement that minimally consists of an infinitive and an accusative subject of the infinitive:

- (26) [Marcum abire] dicit.
 Marcus.ACC leave.INF say.3SG
 ‘He says that Marcus is leaving.’

The AcI is interesting both because prototypical infinitives are not supposed to have overt subjects and because accusative case does not usually mark subjects in Latin.¹ Previous research has explored different explanations for this, and the overall conclusion is that accusative case is somehow a property of the AcI constituent itself. Recent research has tried to elaborate on this by tying accusative case to tense. There is some evidence to support this but proposed implementations are sketchy and hard to verify empirically.

In view of this, my aim is modest. I aim to formalise the mechanism that ensures that the AcI can have an overt subject with accusative case, and make this formalisation as transparent as possible. I will claim that case is assigned by the infinitive, which also has features typically carried by complementisers and licenses null referential or generic subjects.

I start in section 3.2.1 by summarising the evidence, then I review existing work in section 3.2.2, and in section 3.2.3 and section 3.2.4 I discuss what previous research has taught us about analyses of the AcI and propose my own alternative.

3.2.1 Syntactic properties

The term *accusative and infinitive* is a pre-theoretical term that refers to a surface structure – not necessarily continuous – canonically consisting of an infinitive and an accusative NP that is the subject of the infinitive. The term *nominative and infinitive* (*nominativus cum infinitivo* or NcI) refers to surface structures containing a nominative NP and an infinitive. (27) illustrates these using constructed sentences.

- (27) a. Marcum abire dicit. (AcI)
 Marcus.ACC leave.INF say.3SG
 ‘He says that Marcus is leaving.’
 b. Marcus abire dicitur. (NcI)
 Marcus.NOM leave.INF say.PASS.3SG
 ‘Marcus is said to be leaving.’

Hofmann and Szantyr (1972: 363f) derive the NcI-construction from the AcI-construction by passivisation. The term NcI is consequently restricted to structures that have a passive matrix verb that takes an AcI when it is active. The object-control structure in (28a) is therefore traditionally referred to as an AcI, but the subject-control structure in (28b) is not an NcI since it is not derived from an active construction.

¹ Exclamative main clauses can consist of an accusative-marked subject and an infinitive, and as such are formally indistinguishable from AcIs in reported speech. But since exclamative clauses clearly have a speech-act function, it is not clear what the relation between them and the AcI is. I will not take such clauses into account here.

- (28) a. *Marcum_j [Δ_j abire] iubet_i.*
 Marcus.ACC leave.INF say.3SG
 ‘He orders Marcus to leave.’
- b. *Marcus_i [Δ_i abire] vult.*
 Marcus.NOM leave.INF want.3SG
 ‘Marcus wants to leave.’

The distinction between object-control complements and AcIs is not made in much work predating Bolkestein (1976a, 1977, 1979), who argued in detail for its importance.¹ The term AcI in later work is often reserved for those complements that are not object-control complements, and this is also the convention that I will adopt.

3.2.1.1 Tense

Infinitives in AcIs show a three-way morphological tense distinction in both the active and passive. They are interpreted as expressing relative tense with the temporal reference of the matrix verb as the reference point. A perfect infinitive thus expresses anteriority (29a), the present infinitive simultaneity (29b) and the future infinitive posteriority (29c).

- (29) a. *ait [venisse illum in somnis ad se mortuom].*
 say.3SG come.PERF.INF that.ACC in sleep to REFL.ACC dead.ACC
 ‘He said that dead one had come to him in his sleep.’ (PL. *Mos.* 490)
- b. *[hospitium te> aiunt <quaeritare].*
 hospitality you.SG.ACC say.3PL seek.INF
 ‘They said you’re looking for hospitality.’ (PL. *Poen.* 688, tr. de Melo (2011-2012: iv.91))
- c. *is ait [se mihi allaturum cum argento marsuppium].*
 he.NOM say.3SG REFL.ACC me.DAT bring.FUT.INF with money wallet.ACC
 ‘He said he would bring me the wallet with the money.’ (PL. *Men.* 1043)

The same morphological forms always express the same temporal relation regardless of the temporal interpretation of the matrix verb. There is, in other words, no sequence of tense.

The passive anterior, active posterior and passive posterior forms are analytic. The active posterior consists of the future participle and an optional auxiliary (except for the synthetic future infinitive *fore*). The passive posterior consists of the *um*-supine and the auxiliary *īrī*. (30) shows that there is no agreement between the subject of the AcI and the analytic form, which is good evidence that the form in *-um* is the *um*-supine and not the perfect participle.

- (30) ... *postquam audierat [non datum iri filio uxorem suo] ...*
 after hear.PLUPERF.3SG not give.SUP AUX.PASS.INF son.DAT wife.ACC his.DAT
 ‘after he heard that a wife would not be given to his son [= that his son would not get married]’ (TER. *An.* 177)

¹ This is not to say that no earlier work recognised that object-control complements are different from other complements with the same surface structure. Kühner and Stegmann (1912-1914: i.688f), for example, make a distinction between infinitival complements with accusative object NPs and infinitival complements with accusative non-object NPs.

As we have seen, posterior infinitives are unattested in control complements. In ACIs they are systematically attested when posteriority is expressed in CL, while in EL approximately 30% of such infinitives are present infinitives instead (Perrochat (1932: 5–21), de Melo (2007: 141)). (31) illustrates this well as the adverb *cras* ‘tomorrow’ makes the posterior reference clear.

- (31) [cras mane argentum mihi> / miles <dare se] dixit.
tomorrow morning money.ACC me.DAT soldier.NOM give.INF REFL.ACC give.PERF.3SG

‘The soldier said that he would give me the money tomorrow morning.’ (TER. *Ph.* 531-2)

There is a clear tendency for present infinitives to be used if telic and there is coreference between embedded and matrix subjects (de Melo 2007: 141–6). I will not speculate here on why this is. The relevant empirical observation for present purposes is that the temporal interpretation of the infinitive is unrestricted by the matrix verb.

A final wrinkle in the data is what de Melo (2007) calls *extraparadigmatic infinitives*:

- (32) credo [te facile impetrassere].
think.1SG you.SG.ACC easily obtain.INF

‘I think you will easily obtain it.’ (PL. *Mil.* 1128)

There are six known examples of this, five of which occur in my EL data. While these are traditionally interpreted as future infinitives, de Melo (2007: 191–239) shows that it is impossible to reach a conclusion about their actual temporal reference.

3.2.1.2 Subject properties

Two subject properties of the accusative NP are particularly easy to demonstrate. One is that it can locally bind reflexive *sē*. I will postpone this to section 4.1.2.1. The other is agreement between the infinitival subject and the infinitive or other agreeing predicates. (33) shows agreement with an embedded adjective in a complement that probably has a null copula.

- (33) ... ne [te indotatam] dicas ...
COMPL.NEG you.ACC without dowry.ACC.SG.F say.SUBJ.2SG

‘so that you don’t say you’re without a dowry’ (PL. *As.* 356)

Agreement is systematic when the infinitive is analytic (except for the non-agreeing posterior passive periphrasis). This agreement follows directly from the same principles that regulate subject-predicate agreement in finite clauses.

A further subject-like property is susceptibility to *pro*-drop. From the context of (34) it is clear that the agent participant of *impetrare* is the addressee. The infinitive therefore has a null subject, and the matrix and infinitival subjects have disjoint reference.

- (34) et ego_i [impetrare_j> dico <id quod petis].
and I.NOM obtain.INF say.1SG it REL seek.2SG

‘And I say you will obtain that which you are seeking.’ (PL. *Mil.* 231)

Pro-drop occurs in around 30% of AcIs in EL (Ross (2005), de Melo (2007: 153)) and it is more likely when the infinitive has agreement features (de Melo 2006).

That *pro-drop* is possible even under disjoint reference is somewhat surprising since it can lead to garden-path ambiguity. In (35), before the final word *dicere* is processed, *verum* would be attached as an object to *dicas*. But after *dicere* has been processed, its attachment must be changed to *dicere* and a disjoint *pro* subject must be posited for *dicere* (Ross 2005: 118-9).

(35) at iam faciam_i [ut [verum> dicas_j <dicere_i]].
but now make.FUT.1SG COMPL truth say.SUBJ.2SG say.INF

‘But now I’ll ensure that you say I’m telling the truth.’ (Pl. *Am.* 345)

Indeed, just like *pro-drop* is possible independently of coreference, so are overt pronouns. (36) shows this for a first-person subject.

(36) ego [me> dixi <erum adducturum et me domi praesto
I.NOM me.ACC say.PERF.1SG master.ACC bring.FAP.ACC.M.SG and me.ACC at home waiting
fore].
be.FUT.INF

‘I said I would bring my master and would be waiting at home.’ (Pl. *As.* 356)

Note also that, since the morphological distinction between subject and direct object is neutralised, context can be necessary to disambiguate grammatical functions:

(37) aio [te Aiacida Romanos vincere posse].
say.1SG you.ACC son of Aeacus Romans.ACC conquer.INF can.INF

‘I say that you, son of Aeacus, the Romans can conquer.’ (ENN. *Ann.* 174)

That the ambiguity was real is indicated by advice given by Quintilian (QUINT. *Inst.* 7.9.6 and 7.9.10) that this type of ambiguity should be avoided by the use of a passive infinitive.

3.2.1.3 Subcategorisation

AcIs are subcategorised for by verbs with quite different meanings. There are numerous utterance verbs (e.g. *dicere* ‘say’), knowledge verbs (e.g. *scire* ‘know’, *intelligere* ‘discover’), propositional attitude verbs (e.g. *credere* ‘believe’), desiderative verbs (e.g. *velle* ‘want’, *sperare* ‘hope’), manipulative verbs (e.g. *poscere* ‘demand’, *prohibere* ‘prevent’) and perception verbs (e.g. *videre* ‘see’). Less common, but attested, are commentative verbs (e.g. *mirari* ‘wonder’, *gaudere* ‘be glad’).

Despite differences in how frequent AcIs are and how many other types of complements an AcI-taking verb additionally subcategorises for, the AcI shows no obvious dependency on the semantics of the matrix verb. Factivity (Kiparsky and Kiparsky 1970) is not a factor since the AcI is attested with factive verbs¹ like the commentative *gaudere* ‘be glad’ (38a) as well as non-factive verbs like *negare* ‘deny’ (38b).

¹ I take the view that a presupposition is an inherent semantic property of a lexeme. Factivity is thus also a lexical property.

- (38) a. ... gaudeo tibi consilium probari meum.
 be happy.1SG you.DAT.SG plan.ACC approve.INF my.ACC
 ‘I am happy that you approve of my action.’ (CIC. *Fam.* 1.9.19)
- b. negas [novisse me]?
 deny.2SG know.INF me.ACC
 ‘Do you deny that you know me?’ (PL. *Men.* 750)

There is also no correlation with assertivity¹ (Hooper 1975, Hooper and Thompson 1973, Terrell and Hooper 1974). AcI-taking verbs that are factive cannot be assertive since they presuppose their complements (nor is the non-assertive *negāre* in (38b) above), but we also know that strongly assertive verbs like *dīcere* ‘say’ take AcIs.

Particularly amongst propositional attitude verbs we find a substantial number of one-place verbs like *appāret* ‘it is clear’ and *refert* ‘it is important’. The matrix verb, in other words, need not be one that can subcategorise for an object or assign structural case.

- (39) a. apparet [servom hunc esse domini pauperis / miseri=que].
 be clear.3SG slave.ACC thus.ACC be.INF master.GEN poor.GEN wretched.GEN=and
 ‘It is clear that this slave belongs to a poor and wretched master.’ (TER. *Eu.* 486)
- b. quid [me amare] refert, nisi sim doctus ac dicaculus?
 what me.ACC love.INF make a difference.3SG unless be.SUBJ.1SG clever and articulate
 ‘What difference does it make that I’m in love unless I’m clever and articulate?’ (PL. *Cas.* 529)

This is further demonstrated by the fact that the matrix predicate need not be a verb. It can be a VP such as *dare exemplum* ‘give an example’, but more typically it is a copular structure, as in (40).

- (40) [mori me] satius=t.
 die.INF me.ACC better=be.3SG
 ‘It would be better for me to die.’ (TER. *Eu.* 771)

Particularly interesting is the fact that the matrix predicate can be a noun. While some of these are action nouns, like *iudicatio* ‘judgement’ in (41a), there are those like *rumor* ‘rumour’ in (41b) that are not.

- (41) a. haec autem opinatio est iudicatio [se scire quod nesciat].
 this PCL belief.NOM be.3SG judgement.NOM REFL know.INF REL not know.INF
 ‘This belief is a judgement that one knows what one does not know.’ (CIC. *Tusc.* 4.26, Kühner and Stegmann (1912-1914: i.696))
- b. [rem te valde bene gessisse] rumor erat
 issue.ACC you.SG.ACC very well deal with.PERF.INF rumor.NOM was.3SG
 ‘Rumour was that you had handled the problem very well.’ (CIC. *Fam.* 1.8.7)

¹ A predicate is assertive if its complement is an assertion and there is a reading in which the complement is the speaker assertion. This refers to the fact that there are two readings of a sentence like *John said that the book is good*. In one the main proposition is *John said something*, in the other it is *the book is good*. The latter is called the *parenthetical reading* and it is this reading that must be possible for a predicate to be assertive.

Whether the AcI is always subcategorised for with such predicates is an open question, but *rumor*, for example, does not have internal phasal structure and is therefore not the type of noun we would expect to form an NP with argument structure (Grimshaw 1990).

Some AcI-taking verbs can, as an alternative to the AcI, take an accusative NP (Pillinger 1980: 76), which presumably is a direct object. It tends to be a neuter pronoun or drawn from a small set of nominal expressions specific to the AcI-taking verb in question. (42) shows typical objects of *dicere* ‘say’. In (42a) it is the substantivised adjective *vera* ‘truth’, in (42b) the noun *causa* ‘case’, in (42c) it is the pronoun *id* ‘this’ in a correlative structure, and in (42d) it is the pronoun *haec* ‘this’.

- (42) a. *vera dico.*
truth.ACC.PL.N say.1SG
‘I’m telling the truth.’ (Pl. *Am.* 395)
- b. *nec causam liceat dicere mi ...*
and not case.ACC be allowed.SUBJ.3SG say.INF me.DAT
‘I would not be allowed to state my case.’ (Pl. *Am.* 157)
- c. *nam quod ego-met solus feci ... / ... id quidem hodie numquam*
for what I-INTENS alone did.1SG that PCL today never
poterit dicere.
be able.FUT.SUBJ.3SG say.INF
‘For what I did alone ... that he will never be able to tell today.’ (Pl. *Am.* 425–6)
- d. *haec sic dicam erae.*
this.ACC.SG.N thus say.FUT.1SG mistress.DAT
‘I will tell my mistress this [= a story] in this way.’ (Pl. *Am.* 261)

3.2.1.4 Passivisation

There are two passive forms of the constructed AcI-sentence in (43a). One is the NcI or *personal passive* (43b), in which case and agreement indicate that the NP is the matrix subject. The other, the *impersonal passive*, invariably has third person singular features and the NP invariably accusative case (43c). I will use the terms *AcI-active*, *NcI-passive* and *AcI-passive* to distinguish these constructions descriptively and the term AcI to refer to the constituent consisting of an accusative and an infinitive in the AcI-active and AcI-passive constructions.

- (43) a. *Marcum abire dicit (AcI-active)*
Marcus.ACC leave.INF say.3SG
‘He says that Marcus is leaving.’
- b. *Marcus abire dicitur (NcI-passive)*
Marcus.NOM leave.INF say.PASS.3SG
‘Marcus is said to be leaving.’
- c. *Marcum abire dicitur (AcI-passive)*
Marcus.ACC leave.INF say.PASS.3SG
‘It is said that Marcus is leaving.’

While some verbs occur in all constructions, many verbs, like *constituere* ‘decide’, are attested in AcI-actives and AcI-passives but not in NcI-passives. It seems therefore that the set of verbs attested in the NcI-passive is a proper subset of the set of verbs attested in the AcI-passive.

A final observation concerning passivisation is that some verbs subcategorise for an accusative NP and an AcI at the same time. When passivised, the accusative NP must be promoted to subject. The constructed examples and judgements in (44) are from Bolkestein (1979):

- (44) a. *eam admoneo eos profectos esse* (AcI-active)
 her.ACC admonish.1SG they.ACC leave.PPP.ACC.PL.M AUX.INF
 ‘I admonish her that they have left’
- b. **eam admoniti sunt profecti esse* (NcI-passive)
 she.ACC admonish.PPP.NOM.PL.M AUX.3PL leave.PPP.NOM.PL.M AUX.INF
- c. *admonita est eos profectos esse* (AcI-passive)
 admonish.PPP.NOM.SG.F AUX.3SG they.ACC leave.PPP.ACC.PL.M AUX.INF
 ‘she is admonished that they have left’

I consider (44c) to be canonical passivisation of (44a) since there is promotion of the addressee participant to subject in the passive. The AcI is an additional argument of the verb, which is unaffected by passivisation.

3.2.1.5 Word order

Section 2.2.1.2 explained some of the evidence that shows that finite complements have a CP with multiple left-edge positions and that material from the finite complement very rarely intervenes in the surface string of the higher clause.

At least with respect to discontinuity, AcIs do not behave like finite complements. (45a) is typical in that one phrase of the AcI is positioned before the matrix verb. (45b) is of the same type under the assumption that *autem* is a ‘second position’ particle whose placement is determined subsequent to the positioning of the phrase belonging to the AcI. This too holds for (45c), where the clitic *-que* intrudes between the subject *eum* and the matrix verb *ait*.

- (45) a. ... *qui [se> diceret <eum in Appia ... cognosse]*.
 REL.NOM REFL.ACC say.IMPF.SUBJ.3SG him.ACC on Appian way recognise.PERF.INF
 ‘who said that he had recognised him on the Appian Way’ (Cic. *Att.* 9.11.1)
- b. [*Domitium> autem aiunt <re audita et eos qui una
 Domitius.ACC PCL say.3PL matter.ABL hear.PPP.ABL and them.ACC REL together
 essent se tradidisse]*
 be.IMPF.SUBJ.3SG REFL give.PERF.INF
 ‘As for Domitius, they say that on hearing the news he and those with him have
 given themselves up.’ (Cic. *Att.* 8.8.2)
- c. [*P. Valerium> negat <habere quicquam> Deiotarus rex
 Publius Valerius.ACC deny.3PL have.INF anything Deiotarus.NOM king.NOM
 <eum>=que ait <a se sustentari]*.
 he.ACC=and say.3SG by REFL.ABL support.PASS.INF

‘King Deiotarus says that Publius Valerius doesn’t have anything and is being supported by him.’ (Cic. *Att.* 5.21.14)

Multiple phrases can appear to the left of the matrix verb, but then the matrix verb is very often parenthetical.

(46) [iam hic > credo <eum adfuturum]
soon here think.1SG he.ACC be present.FUT.INF

‘He will be here soon, I think.’ (Pl. *As.* 398)

But as with other instances of discontinuity there are few firm rules. More radical scrambling is certainly possible, especially in the EL data, including fronting of heads across multiple matrix elements and scattering across several positions in the surface string, and the conclusion is that AcIs behave unlike finite complements in that material is often placed to the left of the left edge of the AcI constituent itself.

3.2.2 Previous work

Previous work on the AcI has revolved around three intuitions. The traditional one is that the accusative subject is a historical remnant. The AcI is a single constituent but historically it consisted of an accusative object of the matrix verb and a loosely dependent infinitive. Early generative approaches are instead based on the idea that the accusative NP is a matrix object at one level of representation and an embedded subject at another level. Finally, in what I will call the *clause-internal approach*, it is assumed that the accusative NP is the subject of the AcI at all levels of representation and that accusative case is assigned by an AcI-specific rule.

3.2.2.1 The traditional explanation

The explanations in traditional work like Kühner and Stegmann (1912-1914), Woodcock (1959), Hofmann and Szantyr (1972) and Ernout and Thomas (1964) differ but the line of thinking is broadly the same. Since Bolkestein (1979) has summarised and critiqued this work in detail, I will only illustrate the sort of argumentation used and the challenges it faces.

The AcI is seen as the product of a historical development originating in pre-historical Latin and still ongoing when our records begin. It involves a reanalysis of a trivalent verbal structure as a bivalent structure followed by an extension of the bivalent structure beyond the distributional range of the original trivalent structure.

The original trivalent structure is thought to have consisted of a verb with a subject, an accusative object and an infinitive. It is a matter of disagreement which verbs originally headed such structures. Often suggested are *vidēre* ‘see’, *admonēre* ‘admonish’, *iubēre* ‘order’ and *docēre* ‘teach’, the last of which I will use as example.

The structure before reanalysis is (47a). The accusative NP is the object of *doceo*. The infinitive is an additional dependent of the verb. Exactly how this dependency is explained varies. Kühner and Stegmann (1912-1914: i.687f), for example, compare the infinitive in (47a) to a noun like *litteras* ‘writing’, ‘the ABC’. The product of the reanalysis is the bivalent structure in (47b) where the accusative and the infinitive form an object constituent of *doceo*.

- (47) a. doceo [te] [scribere]
 teach.1SG you.SG.ACC write.INF
 ‘I teach you to write.’
- b. doceo [te scribere]
 teach.1SG you.SG.ACC write.INF
 ‘I teach you to write.’

The motivation for the reanalysis is that the NP and infinitive are ‘felt’ like an object.¹ It is as a result of subsequent extension that verbs like *dicere* acquire the ability to subcategorise for AclS.

Although it is unclear what motivated the reanalysis (i.e. why it was ‘felt’ that the accusative and infinitive were a constituent), the suggested reanalysis is not itself implausible. The problem is that the reanalysed pattern is not extended in the predicted way.

The traditional view derives both the Acl-passive and the Ncl-passive from the Acl-active. To produce the Acl-passive, the Acl is taken to be the logical object that is promoted. To produce the Ncl-passive, the accusative NP is the logical object that is promoted. This means that the verbs in question, those that participate in both Acl-passives and Ncl-passives, must be both bivalent and trivalent at the same time. It is not unthinkable that both structures coexisted after reanalysis if children acquiring the language did not realise that the bivalent pattern had become superfluous.

The problem is with verbs like *dicere*, which by hypothesis acquired the bivalent pattern by extension. The verb is attested in Acl-passives and Ncl-passives, which means that it too is both bivalent and trivalent. Where, then, does the trivalent structure come from? Indeed, this is a general problem since the Ncl-passive gained ground over time in terms of the number of attested lexemes. Assuming that this is not an accident of attestation, it actually shows that it is the trivalent pattern and not the bivalent pattern that is being extended.

3.2.2.2 Raising to object

Lakoff (1968) is the first substantial generative work on Latin complementation. It suffers from numerous factual errors (Pinkster 1971, Bolkestein 1976b: 168–70, 1976a: 270–1, 1989: 9–13) and did little to improve our understanding of complementation. But it did spark a debate about the status of the accusative NP as a matrix object at some level of representation.

Pepicello (1977, 1980) suggests that Acl-actives are raising-to-object structures, which he captures in Transformational Grammar by making the accusative NP an argument of the embedded clause in Deep Structure and a syntactic object of the matrix verb in Surface Structure. His evidence is the Ncl-passive. He reasons that since the matrix verb in the Ncl is passive and since the subject of a passive matrix verb can only have become a subject if a rule transforming it from an object has applied, the accusative of an Acl-active must be the object of the matrix verb. The accusative can, in turn, only be an object of the matrix verb if it has been raised from subject position in the embedded sentence.

These transformations explain the accusative case of the Acl-active, derive the Ncl-passive and make it seem reasonable that the embedded verb is an infinitive. Pepicello (1977) presents this as a complete account of the Acl, yet he does not even mention the Acl-passive or AclS with one-place

¹ A different approach uses a perception verb and relies on different structures being associated with a perception reading and a knowledge reading. See Hahn (1950) for this type of approach and Bolkestein (1976a: 284–7) for its problems.

matrix verbs, and he confuses object control with the AcI (Bolkestein 1979). Pepicello (1980), a less widely circulated paper, tries to rectify these mistakes. For a one-place verb like *evenit* ‘happen’, as in (48), he proposes that the AcI is a clausal constituent that is generated in subject position. He refers to this as ‘AI [= accusative and infinitive] complementation’.

- (48) [Marcum venisse] evenit.
 Marcus.ACC come.PERF.INF happen.3SG
 ‘It happens that Marcus has come.’

He does not explain why some verbs participate in ‘AI complementation’. What is clear is that he thinks that *dicere* participates in both raising to object and ‘AI complementation’. Thus an AcI-active can be derived either from raising to object (49a) or from ‘AI complementation’ (49b).¹

- (49) a. [S dicunt [NP [S Marcus venit]]] → [S dicunt Marcus [NP [S venisse]]]
 b. [S dicunt [NP [S Marcus venisse]]]

Passivisation of the raising-to-object structure in (49a) produces the NcI-passive in (50a). Passivisation of the ‘AI complementation’ structure in (49b) produces the AcI-passive in (50b).

- (50) a. [S dicunt Marcus [NP [S venisse]]] → [S Marcus dicitur [NP [S venisse]]]
 b. [S dicunt [NP [S Marcus venisse]]] → [S [NP [S Marcus venisse]] dicitur]

An NcI-passive with a one-place verb like *evenit* is therefore ruled out since it (for whatever reason) only generates its AcI structure with ‘AI complementation’, and an AcI-passive is, presumably, ruled out because *evenit* is a one-place verb whose only semantic argument is the complement.

This idea, that there are two ways of generating the AcI, is clearly related to the traditional view. Pepicello in fact alludes to a very similar diachronic explanation, which I will not go into here. Suffice it to say that he makes no attempt to explain the subset relation between matrix verbs in the AcI-passive and the NcI-passive, nor the diachronic extension of the NcI-passive.

He must, presumably, more generally say that raising to object is lexically restricted to a subset of AcI-taking verbs since ‘AI complementation’ is required to derive the more widespread AcI-passive. If so, the theoretical gain of stipulating raising rests on whether it is the most economical way of deriving the NcI-passive. An alternative to his derivation of the NcI (under the assumptions that he worked under) is to derive it from the AcI-active by cross-clausal passivisation.

- (51) [S dicunt [S Marcus venisse]] → [S Marcus dicitur [NP [S venisse]]]

Cross-clausal passivisation was suggested by Chomsky (1973) for English and would make raising to object redundant. It requires, for various reasons, that the complement in question is of category S. Pepicello instead appears to follow Postal (1974), taking the category of a base-generated AcI in ‘AI complementation’ to be an S dominated by an NP. This then rules out cross-clausal passivisation.

Even if Chomsky’s approach is ruled out for theoretical reasons, it is questionable whether raising is worth stipulating. Pepicello’s suggestions do not deal properly with AcI-taking verbs

¹ These examples do not appear in the original paper and are my interpretation of Pepicello’s prose description.

with two accusative NPs like *admonēre*. These can be passivised but still take an AcI. Finally, he does not address at all AcIs with nouns, adjectives and complex VPs. All of this would require ‘AI complementation’ making raising rare and prompting further questions about the economy of positing raising to object to account for the NcI-passive.

3.2.2.3 Exceptional Case Marking

ECM (Chomsky 1981) has also been suggested for the AcI-active because of the superficial resemblance with English structures of the type *I believe Mary to be a genius*. English ECM infinitives are selected by a group of transitive verbs including *believe* and *expect* that ‘exceptionally’ assign Case to the embedded subject. The key requirement is that the verb must be able to assign structural case to the NP and that the embedded clause lacks a CP so that it is sufficiently ‘transparent’ for Case assignment to target the NP.

Calboli (1983) and Maraldi (1983) claim without much explanation that this is how AcI subjects get case. This is clearly wrong. How would case marking take place when the higher predicate is non-verbal, for example? Chomsky (1981, 1986) assumes that nouns assign inherent case, not structural case, which is why (52) is unacceptable in English.

(52) *the belief [Mary to be a genius]

Similarly, how would an ECM-analysis explain AcIs with one-place predicates? These only take clausal theme complements, have no external theta role and should therefore not be case assigners. There is also no explanation for the AcI-passive. This is again easily illustrated by comparison with English. When the matrix verb in (53a) is passivised, the ECM structure is unacceptable (53b).

- (53) a. John believes [Mary to be a genius].
 b. *It is believed [Mary to be a genius].

3.2.2.4 Clause-internal analyses

Since neither raising to object nor ECM can account for the distribution of the AcI, it is natural to seek an explanation in terms of an AcI-specific rule. Pillinger (1980: 78) follows this intuition, thinking of the AcI as a type of nominalised sentence whose subject gets the ‘least marked’ case available.¹ Assuming that the AcI is base-generated as an NP, he derives the AcI-passive from the AcI-active by passivisation of the sentential AcI object. The NcI-passive is, in turn, derived from the AcI-passive by the application of a raising-to-subject rule:

(54) [_S dicunt [_{NP} [_S Marcum venisse]]] (AcI-active) → [_S [_{NP} [_S Marcum venisse]] dicitur]
 (AcI-passive) → [_S Marcus [_{VP} [_{VP} venisse] dicitur]] (NcI-passive)

The assumption that the base-generated AcI is an NP is not unproblematic. Pillinger supports it using the fact that some AcI-taking verbs can take NP objects instead of AcI-constituents, but, as Cann (1983: 125) points out, his strongest evidence is the passivisation itself, which certainly ‘looks like’ passivisation of an NP constituent.

¹ A somewhat related approach would be ‘default’ case. Calboli (2005) suggests something like this but his erratic and jargon-laden writing style prevents the reader from grasping even the outline of his idea.

Rejecting an NP-analysis, Cann (1983) instead analyses AcI constituents as non-finite sentences. Indeed, the GPSG rule he uses to license AcIs applies to both finite clauses and AcIs. The syntactically relevant part of this rule is shown in (55), where α , which can have the values + or –, ensures that the case of the subject N2 depends on the finiteness of the clausal structure V2. β ensures that there is agreement between the subject N2 and the verb V1.

$$(55) V_2[\alpha \text{ INF}] \rightarrow N_2[-\alpha \text{ nom}, \alpha \text{ acc}, \beta] V_1[\beta]$$

To understand how he derives the AcI-passive and the NcI-passive, we must understand how he links the distribution of the AcI to ‘lexical transitivity’. Cann (1983: 116) explains this as ‘an inherent feature of a verb that remains constant (like all lexical features) no matter what linguistic environment surrounds it’. He defines a transitive verb as one that ‘may appear with a noun phrase object in the accusative case’ (Cann 1983: 117). In other words, if a certain verb is attested with an accusative-marked object, the verb is lexically transitive ([+TRN]). Otherwise it is ‘non-transitive’ ([–TRN]). He thus reasons that the data in (56) shows that *velle* and *audire* are [+TRN] while *posse* and *dīcere* are [–TRN]. Similarly, (57) shows that *cōgere* and *admonēre* are [+TRN] while *permittere* and *nuntiāre* are [–TRN].

(56) a. volo/*possum mala.
want/can.1SG apples.ACC
‘I want/can apples.’

b. audio/*dico equum.
hear/say.1SG horse.ACC
‘I hear/say the horse.’

(57) a. cogo/admoneo te.
force/warn.1SG YOU.ACC
‘I force/warn you.’

b. permitto/nuntio tibi.
allow/report.1SG YOU.DAT
‘I allow you/report to you.’

Most infinitival complements are licensed independently of transitivity. A selection of complements with an accusative and an infinitive is shown below: a single AcI in (58a), an object and an infinitive in (58b)/(58c) and an object and an optional AcI in (58d)/(58e).

(58) a. audivit [+TRN]/dixit [–TRN]/admonuit [+TRN]/nuntiavit [–TRN] Marcum
heard/said/warned/reported.3SG Marcus.ACC
abire.
leave.INF

‘He heard/said/warned/reported that Marcus was leaving.’

b. coegit [+TRN] Marcum (abire).
forced.3SG Marcus.ACC leave.INF

‘He forced Marcus (to leave).’

- c. *permisit* [–TRN] *Marcum abire*.
 allowed.3SG Marcus.ACC leave.INF
 ‘He allowed Marcus (to leave).’
- d. *admonuit* [+TRN] *me (Marcum abire)*.
 warn.PERF.3SG me.ACC Marcus.ACC leave.INF
 ‘He warned me (that Marcus was leaving).’
- e. *nuntiavit* [–TRN] *mihi (Marcum abire)*.
 report.PERF.3SG me.DAT Marcus.ACC leave.INF
 ‘He reported to me (that Marcus was leaving).’

There are two passivisation rules. One generates canonical passives for [+TRN] verbs and the other ‘impersonal’ passives for [–TRN] verbs. The same ‘impersonal’ rule also derives the AcI-passive for [–TRN] verbs. Finally, the NcI-passive is introduced by an *ad hoc* rule that applies only to [–TRN] verbs. In sum, this means that AcI-actives are generated for [±TRN] verbs, while AcI-passives and NcI-passives are generated only for [–TRN] verbs.

The proposal is more explicit than previous work, but at the cost of 11 rules, 7 lexical redundancy rules and 2 meta rules. The interaction between rules is not explained and there are numerous errors, leaving the reader to work out (or guess) all combinations. If my interpretation is correct,¹ the system has many flaws, the most serious being the following: It generates structures like (59a) for all [+TRN] verbs. In actuality this is possible with *velle* but not *audire* (as indicated by the asterisk). It generates passives for all [+TRN] verbs (59b), but *velle* lacks a passive. Finally, it rules out NcI-passives for all [+TRN] verbs, but *audire* is actually attested with an NcI-passive (59c).

- (59) a. *ego volo/*audio abire*.
 I.NOM want/hear.1SG leave.INF
 ‘I want/*hear to go.’
- b. *equus *vultur/auditur a me*.
 horse.NOM want.PASS.3SG by me
 ‘A horse is wanted/heard by me.’
- c. *iam Caesar a Gergovia dicessisse audiebatur ...*
 now Caesar.NOM from Gergovia withdraw.PERF.INF hear.IMPF.PASS.3SG
 ‘Now it became known that Caesar had withdrawn from Gergovia’ (CAES. *Gal.* 7.59.1)

The relevance of the [+TRN] feature is, in other words, doubtful. His judgements on transitivity are themselves debatable. He proposes a rule that allows all verbs that take AcIs to alternatively take a neuter, accusative pronoun as in (60a). Such pronouns do not count as ‘real’ objects for the purposes of lexical transitivity. One can accept this; the problem arises with (60b).

- (60) a. *aliquid dixisti*
 something say.PERF.2SG
 ‘you said something’

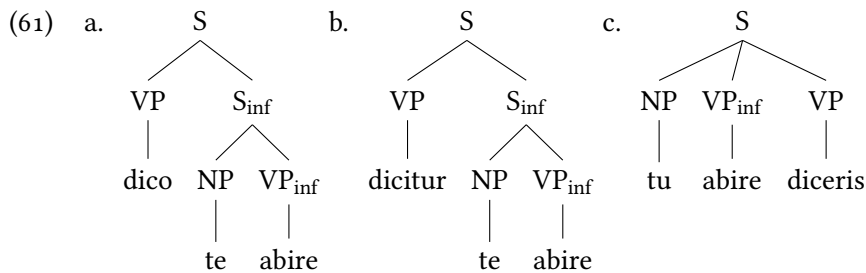
¹ I have made the following adjustments: I take (11) in his paper to be the rule later referred to as meta rule 1. In (19) the features of N₂ are given as [–α nom, –α acc, β] but must be [–α nom, α acc, β]. The set V[9] referenced at the bottom of page 127 must be V[10]. Meta rule 2 in (41) must make reference to a W (like meta rule 1) so that it applies to any environment with an intransitive verb, and the left hand side of the output rule must reference V₁ not V₂.

- b. orationem dixisti
 speech.ACC say.PERF.2SG
 ‘you proclaimed your speech’

He offers two excuses: One is that there are two homophonous verbs with different meanings (as indicated in the translations). The other is that the rule licensing pronouns can be extended to cover certain lexically specified NPs thus exempting (60b) too from counting towards lexical transitivity. Whichever solution is chosen, it weakens the idea that there is such a thing as ‘lexical transitivity’.

In fact, ‘lexical transitivity’ is almost equivalent to a verb’s ability to undergo canonical (i.e. not impersonal) passivisation. It is the absence of this ability that is supposed to correspond with the ability to form the AcI-passive and the NcI-passive. Phrased in this way, it is not at all obvious why there should be any correspondence at all.

Much of Cann’s work is taken over quite uncritically by Schoof (2003, 2004), which is a study of the AcI formalised within HPSG. Schoof says the AcI, the S_{inf} -constituent in (61a), is ‘a kind of adjunct’ or an ‘oblique complement’, except with AcI-taking nouns, when it is an apposition (Schoof 2003: 300–5). In either case, the accusative case of the subject comes from a dedicated rule that applies only to AcIs. The AcI-passive is derived by a general lexical rule for passivisation of intransitives. It demotes the subject but leaves the AcI-constituent in place. The resulting structure is shown in (61b). The NcI-passive is derived from the AcI-passive by another lexical rule, which looks like a modified raising rule. The result is (61c).



Extending Cann’s ideas, she claims that object-control verbs are transitive and AcI-taking verbs intransitive (Schoof 2004: 149f). It is true that an object-control verb by definition is transitive and that an intransitive verb conversely cannot be an object-control verb, as stated in (62a), but, Schoof, in fact, argues as if the equivalences in (62b) hold.

- (62) a. object-control verb \rightarrow transitive
 intransitive \rightarrow not object-control verb
 b. transitive \leftrightarrow object-control verb
 intransitive \leftrightarrow AcI-taking verb

Her explanation of control makes this clear. She classifies the examples in (63) as object control; *velle* in (63a) because ‘*velle* is a transitive verb’ (Schoof 2004: 69), and *audire* in (63b) because *audire* has an accusative object (63b) (Schoof 2004: 132f).

- (63) a. equum abire volo
 horse.ACC leave.INF want.1SG
 ‘I want the horse to leave’

- b. audio puellam venire
 hear.1SG girl.ACC come.INF
 'I hear the girl come.'

The idea that a matrix verb is an object-control verb if it imposes a selectional restriction on an object-marked NP, seems to have been taken by Schoof to mean that if a verb imposes restrictions on a direct object, it will automatically be a control verb in infinitival complementation. Such carelessness is unfortunate when the author's explicit goal is to formalise the distinction between object control and AcI.

If we eliminate the notion of 'transitivity' from Cann's and Schoof's proposals, we are left only with a stipulated rule that assigns accusative case to the subject of non-finite verbs. Nothing new is therefore added to our knowledge compared to Pillinger (1980).

Let us therefore turn to attempts to explain what it is about the AcI itself that might associate it with an accusative-assigning rule. One line of thinking is based on work on non-canonical infinitives and the idea that possible combinations of case, tense, agreement and infinitival morphology can be expressed in terms of two binary features, $[\pm T]$ and $[\pm AGR]$. In general terms, an infinitive is $[+T]$ if it is specified for morphological tense and $[+AGR]$ if specified for morphological agreement. A canonical infinitive thus has the features $[-T, -AGR]$, i.e. it does not express tense and it does not agree with its subject. A canonical finite verbal form, on the other hand, has the features $[+T, +AGR]$.

The same features have also been used to derive the distribution of PRO and *pro* subjects, and a standard assumption is that PRO is incompatible with $[+T, +AGR]$ (= finite) verbal forms but compatible with $[-T, -AGR]$ (= non-finite) verbal forms.

There are numerous Romance dialects and languages with $[+T, -AGR]$ or $[-T, +AGR]$ infinitives, i.e. infinitives combining features of finite verbs and prototypical infinitives. Well-known examples are Portuguese (Raposo 1987), Calabrian (Ledgeway 1998) and Old Neapolitan (Vincent 1997, 1998).

Following this lead, Cecchetto and Oniga (2002) propose that the AcI infinitive has the feature $[+T]$ because of its relative-tense paradigm, in contrast to control infinitives, which lack a full relative-tense paradigm. Both types of infinitive have the feature $[-AGR]$. This, they reason, is correct because the agreement between subjects and periphrastic infinitives is of a different type from the subject-predicate agreement found with finite verbs. Since infinitives in AcIs have overt subjects, $[+T, -AGR]$ is unlikely to support PRO subjects. Their generalisation is therefore that PRO is compatible only with control infinitives.

They further propose that Latin AcIs are similar to English *for...to* complements in having a prepositional complementiser assigning accusative Case. The difference is that this prepositional complementiser is always null. The implementation is sketchy: Drawing on the alternation between overt and null *that* in English and the idea that null *that* is affixal and incorporates into the higher verb (Kayne 1984, Stowell 1981), they take null C in Latin to be affixal. Unlike null *that*, they assume that null C requires the infinitive to move to its position at LF. This movement is first said to be triggered by the $[+T]$ feature of the infinitive, but later (more coherently) explained as necessary in order to satisfy the affixal character of null C. The authors admit that the analysis is speculative, but claim that the alternatives are worse.

Empirically evaluating this proposal is difficult since the proposed prepositional complementiser is null, and it not clear to me that it will have an observable effect on c-structure. If we look past this and the theory-internal technicalities, there are two claims that are easier to evaluate. The first is that infinitives whose temporal interpretation is restricted by the matrix verb ($[-T]$) are control infinitives. This is uncontroversial. The movement of the infinitive to null C at LF means, in more theory-neutral terms, that null C and the infinitive are reflected in surface structure by the same overt material, viz. the infinitive. The second claim therefore works out to be that the temporally unrestricted infinitive is the ‘case assigner’ for the subject.¹

Other recent work accepts this line of thinking but fails to develop it further. Goldbach (2003), after an irrelevant exposition on case syncretism, simply asserts that lack of agreement features on the infinitive rules out nominative case. Ferraresi and Goldbach (2003), in turn, merely allude to the subject being licensed by the finiteness of the AcI. Melazzo (2005: 358), finally, is content to explain the accusative case as ‘licensed by something in the CP-layer’.

It is worth mentioning that the type of analysis proposed by Cecchetto and Oniga has been applied to Ancient Greek. The empirical facts are slightly different but key observations translate between the languages (Hettrich 1992). Ancient Greek AcIs are similar in having infinitives with freely varying morphological tense with a relative-tense interpretation (Tantalou 2003), and there is the same pattern of agreement in control structures so that control constructions can be distinguished from AcIs by case agreement (Spyropoulos 2005). For Ancient Greek Spyropoulos (2005) subscribes to the idea that there is a null prepositional complementiser and develops the relationship between T and C in more detail, but ends up suggesting that accusative assignment is a ‘Last Resort’ operation. What this buys him is unclear to me. As far as I understand, it achieves the same as stipulating that any infinitival INFL that is not in a control or a raising construction, is specified for $[+T]$, which surely does not add anything beyond the by now well-known empirical observation.

3.2.3 Discussion

It should be clear from the review of previous work that base-generated AcIs must be recognised, but the fact that a clause-internal explanation must play a role in explaining the distribution of the AcI does not itself rule out that raising to object might also play a role. Raising to object has only one advantage, and that is to explain the Nci-passive as a passive counterpart of the AcI-active, and, as Pillinger (1980) suggests, the same can be effected by applying raising to subject to the AcI-passive structure.

If raising to subject were independently motivated, it would be the more economic solution. Indeed, certain active verbs whose only argument is propositional are sporadically attested with raising, in particular when the raised element is a pronoun. (64) shows EL examples with the verb *oportere* ‘ought’, which more commonly subcategorises for an AcI.

- (64) a. adhuc, Archylis, quae adsolent quae=que oportent / signa esse ad
 so far Archylis REL.PL be usual.3PL REL.PL=and should.3PL sign.PL be.INF to
 salutem, omnia huic esse video.
 health all this.DAT be.INF see.1SG

¹ One needs to avoid this case assignment in Nci-passives. The authors barely mention this scenario and it is not clear to me why null C would not also appear in such structures since they too have a $[+T]$ INFL.

‘So far, Archylis, I see that she has all the signs that are normal and should be signs of health [= a healthy delivery].’ (TER. *An.* 481–2)

- b. haec facta ab illo oportebant, Syre.
this.NOM.PL.N do.PPP.NOM.PL.N by him should.IMPF.3PL Syrus.VOC

‘This should have been done by him, Syrus.’ (TER. *Hau.* 536)

If one lends weight to this type of sporadically attested evidence, the conclusion must be that raising to subject is motivated independently of the NcI-passive. It is then more economical to derive it from the AcI-passive by raising to subject. Note, however, that this requires raising to subject to be an operation that applies to the outcome of passivisation. If both raising and passivisation are lexical operations, as in LFG, passivisation has to feed raising.

Some evidence suggests a third solution, that two distinct lexical entries are involved for the NcI-passive and the AcI-passive. The best example is *vidēri*. This is transparently the morphological passive of the perception verb *vidēre*. The active form *vidēre* denotes either sensory perception (‘I saw him leave’) or acquisition of knowledge (‘I saw that this was true’). The passive form *vidēri* can also denote sensory perception (‘he was seen to leave’) and maybe also acquisition of knowledge (‘it was seen that this was true’).

- (65) ... in nostra acie Castor et Pollux ex equis pugnare visi
in our ranks Castor.NOM and Pollux.NOM from horses fight.INF see.PPP.NOM.PL.M
sunt ...
AUX.3PL

‘Castor and Pollux were seen fighting on horseback in our ranks.’ (CIC. *N.D.* 2.6)

But the passive form is also a propositional attitude verb with an epistemic or inferential meaning (‘he seems to leave’), a meaning that the active form entirely lacks.¹ It expresses an inference or a judgement about the truth of the proposition contained in the complement or indicates uncertainty about the truth-value of the complement. (66a) and (66b) show examples of these meanings with raising, and (66c) without.

- (66) a. non videor_i [_{t_i} vidisse postis pulchriores].
not seem.1SG see.PERF.INF door post.ACC prettier.ACC
‘I don’t think I have seen prettier door posts.’ (PL. *Mos.* 820)
- b. [vix hoc > videmur_i < _{t_i} credere].
hardly this seem.1PL believe.INF
‘We can hardly believe it.’ (PL. *Poen.* 1264)
- c. non mihi videtur [ad beate vivendum satis posse virtutem].
not I.DAT seem.3SG to well live.ND.ACC enough can.INF virtue.ACC.SG.F
‘It does not seem to me that virtue can be enough to live happily.’ (CIC. *Tusc.* 5.12, Schoof (2004: 151))

The agent phrase favours the perception reading, while the dative experiencer favours the epistemic reading. A reasonable conclusion is therefore that there are two homophonous verbs with different a-structure and different meaning.

¹ See Barron (2001) for thoughts on the diachronic relationship between *vidēre* and *vidēri*.

The question is whether this is a general pattern in the lexicon. Verbs that are attested in NcI-passives can be characterised generally as having an evidential meaning component in the NcI-passive that the AcI-active lacks. Their complement is a proposition, but one that is attributed to someone who is not the speaker.¹ The verbs in question are mostly utterance verbs, perception verbs and propositional attitude verbs, which are classes of verbs associated with evidentiality in languages that have grammaticalised means of expressing it (Aikhenvald 2004, Willett 1988). This is not to say that the verbs in the NcI-passive are markers of evidentiality, but it could mean that there is a systematic difference in a-structure and in meaning, which gives grounds for claiming that there are multiple lexical items involved.

But this does not make entirely the right predictions. First, while I think one could make a case for an evidential meaning component being the difference between the NcI-passive and the AcI-active, it is not clear whether the AcI-passive has this meaning component or not. The following pair of examples of an AcI-passive and an NcI-passive show a contrast because the AcI-passive here clearly involves a reported speech act, but this is not always so.

- (67) a. ... dictum mihi est [Hippodamum ad te profectum
say.PPP.NOM.SG.N me.DAT AUX.3SG Hippodamus.ACC to you leave.PPP.ACC.SG.M
esse].
AUX.INF
'I was told that Hippodamus had left to you.' (Cic. *Q. fr.* 3.1.21)
- b. ... qui inventor olei esse dicitur ...
rel.NOM.SG.M discoverer olive.GEN be.INF say.PASS.3SG
'who is said to have discovered the olive' (Cic. *Ver.* 4.128, Bolkestein (1976a: 271, fn. 11))

Indeed, the difference seems to be brought out by the difference in tense, the past tense disfavouring the evidential reading.² It is also very likely that information structure plays a role in the choice. Bolkestein (1981) and Pinkster (1990: 131) observe that the proposition in an NcI-passive is not a single information-structure unit and that the NcI-passive is used when a constituent of the proposition is the focus.

Another problem is that, while agent phrases occur much more frequently in AcI-passives than in NcI-passives (Bolkestein 1981), the fact that they occur at all in NcI-passives indicates that the matrix verb is a true passive in the NcI-passive. Bolkestein shows two examples:

- (68) a. quae inesse in homine perspiciantur ab iis qui ...
REL.NOM.PL.N be in.INF in man perceive.PASS.3PL by those REL.NOM.PL
'[things] which may be perceived to exist in man by those people who ...' (Cic. *Leg.* 1.62)

¹ Bolkestein (1983) claims that only non-factive verbs form the NcI-passive. This is probably the wrong generalisation, as Ørsnes (2011) points out with reference to similar verbs in Danish, if a proposition is presupposed to be true, it is unlikely that reportative evidence from someone other than the speaker is needed. NcI-passives with factive verbs are thus unlikely to occur, but not impossible.

² This, in turn, might be the explanation for an observation found in the grammars (e.g. Kühner and Stegmann 1912-1914: 708f) to the effect that the AcI-passive is more frequent than the NcI-passive when the verb is analytic.

b. quae ab aliquo ... dicta sunt fore
 REL.NOM.PL.N by someone say.PPP.NOM.PL.N AUX.3PL be.FUT.INF

‘[things] which are said by someone to be going to happen’ (Cic. *Top.* 93)

The conclusion to be drawn from this is that the NcI-passive is lexically specific, can take agent phrases and sometimes differs in meaning from the AcI-active and perhaps the AcI-passive.

3.2.4 A clause-internal account

Since the infinitive is the only lexical element that is always present (ignoring here the general problem of omission of the auxiliary), the relevant constraints must be lexically associated with the infinitive. My proposal is shown in (69).¹

(69) *abisse* V (↑ PRED) = ‘abire<SUBJ>’
 @INFINITIVE(POSTERIOR)
 ((↑ SUBJ PRED) = ‘PRO’)
 (↑ SUBJ CASE) = ACC
 (↑ MOOD) = ACI
 (COMP ↑)

Since *pro*-drop is possible, the infinitive must optionally license a *pro* subject, and this subject must be given accusative case. The purpose of MOOD is to allow a matrix predicate to subcategorise specifically for an AcI rather than some other complement that can have the function COMP. (COMP ↑), finally, ensures that the infinitive will head a structure with the function COMP in the containing structure. A prototypical verb subcategorising for an AcI, like *dicere* ‘say’, will thus have a lexical entry along the following lines:

(70) *dicit* V (↑ PRED) = ‘dicere<SUBJ, COMP>’
 @3SG
 @PRESENT
 (↑ COMP MOOD) =_c ACI

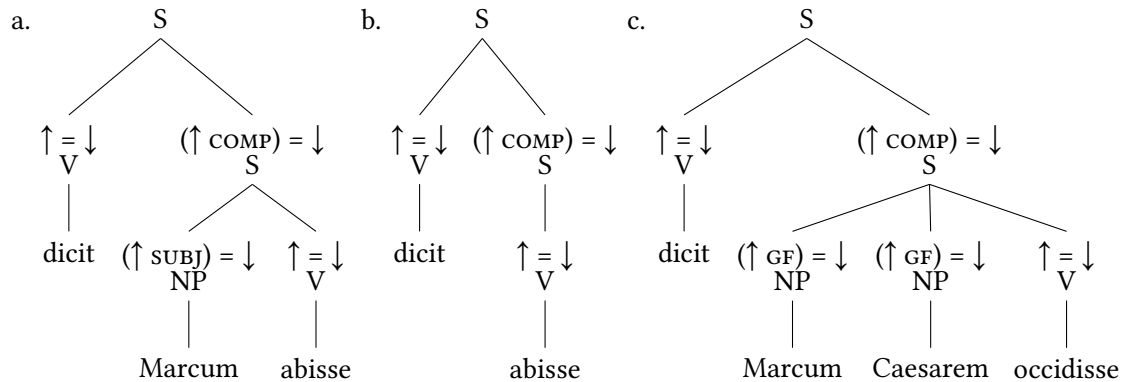
Let us now consider three constructed sentences and their c- and f-structures. (71a) shows an AcI with an overt subject, (71b) one with *pro*-drop and (71c) one with an accusative subject and an accusative object.

(71) a. *dicit* [Marcum abisse].
 say.3SG Marcus.ACC leave.PERF.INF
 ‘He says that Marcus left.’
 b. *dicit_i* [*pro*_{?_i/_j} abisse].
 say.3SG leave.PERF.INF
 ‘He says that he left.’
 c. *dicit* [Marcum Caesarem occidisse].
 say.3SG Marcus.ACC Caesar.ACC kill.PERF.INF
 ‘He says that Marcus killed Caesar/Caesar killed Marcus.’

¹ As for finite verbs, we also need entries for subjectless infinitives to ensure that these do not get a PRO subject.

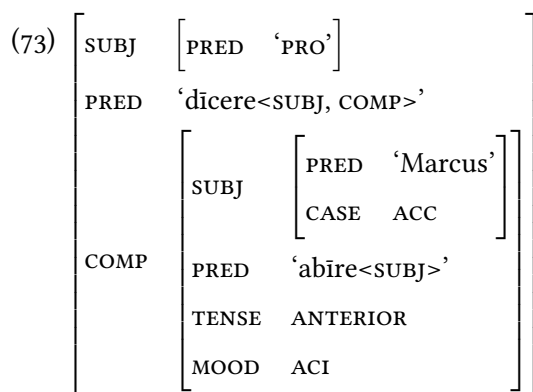
In section 2.2.2 it was explained how the c-structure and f-structure of a main clause with an embedded finite complement correspond. When the complement is an AcI, the crucial difference is that the complement is not headed by an overt complementiser. Consequently, there is no immediate motivation for assigning it to the category CP in c-structure. For now I assume that AcIs belong to the category S in c-structure. The three sentences then have the following c-structures:

(72)



Since the infinitive carries the lexical information otherwise carried by a complementiser, the infinitive will ‘construct’ its own COMP function. Moreover, since the PRED-value of the matrix verb specifies a COMP function, the S constituent corresponding to the AcI will have to be identified with the function COMP.

The f-structure corresponding to the first example sentence is shown in (73). Note that the generalisations stated in section 2.2.2.1 allow NPs with accusative case to have either SUBJ or OBJ function, and that the resolution of the function of *Marcum* as SUBJ in (73) must follow from Completeness, since the PRED-value of the infinitive specifies a SUBJ. The subject will be guaranteed by the infinitive to have accusative case.



In the second example there is no overt NP. But since the PRED value of the infinitive specifies a subject, the optional specification on the infinitive of a pronominal subject takes effect.

(74)	SUBJ	[PRED 'PRO']
	PRED	'dicere<SUBJ, COMP>'
	COMP	[SUBJ [PRED 'PRO']]
		[CASE ACC]
		PRED 'abire<SUBJ>'
		TENSE ANTERIOR
	MOOD ACI	

The third example is ambiguous. The f-structure below represents one possibility. The constraints will also allow for another possibility with *Marcum* being the object and *Caesarem* the subject.

(75)	SUBJ	[PRED 'PRO']
	PRED	'dicere<SUBJ, COMP>'
	COMP	[SUBJ [PRED 'Marcus']]
		[CASE ACC]
		[OBJ [PRED 'Caesar']]
		[CASE ACC]
	PRED 'occidere<SUBJ, OBJ>'	
	TENSE ANTERIOR	
	MOOD ACI	

Since the infinitive contributes the information that complementisers otherwise contribute, one might speculate that AcI infinitives belong to category C. This is unlikely. Since individual words from the AcI can be positioned within the word-order domain of the containing clause, the AcI cannot be a single S constituent, as I have assumed above, or a CP since discontinuity should be prevented from crossing the CP boundary.

If it is correct to assume that discontinuity is a function of syntactic category, the data instead suggests that the AcI is of category NP. This is because it is NPs that otherwise show this type of scattering effect within their containing structures. The correspondence architecture of LFG makes it possible for the AcI to belong to NP in c-structure and yet be clausal in f-structure.

Still, since my word-order evidence is limited, and my model of Latin c-structure is very tentative, it is clear that the evidence I have given is insufficient for substantiating this. The syntactic category of the AcI must therefore remain speculation and a subject for future research.

3.2.5 Passivisation

The AcI-passive and NcI-passive are accounted for by LMT. (76a) shows how the AcI-active form *dicit* in (76b) is derived. As explained in section 2.2.5.4, I assume that the propositional theme corresponds to a slot in a-structure with the feature [+c] and that [+c] maps to COMP.

- (76) a. $\begin{array}{cc} a & c \\ | & | \\ <arg_1, & arg_4> \\ [-o] & [+c] \\ | & | \\ \text{SUBJ} & \text{COMP} \end{array}$
- b. *dicit* V (\uparrow PRED) = ‘dicere<SUBJ, COMP>’
 (\uparrow COMP MOOD) =_c ACI
 @3SG
 @PRESENT

The ACI-passive follows when the passivisation rule is applied to the a-structure, as in (77a). Since the logical subject is demoted and [+c] must be mapped to COMP, no argument can be mapped to SUBJ. The result is therefore a subjectless passive (see section 2.2.4.2) with the lexical entry in (77b).

- (77) a. $\begin{array}{cc} a & c \\ | & | \\ <arg_1, & arg_4> \\ [-o] [+r] & [+c] \\ | & | \\ (\text{OBL}_{ag}) & \text{COMP} \end{array}$
- b. *dicitur* V (\uparrow PRED) = ‘dicī<OBL_{ag}, COMP>’
 (\uparrow COMP MOOD) =_c ACI
 @3SG
 @PRESENT

As shown in section 3.2.3, not only ACI-passives but also NCI-passives are attested with agent phrases. The logical subject of *dicitur* should therefore be mapped to OBL_{ag} in both ACI-passives and NCI-passive. At the same time, *dicitur* behaves as a raising verb in NCI-passives. Its surface subject must therefore be athematic. (78a) shows the required derivation, in which an athematic argument slot has been added to the a-structure. The corresponding lexical entry is shown in (78b).

- (78) a. $\begin{array}{ccc} a & & c \\ | & & | \\ arg_1, & arg_2, & arg_4> \\ [-o] [+r] & [-r] & [+c] \\ | & | & | \\ (\text{OBL}_{ag}) & \text{SUBJ} & \text{XCOMP} \end{array}$
- b. *dicitur* V (\uparrow PRED) = ‘dicī<OBL_{ag}, XCOMP>SUBJ’
 (\uparrow XCOMP SUBJ) = (\uparrow SUBJ)
 @3SG
 @PRESENT

At this point we encounter a weakness in LMT. The version of LMT used here is not specific about the derivation of raising verbs and it lacks a mechanism for explaining the systematic occurrence of pairs of raising and non-raising verbs in the lexicon.

To derive (78a) we would need an operation that introduces the athematic argument. Whether this operation should be morphosemantic or morphosyntactic (see section 2.2.5.1) is unclear, as discussed in section 3.2.3. Nor is it clear from the present data if (78a) is best explained by the application of a lexical raising rule (applied to the a-structure in (77a)) or by the application of a single passivisation-and-raising rule (applied to the a-structure in (76a)).¹ Since our version of LMT does not accommodate either, we are forced to stipulate that an athematic subject is present in the a-structure in (78a). The lexical entry in (78b) then follows.

3.3 Control complements and Acls

We have seen that control verbs impose obligatory control and case agreement, and restrict the temporal reference of the complement. Acls in contrast can have any type of subject, referential or non-referential, and have free temporal reference. This section will attempt to show that it is around this contrast between the presence and the absence of control that non-finite complementation in Latin is organised.

Since free tense expression, overt subjects, assignment of case to subjects and subject-verb agreement are features typical of finite clauses, the Acl can be characterised as ‘more finite’ than infinitival control complements. Whether a complement-taking verb takes an Acl or a finite complement is largely a matter of lexical idiosyncrasy, but there are some patterns, particularly involving utterance verbs and manipulative verbs. For such verbs it tends to be the finite complement that displays properties associated with control and the Acl that is used in the absence of control.

In section 3.3.1 I will examine some data involving finite complements, in section 3.3.2 I will move on to previous work on the contrast between finite and non-finite complements, and finally in Section 3.3.3 I look at specific cases where the contrast between the absence and presence of control plays a role, and develop the idea that the Acl is ‘more finite’ than control complements.

3.3.1 Finite complements

Many verbs that take an Acl can take a finite complement instead. This section will look at some general properties of four types of finite complement that are regularly found with verbs that also appear with Acls. I will first show some examples where the preference for one type of complement over another appears to be idiosyncratic. This is of little interest in the present context. Then I will look in more detail at finite complements introduced by *ut* and at *wh*-complements. For some classes of complement-taking predicates, such complements systematically contrast with Acls and selection of one complement type over another corresponds to differences in meaning.

3.3.1.1 *Quod, quia* and *quoniam*-complements

In Late Latin, clauses headed by *quod*, *quia* and *quoniam* eventually come to replace Acls altogether (Herman 1989, Hofmann and Szantyr 1972: 576–79), but in EL and CL these complementisers

¹ Another problematic aspect is the mapping of [+c] to xCOMP instead of COMP. This is not a problem in practice as the mapping to xCOMP only makes sense if an athematic subject is present.

usually head causal clauses. Only a few examples of what might be complements with utterance and knowledge verbs exist (Cuzzolin 1991, 1994). One is shown in (79).

- (79) equidem scio iam [filius quod amet meus / istanc
 PCL know.1SG already son.NOM COMPL love.SUBJ.3SG my.NOM.SG.M that.ACC.SG.F
 meretricem e proximo Philaenium].
 prostitute.ACC.SG.F from next door Philaenium
 ‘Well, I already know that my son is in love with that prostitute from next door,
 Philaenium.’ (PL. As. 52-3)

Quod-clauses are quite common with commentative verbs and it is debatable whether such clauses are adjuncts or arguments. It has been suggested that some commentative verbs like *gaudēre* ‘be happy’ can take *quod*-clauses as complements (Miller 1974: 242–3, Cuzzolin 1994: 140–65). One can also make a case for some verbs like *accidere* ‘happen’ when they are combined with suitable adverbs (Rosén 1989). An example is shown in (80) where *accidit perincommode* presumably is a factive predicate even though *accidit* alone is non-factive.

- (80) sed accidit perincommode [quod eum nusquam vidisti].
 but happened very disadvantageously COMPL him at all saw.2SG
 ‘But most unfortunately you did not see him at all.’ (CIC. Att. 1.17.2, tr. Shackleton Bailey
 (1999: i.95))

Still, the AcI is generally preferred over *quod*-complements, at least for commentative verbs. For *gaudēre*, for example, Cuzzolin (1994: 149) finds 8 finite complements to 77 AcIs in a sample from CL.

While it may be that only factive verbs can take *quod*-complements, *quod*-complements and AcIs are not distinguished by factivity, nor is there any other detectable difference between the two options. The combination of a lack of difference in meaning and the restriction to one class of predicate makes evidence involving this type of finite complement less useful for understanding more about the AcI.

3.3.1.2 *Quīn* and *quōminus*-complements

Several other types of finite complement show idiosyncratic behaviour. *Quīn*-complements are taken by verbs expressing doubt, for example, but correlate with negation of the complement-taking verb.

- (81) at nemo dubitat quin subsidio venturus sit
 but nobody.NOM doubt.3SG COMPL support.DAT come.FAP AUX.SUBJ.3SG
 ‘But nobody doubts that he will come to help.’ (CIC. Att. 8.7.1)

Quōminus-complements have a similar status as they are taken by verbs with meanings like ‘prevent’ or ‘refuse’, which in a sense are ‘inherently’ negative. There are patterns in such data, but from the point of view of syntax this is clearly an idiosyncratic lexical phenomenon. Indeed, idiosyncratic complementation with verbs with inherent negative meaning or sensitivity to negation is not unique to Latin. Compare in this respect, for example, the contrasts in (82) and (83).

- (82) a. I allowed him [to go].
 b. I prevented him [from going].
- (83) a. I can remember [that/*if he did it]
 b. I can't remember [that/if he did it]

3.3.1.3 *Ut* and *nē*-complements

In contrast to the types of finite complement mentioned above, *ut*-complements are taken by several classes of verbs, many of which also take AcIs, and there are systematic differences between the two. Just like AcIs, *ut*-complements are also found in reported speech without an overt matrix verb.

Ut heads both complements and a range of adverbial clauses. The formal identity between complements and adverbial clauses is extensive. This applies in particular to purpose clauses and consecutive clauses. All require subjunctive mood and the rules for sequence of tense are very similar.¹ To my knowledge, the only formal difference is in the use of complementisers. While all can be headed by *ut*, only complements and purpose clauses can be headed by *nē*, which is inherently negative and in complementary distribution with *ut* except for sporadically attested complementiser doubling (*ut nē*). Moreover, only complements can appear without a complementiser. The conditions that favour this are disputed, but it is not a colloquialism (Halla-Aho 2010). Beyond this, we must rely on semantic criteria for making a distinction. The most important one is that *ut*-complements cannot be omitted while other types of *ut*-clause can (Pinkster 2010: 122–6).

We can identify four broad classes of verbs that take *ut*-complements. First, there is a range of subjectless one-place predicates. A typical example is *accidere* ‘happen’.

- (84) ... accidit [ut esset luna plena] ...
 happen.3SG COMPL be.SUBJ.3PL moon full
 ‘it happened that the moon was full’ (CAES. *Gal.* 4.29.1, Magni (2009: 246))

I will not take such verbs into consideration in the following. Second, there is a class consisting of two-place causative verbs (85) and desiderative verbs (86).

- (85) fac modo [ut venias].
 make.IMP just COMPL come.SUBJ.2SG
 ‘Just make sure to come.’ (CIC. *Att.* 3.4.1)
- (86) a. [hodie uxorem ducas], ut dixi, volo.
 today wife.ACC take.SUBJ.2SG as say.PERF.1SG want.1SG
 ‘As I said, I want you to get married today.’ (TER. *An.* 418)

¹ For complements and purpose clauses they are practically identical. The predominant pattern is that a present subjunctive is found with a primary sequence matrix verb and an imperfect subjunctive with a matrix verb in historic sequence. There are divergences (like ‘pseudo-final clauses’ (de Melo 2007: 83f)) but these are not by themselves sufficient for distinguishing between purpose clauses and complements.

b. timeo [ne aliud credam atque aliud nunties].
worry.1SG COMPL one thing believe.SUBJ.1SG and something else tell.SUBJ.2SG

‘I worry that I believe one thing and you are telling me something else.’ (TER. *Hec.* 844)

The third class comprises manipulative verbs like *orāre* ‘ask’. These are three-place verbs with the agent attempting to manipulate the patient into performing an action or assuming a state.

(87) ... peto a te_i [ut id a me neve in hoc reo neve in aliis
ask.1SG from you.ABL COMPL that from me neither in this defendant nor in others
requiras_i] ...
ask.SUBJ.2SG

‘I ask you not to ask me that [question] about this case or any other’ (CIC. *Fam.* 1.9.19)

It is characteristic that there is coreference between a matrix argument and the embedded subject. (87) shows this with a matrix oblique argument. The examples in (88) show the same with a matrix object (88a), a matrix dative (88b) and a matrix subject (88c).

(88) a. eum_i roga, [ut relinquat_i alias res et huc veniat_i].
him ask.IMP COMPL leave.SUBJ.3SG other things and here come.SUBJ.3SG

‘Ask him to leave other things and come here.’ (PL. *Rud.* 1212)

b. Scapha, id tu mihi_i ne suadeas, [ut illum minoris
Scapha.VOC this you.NOM me.DAT not urge.SUBJ.2PL COMPL him.ACC less
pendam_i].
regard.SUBJ.1SG

‘Don’t urge me to think less of him, Scapha.’ (PL. *Mos.* 215)

c. oratus sum_i [ad eam ut irem_i].
ask.PPP.NOM AUX.1SG to her COMPL go.IMP.F.SUBJ.1SG

‘I was asked to go to her.’ (PL. *Mil.* 1405)

The matrix argument need not be overt, as in (89), but compared to (88a), with the same matrix verb and an overt matrix object, it seems reasonable to think that there is a null object in (89).

(89) [mane ut peteret_i] *pro*_i rogavi_j.
in the morning COMPL ask.IMP.F.SUBJ.3SG ask.PERF.1SG

‘I asked him to ask for it [= a letter] in the morning.’ (CIC. *Fam.* 9.2.1)

Conversely, it is possible for both the matrix object and the embedded subject to be overt and coreferent (90).

(90) ecce, Apollo mihi_i ex oraculo imperat / [ut ego_i illic oculos
PCL Apollo me.DAT from oracle order.3SG COMPL I.NOM that.DAT eyes.ACC
exuram lampadibus ardentibus].
burn out.SUBJ.1SG torch.PL.ABL flaming.PL.ABL

‘See, Apollo orders me through a divine utterance to burn out the eyes of that one with flaming torches.’ (PL. *Men.* 841–2)

But it is also possible for the matrix argument and the embedded subject to have disjoint reference (at least for some of these verbs), as (91) shows.

- (91) *te_j=cum oro_i et quaeso_i, qui_k has tabellas*
 YOU.ABL=with ask.1SG and request.1SG REL.NOM.SG.M these.ACC tablets.ACC
afferet / tibi, ut ei detur quam istic
 bring.IMP.F.SUBJ.3SG YOU.DAT COMPL him.DAT give.PASS.SUBJ.3SG REL.ACC.SG.F there
emi virginem / ... et aurum et vestem.
 buy.PERF.1SG girl.ACC and jewelry.ACC and clothes.ACC

‘I ask you and request that he who is bringing these tablets is given the girl I bought at your place...and the jewelry and clothes.’ (PL. *Cur.* 432–5)

We can draw two conclusions from this. First, we are not dealing with obligatory (anaphoric) control (see section 2.2.6.6) into finite complements. Second, coreference and a null embedded subject is still the overwhelmingly most common pattern to find, which is interesting because the matrix verbs in question seem to be good candidates for taking object-control complements. It is therefore relevant that the temporal interpretation of the embedded subjunctive verb is restricted to simultaneity. Since sequence of tense applies, this means that the embedded verb will be a present subjunctive (expressing simultaneity in primary sequence and sometimes also in historic sequence) or an imperfect subjunctive (expressing simultaneity in historic sequence).

The final class contains utterance verbs that regularly take Acls, but (92) and (93) show pairs of examples with an Acl and with an *ut*-complement.

- (92) a. *clamabat ille miser [se civem esse Romanum,*
 shout.IMP.F.3SG this poor REFL.ACC citizen.ACC be.INF Roman.ACC
municipem Consanum].
 citizen of Consa.ACC

‘The poor man shouted that he was a Roman citizen of Consa.’ (CIC. *Ver.* 5.161)

- b. ... *clamare coeperunt [sibi ut haberet hereditatem].*
 shout.INF begin.3PL REFL.DAT COMPL have.IMP.F.SUBJ.3SG estate.ACC

‘[they] began to shout that he should [be allowed to] have the estate for himself.’
 (CIC. *Ver.* 2.47)

- (93) a. *dic [convenisse, egisse te de nuptiis].*
 say.IMP meet.PERF.INF discuss.PERF.INF YOU.SG.ACC about marriage

‘Say that you’ve met [with me] and discussed the marriage.’ (TER. *Hau.* 863)

- b. *dic Callicli, [me ut convenat].*
 tell.IMP Callicles.DAT me.ACC COMPL meet.SUBJ.3SG

‘Tell Callicles to meet me.’ (PL. *Trin.* 582)

The contrast between the complements is interesting. With an *ut*-complement the matrix verb appears to have more in common with a manipulative predicate than an utterance predicate since the matrix subject is attempting to manipulate the embedded subject into performing an action.

3.3.1.4 *Wh*-complements

Wh-complements are another type of complement that systematically alternates with ACIs, in particular with utterance verbs and knowledge verbs. Tense is used according to the rules for sequence of tense, and a three-way tense distinction is possible. (94) shows examples of simultaneous and posterior forms:

- (94) a. [quid dicam] nescio.
 what say.SUBJ.1SG not know.1SG
 ‘I don’t know what to say.’ (PL. *Cist.* 520)
- b. scio [quid dictura es].
 know.1SG what say.FAP.NOM.SG.F AUX.2SG
 ‘I know what you’re going to say.’ (PL. *Aul.* 174)

In CL subjunctive mood is required, but in EL between 15% and 25% of *wh*-complements have indicative mood.¹ (95) neatly shows two *wh*-complements, one in each mood, dependent on the same verb.

- (95) nunc quous iussu venio et quam ob rem venerim / dicam ...
 now whose command come.1SG and why come.PERF.SUBJ.1SG tell.FUT.1SG
 ‘Now I will tell you on whose command I come and for what reason I’ve come’ (PL. *Am.* 17, Magni (2009: 247))

Wh-complements are embedded questions in the sense that they express the same content as a question. In this sense, the *wh*-complements in (96) correspond to variable questions and (97) to polar and alternative questions.

- (96) a. rogant me servi [quo eam].
 ask.3PL me.ACC servants.NOM where go.SUBJ.1SG
 ‘The servants ask me where I am going.’ (PL. *Cur.* 362)
- b. Flaccus [quid alii postea facturi essent] scire non
 Flaccus.NOM what others.NOM later do.FAP.PL AUX.IMP.F.SUBJ.3PL know.INF NEG
 poterat, [quid fecissent] videbat.
 be able.IMP.F.3SG what do.PLUPERF.SUBJ.3SG see.IMP.F.3SG
 ‘Flaccus was unable to know what others would do later, but he saw what they had done.’ (CIC. *Flac.* 33)
- (97) a. quin iam prius quam sum elocutus, scis [si mentiri volo].
 PCL now before AUX.1SG speak.PPP know.2SG if lie.INF want.1SG
 ‘Even before I have spoken you know if I want to lie.’ (PL. *Mer.* 155)
- b. iam scibo [utrum haec me mage amet an
 soon know.FUT.1SG whether this.NOM.SG.F me.ACC more love.SUBJ.3SG or
 marsuppium].
 wallet.ACC
 ‘I will know soon whether she loves me or my wallet more.’ (PL. *Men.* 386)

¹ Bennett (1910: 120–3, 326, 328–35) finds 217 indicative embedded questions and 1150 in the subjunctive in his EL sample. His numbers do not quite add up (Hahn 1952: 250, fn. 28) but the net proportion remains c. 15% even after adjustments.

3.3.2 Previous work

Two explanations have been offered for the contrast between *ut*-complements and AcIs. The approach in the grammars is as follows. The complementiser *ut* has intrinsic meaning. Subordinate clauses headed by *ut* will therefore only be compatible with matrix verbs whose meaning is compatible with the meaning of *ut*. There are therefore, for example, two homophonous verbs *dicere*. One means ‘say’ (98a) and the other ‘tell (to)’ (98b), and it is only with the latter that *ut* is compatible.

- (98) a. dixit placere sibi
say.PERF please.INF REFL.DAT
‘he said it pleased him’ (CAES. *Civ.* 3.83)
- b. dicebam, pater, tibi, ne matri consuleres
say.IMP.1SG father.VOC you.SG.DAT COMPL.NEG mother.DAT advice.SUBJ.IMP.2SG
male.
badly
‘Father, I told you not to play any tricks on mother’ (PL. *As.* 938)

This view can be dismissed on the basis that it is impossible to ascribe a single ‘meaning’ to *ut* that is compatible with the ‘meaning’ of all verbs that take *ut*-clauses (Bolkestein 1976b). Moreover, the theory that there are pairs of homophonous verbs is undermined by evidence such as (99) where the matrix verb *respondēre* ‘answer’ is found with an AcI and an *ut*-complement; the verb cannot at the same time be both compatible and incompatible with *ut*.

- (99) ... respondent bello se et suos tutari posse, proinde uti /
answer.3PL war.ABL REFL.ACC and theirs.ACC protect.INF can.INF so then COMPL
propere suis de finibus exercitus deducerent.
quickly their.ABL from territory.ABL army.ACC remove.SUBJ.IMP.3PL
‘they answered that they could protect themselves and their own by war, so they should remove their army from from their territory quickly’ (PL. *Am.* 214, Bolkestein (1976b: 170-1))

Bolkestein (1976b,c) instead argues that the underlying distinction is a semantic distinction between clauses with Declarative Mood (D-clauses) and clauses with Imperative Mood (I-clauses).

She distinguishes three classes of verbs, whose members lexically select either type of clause. In practice the system works out so that the [+DECLARATIVE] class, which encompasses knowledge verbs (e.g. *scīre* ‘know’), propositional attitude verbs (e.g. *crēdere* ‘believe’), commentative verbs (e.g. *mīrārī* ‘wonder’) and some utterance verbs (e.g. *narrāre* ‘tell’), selects D-clause AcIs. The [+IMPERATIVE] class, which appears to consist exclusively of manipulative verbs (e.g. *imperāre* ‘order’, *iubēre* ‘order’, *cōgere* ‘force’), selects *ut*-complements or object-control complements, both as I-clauses. There is, in other words, no semantic difference between the finite and non-finite realisation of the complement with these verbs. A neutral class, which contains utterance verbs (e.g. *dīcere* ‘say’) and certain manipulative verbs (e.g. *persuadēre* ‘convince’), selects I-clause *ut*-complements or D-clause AcIs. For this class, then, there is a difference in mood between the finite and non-finite complement.

She explains I-clauses as embedded imperatives. Her evidence is that I-clauses are subject to the same semantic restrictions that apply to imperative main clauses and subjunctive main clauses with imperative function. D-clauses, on the other hand, are not subject to these restrictions.

The restrictions, she claims, have a functional motivation: The ‘addressee’ in an imperative can only be requested to do something that it is possible for them to do. It is impossible to request of someone that they perform a past action, that they engage in a process, adopt a state or assume a property that they do not control, or that they undertake to be involved as patient in an event in which someone else is agent. This restricts the tense of imperatives to non-past forms, rules out imperatives of verbs denoting uncontrollable events or situations like *mori* ‘die’ and *aeger esse* ‘be ill’, and rules out certain imperatives whose subject is a patient argument. She illustrates the latter with (100).

- (100) *laudare
praise.PASS.IMP
‘be praised’

In non-finite I-clauses the restriction to non-past tense is manifested by the use of present infinitives, and in finite I-clauses present or imperfect tense. The restriction on controllable events or situations also applies to I-clauses (101), as does the restriction on identity between the addressee and an embedded embedded patient (102).

- (101) a. *imperavit mihi ut aeger essem
order.PERF.3SG me.DAT COMPL ill.NOM be.SUBJ.IMPF.1SG
‘he ordered me to be ill’
b. *iussit omnes aegros esse
order.PERF.3SG all.ACC ill.ACC be.INF
‘he gave order for everyone to be ill’

- (102) *impero tibi ut lauderis
order.1SG you.DAT COMPL praise.PASS.SUBJ.2SG
‘I order you to be praised’

A final parallel between main clauses and embedded clauses is that I-clauses are incompatible with certain evaluative adverbs and expressions of epistemic modality, which D-clauses readily support.

Bolkestein (1990: 74–7, 80–1) finally links the contrast between D-clauses and I-clauses to illocutionary force, which is deemed relevant not only to utterances but also to embedded clauses, at least as long as the matrix verb is an utterance verb. The difference in properties between I-clauses and D-clauses is finally reduced to I-clauses lacking the propositional layer of the sentence.

3.3.3 Discussion

The generality of the restrictions that Bolkestein mentions is debatable. It is not correct that uncontrollable events are excluded from imperatives but lack of controllability produces marked readings. In the following example, for example, it interpreted as a wish according to de Melo (2007: 103, fn. 24).

- (103) tu vel suda vel peri algu, vel tu aegrota vel vale
 you either sweat.IMP or perish.IMP cold.ABL or you be ill.IMP or be well.IMP
 ‘Sweat or die from cold, or be ill or be well.’ (Pl. *Rud.* 582)

I am also sceptical about her judgement regarding (104) and her assertion that ‘let yourself be praised’ requires a paraphrase with a causative verb like *cura ut* ‘take care that’, *effice ut* ‘cause that’ or *concede ut* ‘permit that’ (Bolkestein 1976c: 280 fn. 39).

- (104) *laudare
 praise.PASS.IMP
 ‘be praised’

We do not know if such imperatives were possible and more specifically if causative coercion (Sag and Pollard 1991), whose availability varies a great deal from language to language (Kroeger 1993: 76–80), was possible. Under the coercion approach a valid interpretation that does not violate constraints on controllability is derived by inserting a causative in the structure, producing the interpretation ‘allow yourself to be praised’ here.

More importantly, the observation that imperatives and control complements are subject to some of the same constraints has been made independently of Latin data. Farkas (1988), explaining the semantics of obligatory control, invokes a semantic relation she calls the RESP-relation, and she shows that it also plays a role in the interpretation of imperatives. In other words, the restrictions on imperatives and control complements are independent but show similar behaviour in some respects as a result of the RESP-relation.

The pattern shown by *ut*-complements is also not unique to Latin. A link between finite subjunctive clauses and control infinitives is found in many European languages. In one system, found in Spanish, for example, subjunctive complements and infinitival control complements are in near-complementary distribution for some verb classes. The infinitival complement is used under coreference with a matrix argument and the subjunctive complement under disjoint reference. Control infinitives and subjunctives thus belong to the same functional domain and mark a semantic dependency on the matrix verb (Farkas 1992). While Latin control infinitives and *ut*-complements do not pattern in the Spanish way with respect to coreference (see below), they can mark a semantic dependency on the matrix verb.

The pattern displayed by Latin has a closer parallel in Hungarian. While infinitival complements are used in subject control in Hungarian, as in (105), there are hardly any infinitival complements of object-control verbs (Kiss 2002: 200). Typical object-control verbs like manipulative verbs instead take finite subjunctive clauses (Farkas 1992: 91f), as in (106), where it is the finite complement that is used with the coreference pattern one would expect to find in object control.

- (105) János igyekszik kedves len-ni.
 János tries nice be-INF
 ‘János tries to be nice.’ (Farkas (1992: 91))

- (106) a. János_i meggyőzte Marit_j, hogy $\Delta_{*i/j/*k}$ men-je vele.
 János convinced Marit that go-SUBJ with him
 ‘János convinced Marit to go with him.’

- b. *János_i meggyőzte Marit_j, men-ni vele.
János convinced Marit go-INF with him

Finally, the finite complement in (106a) is formally very similar to a main clause imperative (Stiebels 2007: 42–4).

It is clear that there is a correspondence between declarative, interrogative and imperative force and embedded statements, questions and directives in the sense that an embedded question, for example, expresses the same as a matrix question. The difference is that the embedded question lacks illocutionary force since it is not an utterance.

But there is no general one-to-one mapping between illocutionary force and the type of embedded ‘utterance’. An interesting illustration is (107) from Huddleston and Pullum (2002: 981), which shows two embedded questions, but one actually ‘embeds’ an interrogative and the other a declarative.

- (107) a. She asked [where he lived]. ← She said: “Where does he live?”
b. She told me [where she lived]. ← She said: “I live in London.”

Another complication is caused by the contrast between information questions and deliberative questions. To the former the answer is a statement, to the latter a directive, and English makes a distinction between the two in embedded questions, as Huddleston and Pullum (2002: 876f, 973) illustrate:

- (108) a. I don’t know [where I am going]. ← Where am I going? You are going to New York.
b. I don’t know [where to go]. ← Where should I go? Go to New York.

How would we go about explaining the restrictions on the embedded question in (108b) if our hypothesis is that the restrictions in question stem from a notional correspondence between the illocutionary force of the reported utterance and the form of the complement? (108b) ‘embeds’ a question yet it is subject to restrictions of the type imperatives are subject to.

The conclusion is that while there is a notional correspondence between controlled complements and imperatives, and there is perhaps also a historical connection in languages that, like Latin and Hungarian, show formal overlap between the two, the restrictions on embedded directives are better understood in terms of control.

The restriction that ‘I-clauses’ are restricted to non-past tense is a standard empirical fact about control complements. The restriction to controllable events is also a standard part of control, and the impossibility of patient coreference is a special case of the same, at least for the embedded predicates that Bolkestein uses as evidence.

The idea in Bolkestein (1990), that ‘I-clauses’ lack some clausal layers, is more credible. They do so because *ut*-complements and object-control complements indicate a semantic dependency on the matrix verb. The generally observable effect is the tense restriction and control related restrictions on the embedded verb’s participants. The primary characteristics of AcIs are, as I have argued above, the presence of a subject in the structure of the AcI and the support for a three-way distinction in tense. AcIs are therefore not ‘reduced clauses’ like infinitival control complements or subjunctive complements and thus do not mark any such semantic dependency on the matrix verb.

3.3.3.1 Control and coreference

If the AcI marks absence of control, we might reason that coreference between the embedded subject and a chosen matrix argument would lead to a preference for a control complement and that disjoint reference would favour the AcI.

Let us first establish that there is no general link between coreference and the type of complement chosen. The verb *dīcere*, for example, very clearly does not display any such behaviour and as an utterance predicate it never subcategorises for an *ut*-complement or an infinitival control complement.

- (109) dico [med esse atriensem].
 say.1SG me.ACC be.INF steward.ACC
 ‘I say I am the steward.’ (PL. *As.* 352)

If we narrow our view down to verbs that are not inherent control verbs but whose lexical semantics is compatible with control, the situation is different. The most interesting case is desiderative *velle* ‘want’. Under coreference we generally find a controlled infinitival complement (110a), and under disjoint reference we find either an *ut*-complement (110b) (in particular in EL) or an AcI (110c).

- (110) a. ego_i volo [Δ_i ire].
 I.NOM want.1SG go.INF
 ‘I want to go.’ (PL. *Cist.* 112)
- b. [ut ille_j te videat] volo_i.
 COMPL he.NOM you.ACC see.SUBJ.3SG want.1SG
 ‘I want him to see you.’ (PL. *Bac.* 77)
- c. nunc ego_i [te_j facere hoc] volo.
 now I.NOM you.ACC do.INF this.ACC want.1SG
 ‘I’d like you to do this now.’ (PL. *Bac.* 94)

Surprisingly, we also find the AcI under coreference:¹

- (111) volo_i [me_j placere Philolachi] ...
 want.1SG me.ACC please.INF Philolaches.DAT
 ‘I want to please Philolaches’ (PL. *Mos.* 167)

The phenomenon in (111) is restricted to certain desiderative verbs (Hofmann and Szantyr 1972: 355f, Kühner and Stegmann 1912-1914: i.714f), and its relative frequency is lower than the corresponding control construction.

Sevdali (2006) studies a similar problem in Ancient Greek. She finds that coreference generally disfavors the AcI, and that the presence of a coreferent AcI subject is due to contrastive focus. This does not carry over to Latin. First, the observed pattern in Ancient Greek applies to a much wider range of complements, including utterance verbs, which in Latin routinely have coreferent AcI subjects without contrastive focus.

¹ I have not been able to establish whether the final combination, an *ut*-complement under coreference, is possible.

Second, contrastive focus does not explain all attestations with *velle*. In (112) the speaker, taking the moral high ground, explains that the way to earn the affection of one's children is to oblige them, and then utters (112) to say that he too will follow this prescript. There is some form of emphasis involved here, but it is probably as much expressed by the overt personal pronoun *ego* 'I' as the coreferent accusative pronoun in the first AcI with the verb *studēre* 'be eager'. In the third AcI, which also has an overt coreferent pronoun, there seems to be no difference in terms of information structure from what would be the case in the second AcI, which does not have an overt coreferent pronoun.

- (112) *atque ego [me id facere] studeo, volo [amari a meis]. / volo*
 and I.NOM me.ACC it.ACC do.INF be eager.1SG want.1SG love.PASS.INF by my.PL want.1SG
[me patris mei similem] ...
 me.ACC father.GEN my.GEN be like.ACC

'And I am keen to do it myself. I want to be loved by my family. I want to be like my father' (PL. *As.* 67–8)

The restriction to some desiderative verbs means that this is a lexical idiosyncrasy. The relevant feature that distinguishes desiderative predicates from other predicates is that they allow for control, but do not require it. This is in contrast to, for example, manipulative predicates, which show *inherent control*, i.e. they are predicates 'that require control readings independent of the instantiated structure of sentential complementation' (Stiebels 2007).

3.3.3.2 Object control and the AcI

Since the surface form of an accusative object and an infinitival complement of an object-control verb is indistinguishable from the AcI, the behaviour of manipulative verbs is particularly interesting. Since many of the lexemes in question are manipulative verbs with inherent control but also utterance verbs without control, it is perhaps not surprising that these two are realised differently, as *ut*-complements and AcIs, respectively. Patterns like this, with differences in realisation, are also common in other languages (Noonan 2007).

The facts are similar for perception verbs. As unambiguous perception predicates, these verbs subcategorise for an accusative object and a participle. As knowledge predicates (and perhaps also as perception predicates), they subcategorise for an AcI. The matrix verb *audivi* in (113), for example, does not denote sensory perception because neither boldness nor badness can be physically perceived, but it is possible to acquire the knowledge that a person has these properties through the medium of physical perception.

- (113) *nam [illi itidem Ulixem> audivi, [ut ego sum, fuisse et audacem*
 for there likewise Ulysses.ACC hear.PERF.1SG like I.NOM be.1SG be.PERF.INF and bold.ACC
et malum].
 and bad.ACC

'I've heard that Ulysses there was bold and bad, just as I am.' (PL. *Bac.* 949)

The knowledge reading in (113) is exclusive to the AcI construction, while the perception reading is possible with either construction.

The fact that these subcategorisation patterns avoid ambiguity by differentiating between the realisation for control and non-control is probably a coincidence. There are, in fact, verbs that subcategorise for AcIs and infinitival control complements. One is *iubēre*. (114) is an interesting example of this. In the first conjunct the accusative NP *portas* is a patient and even inanimate so control is unlikely, but the second conjunct would work well with an accusative object (*militēs*) as the controller and *ex oppido exire* as the control complement.

- (114) sub vesperum Caesar portas claudi milites=que ex oppido
 under evening Caesar.NOM gates.ACC close.PASS.INF soldiers.NOM=and from town
 exire iussit ...
 leave.INF order.PERF.3SG

‘In the evening Caesar ordered that the gates should be closed and the soldiers should leave’ (CAES. *Gal.* 2.33.1)

Presumably, the way to analyse this example is to say that we have two conjoined AcIs. We therefore have a two-place causative version of *iubēre* with an AcI. That there is such a thing as a three-place manipulative version of *iubēre* that is an inherent control verb and takes an object-control complement is indicated by data such as (115), which shows that the controller can be a matrix subject when *iubēre* is passivised.

- (115) quamquam quid ego de lictoribus, qui; paene [Δ_i ex Italia decedere]
 but what I.NOM about lictors REL.NOM.SG.M almost from Italy leave.INF
 sim iussus?
 AUX.SUBJ.1SG order.PPP.NOM.SG.M

‘But why do I talk about lictors, [I] who have almost been ordered to leave Italy.’ (CIC. *Att.* 11.7.2)

3.3.3.3 Obligatory and non-obligatory control

We have seen that in control constructions there is agreement in case, number and gender between the controller, the implicit infinitival subject and any embedded predicates that agree with the infinitival subject. Case agreement (or ‘case transmission’) is known from Icelandic, Ancient Greek and Russian (Andrews 1971, 1982, 1990, Franks and Hornstein 1991, Landau 2008), and the relevance of Latin in this connection has been pointed out by Cecchetto and Oniga (2004).

Agreement between controller and controllee is systematic, but there is evidence that complicates this picture. The problem is caused by the data in (116). Judging from the accusative case of *fortunatissimos* in (116a) and *Gaditanum* in (116b), the infinitival subject must have accusative case. Yet the controllers have dative case. Note specifically that it is only in case that there is a mismatch; *fortunatissimos* still agrees with its controller in number and gender.

- (116) a. quid vos ... hanc miseram ac tenuem sectamini praedam, quibus; licet [Δ_i
 why you.PL this miserable and slender pursue.2PL loot.ACC REL.DAT.PL may
 iam esse fortunatissimos]?
 now be.INF most wealthy.ACC.PL.M

‘Why do you pursue this miserable and slender booty, when you may now be the most wealthy?’ (CAES. *Gal.* 6.35.8)

- b. quod-si [civi Romano]_i licet [Δ_i esse Gaditanum] sive
 but-if citizen.DAT.SG Roman.DAT.SG may.3SG be.INF of Gades.ACC.SG either
 exsilio sive postliminio sive reiectione huius civitatis ...
 exile.ABL or postliminium.ABL or surrendering.ABL his.GEN citizenship.GEN
 ‘Now if a Roman may be a citizen of Gades either by exile or by the right to
 resumption of civic rights upon one’s return from exile or by surrendering his
 citizenship’ (Cic. *Balb.* 29)

The immediate consequence of this for my analysis is that if this is control, it is not functional control but anaphoric control. Sevdali (2006) proposes that case agreement and lack of case agreement correspond to OC and NOC. If we adopt this view, we could preserve our formalisation of OC as functional control and use anaphoric control for NOC.

What appears to have been overlooked in previous work is how marginal this phenomenon is. Kühner and Stegmann (1912-1914: i.679f) give six examples from the authors in my corpus and the matrix verb is always *licēre*.¹ I have found no new evidence to add to this. If lack of case agreement is NOC, it is extraordinary that only *licēre* is attested. I therefore find it very doubtful that this represents a real difference in terms of control. An analysis that works, without changing any of the conclusions I have drawn so far, is to say that non-agreement occurs when the complement is an AcI that has a *pro* subject.

3.4 Conclusion

The key results of this chapter are summed up in table 3.1, which shows the main properties of infinitival complements in Latin. The row labelled ‘neither’ corresponds to the AcI-active and AcI-passive, ‘raising’ to the NcI-passive and ‘obligatory control’ to a verb and an infinitival control complement. The key observation is the two rightmost columns; we find either subjects that are identified with a matrix argument and get their case from the matrix verb, or subjects that are licensed by the infinitive and get case from it.

Type	Infinitive		Subject	
	Temporal interpretation	Tense morphology	Reference	Case
Obligatory control	Restricted	Present	= controller	= controller
Raising	Unrestricted	Any	= controller	= controller
Neither	Unrestricted	Any	Any ^a	Accusative

^a Includes overt subjects, null referential pronouns, null generic pronouns and the absence of a syntactic subject.

Table 3.1: Properties of infinitival complements in Latin.

The infinitive in an AcI thus licenses the same range of subjects that a finite verb does. It also assigns case like a finite verb, and its temporal reference is unrestricted. The AcI infinitive therefore has several prototypically finite properties.

The results are interesting for another reason too. They mean that OC and raising cluster together and are syntactically distinguished only by the assignment of thematic roles. This is unprob-

¹ Other verbs are attested in Post-Classical Latin.

lematic for an LFG analysis and follows directly without additional stipulations when formalised as functional control.

The resulting case-agreement is a theoretical challenge for the null Case theory of PRO (Chomsky and Lasnik 1993) on the assumption that PRO is unable to have two cases at once. The results instead support alternative theories of control. Most transparently they support the intuition behind the Movement theory of control (Boeckx, Hornstein and Nunes 2010, Hornstein 1999), which seeks to explain OC and raising using related mechanisms.

4 Binding into non-finite clauses

Latin grammars distinguish between *direct reflexives*, which are reflexive pronouns with an antecedent in the same clause, and *indirect reflexives*, whose antecedent is outside the clause. In (1a) the direct reflexive *sē* is the object of the verb *dediderunt* ‘gave’ and its antecedent is the verb’s subject *Pindenissitae* ‘citizens of Pindenissum’. I will refer to this as *local sē*. In (1b) the indirect reflexive *sē* is found in a finite complement clause and its antecedent is the *pro*-subject of the matrix verb *mandavit* ‘instructed’. I will refer to this as *long-distance sē*.

- (1) a. Saturnalibus mane se_i mihi Pindenissitae_i dediderunt ...
Saturnalia.ABL morning REFL.ACC me.DAT Pindenissites.NOM give.PERF.3PL
‘Pindenissum surrendered to me on the Saturnalia’ (CIC. *Att.* 5.20.1)
- b. his mandavit_i [ut quae diceret Ariovistus
them.DAT instructed.3SG COMPL REL say.IMP.F.SUBJ.3SG Ariovistus
cognoscerent et ad se_i referrent]
ascertain.IMP.F.SUBJ.3PL and to REFL report.IMP.F.SUBJ.3PL
‘He instructed them to ascertain what Ariovistus said and report it back to him.’
(CAES. *Gal.* 1.47.5)

The distribution of local *sē* is similar to the distribution of English *-self*-anaphors.¹ The phenomenon in (1b) has no analogue in English but is known from many other languages and is referred to as *long-distance reflexivity* (LDR) or *long-distance anaphora*.

That indirect reflexives are very frequent in Latin is well-known amongst Latinists, but it has not yet been absorbed in the linguistic literature on LDR, which routinely mentions Latin but rarely elaborates. Latin-specific work, on the other hand, has not successfully engaged with the vast amount of relevant cross-linguistic research on LDR.

These are reasons enough to study this data. Another motivation would be to establish whether binding evidence can be used in syntactic argumentation to identify null subjects. In the present study, the immediate motivation for studying binding is to better understand the close association between the reflexive *sē* and the Acl.

I will claim that the reflexive *sē* is licensed in three ways. Local *sē* is an anaphor bound in the minimal complete nucleus and its binder must be a subject. Long-distance *sē* comes in two varieties. One requires an antecedent that is an argument of a logophoric predicate. The other variety expresses empathy, which means that the speaker instead chooses to temporarily adopt

¹ ‘Anaphor’ in generative work refers to what traditional grammars call ‘reflexive pronouns’ and ‘reciprocal pronouns’, while what is traditionally called an ‘anaphor’ or an ‘anaphoric pronoun’ is a type of ‘pronoun’. I assume the following nomenclature (Asudeh and Dalrymple 2006): Reflexives and reciprocals are anaphors. Anaphors and pronominals are pronouns. Pronouns and non-pronouns are nominals.

some other participant's point of view. Although syntax plays a significant role, the distribution of long-distance $s\bar{e}$ is primarily determined by the lexical semantics of logophoric predicates and by discourse factors.

An in-depth investigation of the factors that license long-distance $s\bar{e}$, especially when it expresses empathy, must be left for future research, but I intend to show that the licensing of long-distance $s\bar{e}$ can be ascribed largely to logophoric predicates, that these can be identified in a reasonably robust way, and that this is the explanation for the close association between long-distance $s\bar{e}$ and the Acl.

Recourse to certain inherently vague semantic notions is, given the constraints on the present work, unavoidable but I have tried not to use them in such a way that they can be made to fit any type of data. It should therefore also be possible to control for the logophoric and empathic interpretations in the majority of cases.

The chapter is organised as follows. Section 4.1 presents the data organised around the distinction between *local* $s\bar{e}$ and *long-distance* $s\bar{e}$. Section 4.2 summarises recent relevant work. In section 4.3 I will propose a formal account for local $s\bar{e}$ and discuss the extent to which long-distance $s\bar{e}$ is lexically licensed. Finally, section 4.5 discusses residual data that cannot be subsumed under logophoricity and tentatively suggests empathy as an explanation.

4.1 Local and long-distance reflexives

I will only discuss the reflexive pronoun $s\bar{e}$. This means specifically that the attributive pronoun *suus* 'his/her/its (own)', whose distribution is quite different, is not taken into consideration.

The inflection of $s\bar{e}$ is shown in table 4.1. Unlike pronominals, it lacks a nominative form and does not agree in gender or number with its antecedent. The reduplicated form $s\bar{e}s\bar{e}$ may have had a distinctive function in pre-historic Latin, but in my data it appears to be a variant form of $s\bar{e}$. The reflexive $s\bar{e}$ also never has first or second person antecedents. Personal pronouns are used instead, so the formal reflexive/non-reflexive contrast only obtains in the third person.

Case	Form
Nominative/vocative	(missing)
Accusative/ablative	$s\bar{e}$, $s\bar{e}s\bar{e}$
Genitive	$su\bar{i}$
Dative	$sibi$

Table 4.1: Inflection of $s\bar{e}$.

4.1.1 Local $s\bar{e}$

The relation between lexical semantics and morphosyntactic marking of reflexivity is complex. For Latin it is particularly difficult to make a principled distinction between reflexivity and the middle.¹ I will only make a few superficial observations here about the predicates that occur with

¹ See Kemmer (1993) for discussion of the semantic notions *middle*, *reflexivity* and *reciprocity*, and their realisation in Latin.

reflexive marking.¹

Some verbs are (in an intuitive sense at least) one-place relations but still transitive. An example is the transitive verb *habēre* ‘have’, which means ‘be in (such and such) a way’ when *sē* is its object (OLD s.v. *habēō* 21). The reflexive here only serves to reduce the valency of the verb.

- (2) quae res se sic habet
this.NOM affair.NOM REFL.ACC so have.3SG

‘This is how the matter stands.’ (CIC. *Att.* 5.1.3)

In a similar vein, we find reflexives in transitive-intransitive alternations. Such alternations are amply attested (cf. Kühner and Stegmann 1912-1914: i.90–100, i.104–11) but are mostly pairs of verbs with active and passive morphology (Miller 2010: 163ff), as in (3). Occasionally we also find an anticausative variant with a reflexive pronoun (4).

- (3) a. ecquis has aperit foris?
someone.NOM these.ACC open.3SG door.ACC

‘Is anyone going to open the door?’ (PL. *Mos.* 900)

- b. aperitur foris.
open.PASS.3SG door.NOM

‘The door is opening.’ (PL. *Mer.* 699)

- (4) ... valvae ... subito se ipsae aperuerunt ...
doors.NOM suddenly REFL.ACC INTENS.NOM open.PERF.3SG

‘the doors suddenly opened by themselves’ (CIC. *Div.* 1.74, Cennamo (1998))

More commonly, *sē* occurs with typically other-directed verbs (König and Siemund 2000) when the agent-like argument and the patient-like argument are coindexed. This is the case in (5) since a ‘giving’-situation typically involves the transfer of something or somebody else than the giver himself.

- (5) Saturnalibus mane se_i mihi Pindenissitae_i dediderunt ...
Saturnalia.ABL morning REFL.ACC me.DAT Pindenissites.NOM give.PERF.3PL

‘Pindenissum surrendered to me on the Saturnalia’ (CIC. *Att.* 5.20.1)

Another frequent other-directed verb in my corpus is *recipere* in the sense ‘withdraw’ (OLD s.v. *recipiō* 12a), which occurs in an other-directed event in (6a) and in a self-directed event in (6b).

- (6) a. hoc idem Caesar facere cogebatur, [ut [submissis in eundem locum
this same Caesar do.INF forced.PASS.3SG COMPL send up.PPP.ABL.PL in same place
cohortibus] defessos reciperet]
cohorts.ABL.PL exhausted.ACC withdraw.IMP.F.SUBJ.3SG

‘Caesar was forced to do the same, to send cohorts up to the same position and withdraw the exhausted ones.’ (CAES. *Civ.* 1.46)

¹ By this I mean the ‘primary reflexive strategy’ in the sense of Faltz (1985: 3–4), which he explains in terms of ‘a class of simple clauses expressing a two argument position, the argument being a human agent or experiencer on the one hand and a patient on the other [...] If that language has a grammatical device which specifically indicates that the agent/experiencer and the patient in such clauses are in fact the same referent, then the grammatical device will be called the primary reflexive strategy of that language’. For Latin the primary reflexive strategy is the reflexive pronoun *sē*.

b. quo cognito se_i in portum recipit_i ...
 which.ABL learn.PPP.ABL REFL.ACC to port return.3SG

‘Having learned this, he withdraws to port’ (CAES. Civ. 3.14.2)

It appears that there is complementary distribution between local *sē* and pronominals¹ so that when the agent-like and patient-like arguments have disjoint reference a pronominal must be used. (7) illustrates the apparent complementarity (from Viti (2009: 150–1)).

(7) a. mira sunt nisi invitavit_i sese_i in cena plusculum.
 strange be.3PL if not treat.PERF.3SG REFL 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, tr. de Melo (2011–2012: i.37))

b. Neptunus_i magnis poculis hac nocte eum_j invitavit
 Neptune 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)

To my knowledge, this has not yet been rigorously studied, but I am unaware of any convincing evidence showing that it is untrue.

Negative evidence also points in the direction that, unlike English, the antecedent of local *sē* must be a subject and therefore that a pronominal would be required for marking coreference with a non-subject in the same clause. This has, again, not been rigorously tested, but it is a reasonable hypothesis in the absence of evidence to the contrary. There are counterexamples to this, but most can be explained as long-distance *sē*, which does not require a subject antecedent.

One particular type of evidence that has been cited in favour of non-subject binding involves accusative experiencer verbs. Pieroni (2010: 433) relies on the following example:

(8) ... sic sapientia semper eo contenta est, quod
 so wisdom.NOM always that.ABL.SG.N satisfied.NOM.SG.F be.3SG REL.NOM.SG
 adest, ne-que eam_i umquam sui_i paenitet.
 be present.3SG not-and it.ACC.SG.F ever REFL.GEN regret.3SG

‘so wisdom is always satisfied with that which is present, and is never self-repentant.’ (Cic. Tusc. 5.54, Hahn (1963: 109))

This is, as far as I have been able to establish, unique. Other attestations with *paenitēre* have the attributive pronoun *suus*, not *sē*. None of the other ‘impersonal’ verbs, perhaps with the exception of *miserēre*, have a similar construction. Pieroni reads (8) as ‘wisdom...is never self-repentant’ or ‘wisdom...never repents of itself’, which is very awkward. In theory this may mean that local binding does not require subject antecedents or that *paenitēre* is a quirky-subject verb. I doubt that either is correct, because *sui* may be a form of the attributive *suus* with an omitted head noun (see Kühner and Stegmann (1912–1914: 589f) for some similar examples with other verbs), but I know of no way of distinguishing between possible analyses on the basis of a single example.

¹ A problem is that it can be difficult to distinguish between null referential pronouns and detransitivisation, e.g. in Pl. Bac. 294 where *recipere* expresses a self-directed event but lacks an overt object.

4.1.1.1 Obliques and adjuncts

It is clear that *sē* can be bound when it is an oblique argument, as in (9), where it is a source argument.

- (9) ... qui_i cum interemisset Clitum familiarem suum, vix a se_i
 REL.NOM when kill.IMPF.SUBJ.3SG Clitus.ACC friend.ACC his hardly from REFL.ABL
 manus abstinuit.
 hand.ACC keep off.PERF.3SG
 ‘who could hardly keep his hands off himself after he had killed his friend Clitus.’ (Cic. *Tusc.* 4.79, Kühner and Stegmann (1912-1914: i.600))

It is also possible for *sē* in an adjoined phrase to be bound. The PP *sēcum* ‘with him/her/they/one’ is frequent with verbs meaning ‘bring’, ‘carry’ or ‘take’ and is probably not an argument of these verbs. Only the reflexive is attested under coreference in my data (10a). Likewise, verbs that mean ‘talk to’ or ‘discuss’ like *loquī* and *disputāre* appear with a *cum*-phrase denoting the person addressed. Coreference with the matrix subject is rare but when it obtains, it is the reflexive that is attested (10b).

- (10) a. me se_i=cum in Hispaniam ducit;
 me.ACC REFL.ABL=with in Spain.ACC bring.3SG
 ‘He is taking me with him to Spain.’ (Cic. *Att.* 10.9A.4)
- b. quis autem est tanta quidem de re quin varie se_i=cum
 who PCL be.3SG such.ABL PCL about matter that not back and forth REFL=with
 ipse_i disputet?
 INTENS.NOM argue.SUBJ.3SG
 ‘In so great a matter must not any man argue with himself this way and that?’ (Cic. *Att.* 8.14.2, tr. Shackleton Bailey (1999: ii.339))

My data on other structures with non-argumental NPs and PPs is limited. (11a) shows an ablative of comparison and (11b) a non-argumental goal.

- (11) a. ... omnis suos ... caros habet_i, me quidem se_i ipso
 all.ACC his.ACC fond.ACC have.3SG me.ACC PCL REFL.ABL INTENS.ABL
 cariorem
 fonder.ACC
 ‘he is fond of all his own people and fonder of me than of himself.’ (Cic. *Att.* 10.11.1, tr. Shackleton Bailey (1999: iii.157))
- b. me ad se_i ad prandium, ad cenam vocant_i.
 me.ACC to REFL to lunch to dinner call.3PL
 ‘They invite me home to lunch and to dinner.’ (Pl. *Mil.* 712)

This indicates that binding of *sē* is possible irrespective of argumenthood and perhaps also that complementary distribution extends to such cases.

4.1.1.2 NP-internal binding

In English, a clausal subject can bind an anaphor within an NP (12a), but if the NP has a possessor, the possessor becomes the binder (12b).

- (12) a. John_i bought [a picture of *him_i/himself_i].
 b. John_i bought [Mary_j's picture of him_i/*her_j/??himself_i/herself_j].

I have found few comparable structures but they suggest that possessors are not binders. In (13a) the reflexive is an objective genitive of the noun *memoria* 'rememberance' in spite of the presence of the possessor *tua*. The same is the case in (13b) where the reflexive in *ad se* is not coreferent with the possessor *Caesaris* and instead bound by the subject of the clause.

- (13) a. ... vehementer=que [tua_j sui_i memoria] delectatur_i
 immensely=and your.ABL REFL.GEN rememberance.ABL is delighted.3SG
 'And he is immensely delighted by your rememberance of him.' (Cic. Att. 13.1.3)
- b. nam ad me misit Antonius_i [exemplum [Caesaris_j ad se_i
 for to me send.PERF.3SG Antonius.NOM copy.ACC Caesar.GEN to REFL.ACC
 litterarum]] ...
 letter.GEN
 'Antony has sent me a copy of a letter from Caesar to himself' (Cic. Att. 11.7.2)

Generalising about NP-internal binding from two examples is not prudent, but the evidence again provides an indication about what might be the principle and it does not rule out the view that it is generally the structurally closest subject that is the binder.

4.1.1.3 Infinitival complements

In the following examples, *sē* is bound in an embedded infinitival clause. The matrix verb is a raising verb or a subject-control verb, and there is coreference between the subject of the matrix verb and *sē*, whose function in the embedded clause varies.

- (14) a. ... [quamquam videbatur_i [se_i non graviter habere]], tamen sum
 although seem.IMPF.3SG REFL.ACC not very ill have.INF still be.1SG
 sollicitus ...
 anxious.NOM
 'although he did not seem to be gravely ill, I am still anxious' (Cic. Att. 7.2.3)
- b. ... qui hic_i potest [se_i gerere non perditē]
 how he.NOM can.3SG REFL.ACC behave.INF not recklessly
 'but how can he behave otherwise than a desperado?' (Cic. Att. 9.2A.2, tr. Shackleton Bailey (1999: iii.13.))
- c. neque nunc [tam pro se_i quam contra me laborare] dicitur_i
 and not now so for REFL.ABL as against me work.INF say.PASS.3SG
 'And now he is said not to work so much for himself as against me.' (Cic. Att. 11.9.2)

- d. ... ut adolescentuli_i [vobis placere ...] studeant [... potius quam sibi_i].
 as the young.NOM.PL you.DAT please.INF want.3PL rather than REFL.DAT
 ‘as the young would aim to please you rather than themselves.’ (TER. *Hau.* 51-2)

The verbs in the embedded clauses are attested in finite non-embedded clauses too and in such clauses $s\bar{e}$ is unambiguously bound by the subject of the clause. This suggests that the infinitival clauses in (14) have a null subject that locally binds $s\bar{e}$. Since the null subject is functionally controlled (see section 3.1.3), coindexation of matrix and embedded subject follows directly, and we can therefore maintain the generalisation that $s\bar{e}$ is bound by the structurally closest subject.

4.1.1.4 Appositions

Local $s\bar{e}$ in appositions follows straightforwardly if one assumes that the predicate in question has a subject that is functionally identified with an argument of the main predicate. In (15), the genitive reflexive is an objective genitive to *deprecatores* ‘pleader’, which is an appositional (i.e. non-restrictive) modifier of *filium*. If we assume that *deprecatores* has a subject identified with *filium*, it follows that the genitive reflexive *sui* is bound by the structurally closest subject.

- (15) Quintus_i misit filium non solum sui_i deprecatores sed etiam accusatores
 Quintus.NOM sent.3SG son.ACC not only REFL.GEN pleader.ACC but also accuser.ACC
 mei
 me.GEN
 ‘Quintus has sent his son not only as a pleader on his behalf but also as an accuser of me.’
 (CIC. *Att.* 11.8.2)

I assume that this reasoning can be extended to other types of secondary predications, which happen not to be represented in my corpus.

4.1.1.5 Reciprocal interpretation

When the antecedent is plural or collective, local $s\bar{e}$ may have a reciprocal or collective interpretation:

- (16) perrumpere nituntur se_i=que ipsi_i adhortantur, ne tantam
 break through.INF strive.3PL REFL=and they.NOM encourage.3PL COMPL.NEG such.ACC
 fortunam ex manibus dimittant
 chance.ACC from hands.ABL slip.SUBJ.3PL
 ‘They strive to break through and encourage each other not to let such a good chance slip out of their hands.’ (CAES. *Gal.* 6.37.10)

Latin is not unique in this respect (cp. German *Sie mögen sich* ‘they like each other’), but the conditions that give rise to this interpretation are not well understood (Büring 2005: 221). It is notable that in Latin the PP *inter se* ‘amongst themselves’ is particularly likely to have this interpretation.

- (17) itaque inter se_i commutant_i vestem et nomina.
 so between REFL exchange.3PL clothing.ACC and names.ACC
 ‘So they exchange clothes and names with each other.’ (PL. *Capt.* 37)

The range of grammatical functions this PP can have is unusual for Latin. It is probably an adjunct in (17) but an object in (18a) and maybe a secondary object in (18b).

- (18) a. valent pueri_i ... et nos et inter se_i amant.
 be well.3PL boys.NOM and us.ACC and between REFL.ABL love.3PL
 ‘The boys are well ... and love us and each other.’ (CIC. *Q. fr.* 3.3.1)
- b. sunt hic inter se_i quos_i nunc credo dicere: ...
 are here between REFL REL.ACC.PL now think.1SG say.INF
 ‘There are people here who I think are now saying to each other: ...’ (PL. *Cas.* 67)

Despite the difference in interpretation there seems to be nothing in the distribution of reciprocal *sē* that distinguishes it from other instances of local *sē*. In the following I will therefore subsume all instances of reciprocal *sē* under local *sē*.

4.1.1.6 Intensifiers

The attributive pronoun *suus* ‘his/her/its (own)’ is not simply an attributive counterpart to *sē*, as some work has assumed (i.a. Bertocchi and Casadio (1980, 1983), Ros (2001)). It has an ‘emphatic’ or contrastive function (Kühner and Stegmann 1912-1914: 1.603–7, Hahn 1963, Bertocchi 1986: 69–71) and does not require a subject antecedent, which means that its distribution is noticeably different from that of *sē*:

- (19) a. nunc eam_i volt suae_i matri et patri, quibus
 now she.ACC want.3SG her own.DAT mother.DAT and father.DAT REL.ABL.PL
 nata est, reddere ultro.
 born.PPP.NOM.SG.F AUX.3SG return.INF voluntarily
 ‘Now she wants to return her of her own accord to her mother and father, to whom she was born.’ (PL. *Cist.* 718, de Melo (2010: 94))
- b. meus mihi, suos_i quoique_i est carus.
 my.NOM me.DAT his own.NOM each.DAT be.3SG dear.NOM
 ‘My son is dear to me, his own son is to every [father].’ (PL. *Capt.* 400)

If one adopts the theory of intensifiers proposed by König (2001) and König and Gast (2006), *suus* fits well with what they call *attributive intensifiers*, which, in comparative terms, means it is the rough equivalent of German *eigen*. The relevance of this is that *sē* sometimes takes on functions that resemble those of *suus*. (20) shows *suus* combined with the dative form of *sē* with a non-subject antecedent.

- (20) ... eum_i necabam ilico / per cerebrum pinna [sua sibi]_i
 he.ACC kill.IMPF.1SG instantly through brain feather.ABL hiw own.ABL REFL.DAT
 quasi turturem.
 like turtle-dove.ACC
 ‘...I instantly killed him with his own feather through the brain like a turtle-dove.’ (PL. *Poen.* 486–7)

Hahn (1963: 111) lists numerous similar examples. *Suus* and *sibi* are always string-adjacent and there is parallel data with first or second person pronouns. I think it is fair to say that *sibi* here is not an anaphor but an intensifier (cf. de Melo (2010: 80–9)), and I have consequently ignored such tokens in the following.

4.1.2 Long-distance *sē*

Long-distance *sē* is most characteristically found in AcIs with the matrix subject as antecedent:

- (21) *is_i [mi se_i locum> dixit <dare].*
 he.NOM me.DAT REFL.ACC place.ACC said.3SG give.INF
 ‘He said he would give me a place.’ (PL. *Cas.* 479)

Sē does not have to be the subject of the embedded clause – it can have any function and occupy any structural position in the AcI:¹

- (22) a. ... *narrabit [servom hinc sese a foribus Sosiam / amovisse].*
 tell.FUT.3SG slave.ACC hence REFL.ACC from door Sosia.ACC drive away.PERF.INF
 ‘he will say that the slave Sosia drove him away from the door’ (PL. *Am.* 467–8)
- b. ... *Camillus_i mihi scripsit [te se_i=cum locutum]*
 Camillus.NOM me.DAT write.PERF.3SG you.ACC REFL=with speak.PPP.ACC.SG.M
 ‘Camillus wrote to me that you had spoken to him.’ (CIC. *Att.* 11.23.1)

Long-distance *sē* is also regularly found in finite embedded clauses (although here never as subject since this would require a nominative form of the reflexive). (23) shows finite complements.

- (23) a. ... *orat_i [ut eam det sibi_i].*
 ask.3SG COMPL her.ACC give.SUBJ.3SG REFL.DAT
 ‘He asks [her] to give her to him.’ (PL. *Cas.* 42)
- b. *qui etiam a me petierit_i [ut se_i=cum et apud*
 REL.NOM PCL from me.ABL ask.PERF.SUBJ.3SG COMPL REFL.ABL=with and at
se_i essem cotidie].
 REFL.ACC be.IMP.F.SUBJ.1SG each day
 ‘Indeed he has asked me to spend every day with him at his house.’ (CIC. *Att.* 5.6.1)

The status of *quod*-clauses and *quia*-clauses, exemplified in (24), is slightly different. It is generally difficult to determine if these clauses are complements or adjuncts. This might be important because there is a noticeable difference in the regularity of use of long-distance *sē* in such complements compared to unambiguous complements.

¹ Schoof (2005) claims that accusative *sē* with object function in an AcI never has an antecedent outside the complement. This is clearly wrong, as (22a) shows (unless there is a real difference between *sē* and the reduplicated form *sēsē*). Her claim is apparently based on an examination of all prose texts in the *Bibliotheca Teubneriana Latina* but her methodological description in Schoof (2004) reveals that she has overlooked all instances of the reduplicated form.

- (24) ... princeps=que [decima legio]_i per tribunos militum ei gratias
 first=and tenth legion.NOM through tribunes military him.DAT thanks.ACC
 egit [quod de se_i optimum iudicium fecisset], [se_i=que
 do.PERF.3SG because about REFL best opinion make.PLUPERF.SUBJ.3SG REFL.ACC=and
 esse ad bellum gerendum paratissimam] confirmavit_i
 be.INF to war fight.ND ready.SUP confirm.PERF.3SG

‘and the Tenth legion was the first to thank Caesar through its tribunes because he had formed an excellent opinion of it, and it confirmed that it was completely ready to fight a war.’ (CAES. *Gal.* 1.41.2, Benedicto (1991: 172–3))

Long-distance *sē* is also found in complements of verbs that can be object-control verbs. In (25), the matrix verb is *iubēre* and its subject is the antecedent of *sē*.¹

- (25) ... Indutiomarum_j [Δ_j ad se_i cum CC obsidibus venire] iussit_i
 Indutiomarus.ACC to REFL.ACC with 200 hostages.ABL come.INF ordered.3SG
 ‘he ordered Indutiomarus to come to him with 200 hostages’ (CAES. *Gal.* 5.4.1)

4.1.2.1 Multiple embedding

In complex structures, there may be other complements intervening between the matrix clause with the antecedent and the complement with long-distance *sē*.

- (26) ... iussit_i=que [mihi nuntiari [mox se_i venturum]]
 order.PERF.3SG=and me.DAT announce.PASS.INF soon REFL.ACC come.FAP.ACC
 ‘He ordered that word should be brought to me that that he would come shortly.’ (CIC. *Att.* 10.4.8)

There is also no restriction preventing the antecedent from being found in a complement or infinitival clause. (27) shows how the antecedent can be the subject of an AcI.

- (27) quod ais [illum_i ad te scribere [me sibi_i nullas litteras remittere]]
 REL say.2SG he.ACC to you write.INF me.ACC REFL.DAT no.ACC letter.ACC send back.INF
 ‘You say that he writes to you that I do not answer his letters.’ (CIC. *Att.* 11.16.4)

In multiply embedded structures, instances of long-distance *sē* can have different antecedents. This is shown in (28a) where each reflexive finds its antecedent in the immediately higher clause.

- (28) quid est quod [Hermogenes> mihi <Clodius]_i [Andromenem_j sibi_i
 what is REL Hermogenes.NOM me.DAT Clodius.NOM Andromenes.ACC REFL.DAT
 dixisse [se_j Ciceronem vidisse Corcyrae]]
 say.PERF.INF REFL.ACC Cicero.ACC see.PERF.INF Corcyra

‘What’s this that Clodius Hermogenes [tells] me that Andromenes said to him that he saw Cicero [= Cicero’s son] at Corcyra?’ (CIC. *Att.* 13.24.1)

¹ Schoof (2005) claims that in object-control, accusative *sē* is the subject only when the infinitive is passive. This looks to me like an accident of attestation. The unattested sentence would involve an agent-like participant manipulating himself to perform some action, e.g. *Marcus cogit se abire* ‘Marcus forces himself to leave’.

This is not the only possibility. It is possible to ‘skip’ a suitable antecedent in the immediately higher clause.

Note also that local binding is possible within AcIs even when there is a suitable matrix antecedent. In (29) both $s\bar{e}$ and its antecedent are arguments of the infinitive. Since AcIs are clausal and have accusative subjects, $s\bar{e}$ is locally bound, but in theory $s\bar{e}$ could be bound by the matrix subject instead.

- (29) ubi [eum_i castris se_i tenere] Caesar intellexit ...
 when he.ACC camp.ABL REFL.ACC hold.INF Caesar.NOM understand.PERF.3SG
 ‘when Caesar understood that he stayed in the camp’ (CAES. *Gal.* 1.49.1)

4.1.2.2 Mood and finiteness

One interpretation of these facts is that it is the mood and finiteness of the clause that determines whether long-distance $s\bar{e}$ is possible. The generalisation would be that long-distance $s\bar{e}$ is licensed if the clause with $s\bar{e}$ is a subjunctive or infinitival clause and, as one searches for the antecedent of $s\bar{e}$ in a higher clause, one can only pass through subjunctive and infinitival clauses until the clause with the antecedent is reached. This means that the antecedent does not itself have to be in a subjunctive or infinitival clause, but it may be.

Another way of looking at the data is to say that long-distance $s\bar{e}$ is licensed in sentences that form part of reports of speech or thoughts. Since the verbs that can serve as matrix verbs introducing such reports happen to select infinitival and subjunctive complements, the relation between long-distance $s\bar{e}$ and mood is only indirect.

Key evidence here is the behaviour of adjoined clauses and relative clauses. Let us look at adjoined clauses first, which also allow long-distance $s\bar{e}$ but only when themselves adjoined to a complement that is able to host long-distance $s\bar{e}$. (30) shows long-distance $s\bar{e}$ in conditional clauses adjoined to finite and non-finite complements. (30a) also shows that $s\bar{e}$ does not have to be present in the complement for this to be possible.

- (30) a. Lepta_i me rogat [ut, [si quid sibi_i opus sit],
 Lepta.NOM me.ACC ask.3SG COMPL if any.NOM REFL.DAT help.NOM be.SUBJ.3SG
 accurram]
 run to.SUBJ.1SG
 ‘Lepta asks me to run up to town if I’m needed.’ (CIC. *Att.* 13.48.1)
- b. ... ei_j=que est pollicitus_i, [[si praemium sibi_i
 him.DAT=and AUX.3SG promise.PPP.NOM if reward REFL.DAT
 proposuisset_j], se_i, ut clam venisset, sic clam in
 offer.PLUPERF.SUBJ.3SG REFL.ACC as secretly come.IMPV.SUBJ.3SG so secretly to
 Pyrrhi castra rediturum et eum_k veneno necaturum].
 Pyrrhus.GEN camp.ACC return.FAP.ACC and him.ACC poison.ACC kill.FAP.ACC
 ‘He [= a deserter] promised him [= Fabricius] that if he [= F.] would offer him [= the deserter] a reward, he [= the deserter] would return to Pyrrhus’ camp as secretly as he had come and kill him [= the king] with poison.’ (CIC. *Off.* 3.86, Benedicto (1991: 172))

This extends further to clauses adjoined to adjoined clauses that themselves are adjoined to a complement, while clauses adjoined directly to the matrix clause rarely have long-distance $s\bar{e}$.

Since the Latin subjunctive is largely grammaticalised as a marker of subordination, many embedded clauses will automatically have subjunctive mood. For some adjoined clauses there is a choice between indicative and subjunctive mood, and the use of the subjunctive is best interpreted as signalling that the clause is part of reported speech, although indicative clauses occasionally also appear to belong to reported speech (Kühner and Stegmann 1912-1914: ii.199–200, 542–8). The same applies to relative clauses. Relative clauses that belong to reported speech predominantly appear in the subjunctive, while those that do not are in the indicative. The hypothesis then must be that subjunctive mood signifies a report presented from the point of view of the sentence-internal participant, while indicative mood indicates that the content is vouched for by the speaker.

What this means is that an indicative adjoined clause, let us say a causal clause, can be used to explain the cause of an action from the speaker's point of view, whereas one in the subjunctive would be an explanation that is attributed to the participant whose speech or thought is reported.

If long-distance *sē* is conditioned precisely by reports of speech or thought, we would expect it to occur only in subjunctive clauses. It appears to be the case that clauses that are marked with the subjunctive have long-distance *sē* and not pronominals, and that indicative clauses usually exclude long-distance *sē*, but the often-cited counterexamples in (31) of indicative clauses with long-distance *sē* show that this is not exceptionless.

- (31) a. *dicit capram, quam dederam servandam sibi, /*
 say.3SG she-goat.ACC.SG.F REL.ACC.SG.F give.PLUPERF.1SG keep.ND.ACC.SG.F REFL.DAT
suae uxoris dotem ambedisse oppido.
 his.GEN wife.GEN dowry.ACC consume.PERF.INF altogether

'He says that the goat that I had given to him to keep has eaten up his wife's dowry altogether.' (PL. *Mer.* 239)

- b. *Caesar_i ... duabus de causis Rhenum transire constituit, [quarum*
 Caesar.NOM two.ABL for reasons.ABL Rhine.ACC cross.INF decided.3SG REL.GEN.PL.F
una erat, [quod auxilia contra se_i Treveris
 one.NOM.SG.F was.3SG because help.ACC against REFL.ACC Treveri.DAT
miserant]].
 send.PLUPERF.3PL

'Caesar decided to cross the Rhine for two reasons, one of which was that they had sent help to the Treveri against him.' (CAES. *Gal.* 6.9.1, Kühner and Stegmann (1912-1914: i.614))

In (31a) the indicative clause is clearly part of the report. In (31b) it is hard to say if the indicative clause is the speaker's explanation or part of the report. For data such as this it has been suggested that there is a link between restrictiveness and long-distance *sē*, the observation being that when relative clauses do support long-distance *sē*, they tend to be restrictive (Benedicto 1991). (32) is a standard example of this showing a non-restrictive relative clause without long-distance *sē* and a restrictive clause with.

- (32) a. *Milesios navem poposcit_i [quae eum_i praesidii causa*
 Milesians.ACC ship.ACC demand.PERF.3SG REL.NOM him.ACC escort.GEN cause.ABL
Myndum prosequeretur].
 Myndus.ACC accompany.IMP.F.SUBJ.3SG

‘He demanded a ship from the Milesians that would accompany him to Myndus as escort.’ (CIC. *Ver.* 1.86)

- b. ... ei [qui sibi_i ex lege praetor successerat] exercitum non
 him.DAT REL.NOM REFL.DAT from law praetor.NOM succeed.PERF.3SG army.ACC NEG
 tradidit_i ...
 hand over.PERF.3SG

‘he did not hand the army over to him who legally had succeeded him as praetor’
 (CIC. *Inv.* 1.55, Hahn (1963: 103))

The conclusion is that subjunctive or infinitive marking is not strictly necessary for long-distance *sē*. It is also not sufficient for long-distance *sē* because consecutive clauses and purpose clauses, which have obligatory subjunctive mood, rarely have long-distance *sē*.

4.1.2.3 Lack of subject orientation and complementarity

Unlike local *sē*, long-distance *sē* does not require its antecedent to be a subject. Two examples of non-subject antecedents are shown in (33); we will see non-argument antecedents in section 4.4.4.

- (33) a. aratoris_i interest [ita se_i frumenta habere, [ut decumae quam
 farmer.GEN be important.3SG SO REFL.ACC crops.ACC have.INF that tax.NOM.PL as
 plurimo venire possint]]
 much come.INF be able.SUBJ.3SG

‘To the farmer it is important to have crops so heavy that the tithes may fetch the highest prices.’ (CIC. *Ver.* 3.147, Kühner and Stegmann (1912-1914: i.608f))

- b. a Caesare_i valde liberaliter invitor in legationem illam, [sibi_i
 by Caesar.ABL very generously invite.PASS.1SG in commission.ACC that.ACC REFL.DAT
 ut sim legatus]
 COMPL be.SUBJ.1SG legate

‘Caesar very generously invites me to take that commission, to be on his personal staff.’ (CIC. *Att.* 2.18.3, Kühner and Stegmann (1912-1914: i.608f))

There is also reason to think that long-distance *sē* is not in complementary distribution with pronominals. Overt or null pronouns are always used when a nominative form is required, but this may be explained independently by the *sē* lacking a nominative form in general. It is more surprising that ACIs are sometimes found without long-distance *sē* even when the matrix verb is of a type that is otherwise attested with complements that permit long-distance *sē*, as in (34a) where *arbitratus* ‘thinking’ should be able to license an accusative long-distance *sē* as the subject of its complement, but instead we find a null pronoun, and in (34b) where an overt pronoun shows up in the *ut*-complement of *persuadent* ‘persuade’.

- (34) a. [*pro*_i satis et ad laudem et ad utilitatem profectum]
 enough both to glory and to usefulness advance.PPP.ACC.SG.M
 arbitratus_i se in Galliam recepit ...
 think.PPP.NOM.SG.M REFL.ACC in Gaul retreat.PERF.3SG

‘Thinking that he had advanced far enough both for his own merit and for the utility [of the expedition], he retreated to Gaul’ (CAES. *Gal.* 4.19.4, Solberg (2011: 46–7))

- b. *persuadent_i Rauracis et Tulingis et Latobrigis finitimis, [uti ... persuade.3PL Rauraci.DAT and Tulingi.DAT and Latobrigi.DAT neighbours.DAT COMPL una cum eis_i proficiscantur]*
together with them.ABL set out.SUBJ.3PL

‘They persuade their neighbours the Rauraci, Tulingi and Latobrigi to set out together with them.’ (CAES. *Gal.* 1.5.3, Solberg (2011: 43))

4.1.3 Reported speech

The distinction between a complement of an utterance predicate and a passage of reported speech can be fluid. It is debatable how a particular passage should be divided into sentences, but when confronted with long sequences of reported speech, one is at some point forced to admit that long-distance *sē* need not have an antecedent in the same sentence. (35) illustrates this point. The example is heavily abbreviated and there are almost two pages of continuous reported speech in the Loeb edition of the text between *Caesar* and *sē*.

- (35) *ad ea Caesar_i respondit: ... si id sit factum, se_i nociturum*
to this Caesar.NOM answered.3SG if this AUX.SUBJ.3SG done.PPP REFL.ACC harm.FAP.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)

From such data it is clear that long-distance *sē* cannot always be syntactically bound in the sense it is understood in binding theory. It should be mentioned that in (35), as in other comparable passages, *sē* is repeatedly used with the same antecedent so that the referent is kept ‘active’ in discourse, but there is no obvious way of stating a restriction on the maximum possible distance between an occurrence of *sē* and its antecedent.

Reported speech presents a methodological problem that has been handled poorly in some previous work. Benedicto (1991) cites (36) to show how her theory works for adjoined clauses in complements. The reader is given no hint that there is more than a page of reported speech in the Loeb edition of the text between *respondit* and *nos* in CAES. *Gal.* 1.44.8.

- (36) *Ariovistus_i ... respondit ... [nos esse iniquos, [quod in suo*
Ariovistus.NOM replied.3SG we.ACC be.INF unjust.ACC because in his.ABL
iure se_i interpellaremus]].
jurisdiction.ABL REFL.ACC obstruct.IMPF.SUBJ.1SG

‘Ariovistus ... replied ... that we were unjust in obstructing him in his own jurisdiction.’ (Benedicto (1991: 173))

Similarly, (37a) is from Bertocchi and Casadio (1980) (probably originally from Kühner and Stegmann (1912-1914: i.601)), who claim it shows long-distance *sē* in an embedded question. The full form in (37b) shows that this is debatable.

- (37) a. *Ariovistus_i exercitu suo praesente conclamavit quid ad se_i*
Ariovistus.NOM army.ABL his.ABL present.PAP.ABL exclaim.PERF.3SG why to REFL
venirent
come.IMPF.SUBJ.3PL

‘Ariovistus exclaimed in the presence of his army, why they were coming to him.’
(Bertocchi and Casadio (1980: 30), my glosses)

- b. quos cum apud se_i in castris Ariovistus_i conspexisset, exercitu
REL.ACC.PL when near REFL in camp Ariovistus.NOM saw.PLUPERF.SUBJ.3SG army.ABL
suo_i praesente conclamavit_i: quid ad se_i venirent? an
his.ABL present.PAP.ABL exclaim.PERF.3SG why to REFL come.IMPV.SUBJ.3PL PCL
speculandi causa?
spy.ND.GEN reason.ABL

‘But when Ariovistus saw them near him in his camp he called aloud in the presence of his army, Why did they come to him? To spy?’ (CAES. *Gal.* 1.47.6)

The issue is that later work takes such data at face value. (37a), for example, is standardly cited (Benedicto 1991: 171–2, Ros 2001: 252) as evidence that LDR is found in embedded questions.

4.2 Previous work

Existing work approaches long-distance $s\bar{e}$ in two ways. One way is to assume that $s\bar{e}$ is a long-distance anaphor whose distribution can be explained if the domain which it is syntactically bound in is extended beyond that of local $s\bar{e}$. The other approach treats long-distance $s\bar{e}$ as a type of pronoun, which does not have to be syntactically bound, and seeks explanations for the distinction between long-distance $s\bar{e}$ and other pronominals in discourse.

4.2.1 Syntactic approaches

Since there is a strong correlation between long-distance $s\bar{e}$ and non-indicative clauses, it is reasonable to explore the idea that the distribution of long-distance $s\bar{e}$ can be derived from a formal property like mood or finiteness.

Some early general work on LDR makes reference to Latin, but it seems that no attempt had been made to ascertain what the correct empirical generalisations are. Yang (1983), for example, which is an early attempt to parametrise binding theory in GB, claims that the binding domain for $s\bar{e}$ is the minimal finite clause. This is clearly wrong.

Benedicto (1991) instead suggests that Latin LDR can be explained in terms of the notion *dynasty* formulated by Koster (1987):

(38) *Dynasty*

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

The main effect of the dynasty formulation is the following. A reflexive in a complement clause can be bound by the topic of the matrix clause. If a clause is adjoined to the complement clause, a reflexive is possible there too. But if a clause is adjoined directly to a finite matrix clause or adjoined to another adjoined clause, a reflexive in this adjoined clause cannot be bound by the matrix topic.

By making the assumption that *quod*-clauses are complements, that restrictive relative clauses are attached so that they pattern with governed clauses and that non-restrictive clauses pattern with adjoined clauses, the analysis accommodates a significant amount of data.

The issues are still numerous. She is not clear on whether the binder has to be a subject or in topic position (Benedicto 1991: 176, 181), nor on how the principles that regulate long-distance binding interact with local binding, which is subject to the standard Binding condition A and ‘always a real possibility’ (Benedicto 1991: 183, fn. 6). Worse, Benedicto (1991) herself points to several types of incompatible evidence but, oddly, offers no explanation for it. The second adjoined clause in (39), for example, should not host a reflexive, but it does.

- (39) haec propterea de me dixi [ut mihi Tubero_i [cum de se_i
 this thus about me spoke.1SG so that me.DAT Tubero.NOM when about REFL.ABL
 eadem dicerem] ignosceret]
 same say.IMP.F.SUBJ.1SG forgive.IMP.F.SUBJ.3SG

‘And I have spoken thus about myself in order that Tubero might forgive me when I said the same thing about him.’ (CIC. *Lig.* 8)

Ros (2001) takes a related approach. The exact generalisation is never stated but appears to be that long-distance *sē* is licensed in complements, including clauses adjoined to complements, and that the binder is found in the clause embedding the complement. Ros appears to be unaware that this is the wrong empirical generalisation since the binder in structures with multiply embedded complements need not be the one embedding the complement with long-distance *sē*.

Ros instead focuses on tackling data involving adjoined clauses and relative clauses that are not embedded within complements. This is done by inventing a category of ‘complement-like’ clauses. The claim is that a ‘complement-like’ clause is more like a complement than other clauses and that it therefore allows long-distance *sē*. Oddly, the prime example given of this is an alleged contrast between purpose clauses, which are supposed to be ‘complement-like’, and consecutive clauses, which are not. This is supported by (40a), which is supposed to show long-distance *sē* in a purpose clause. The full form in (40b) shows that this is wrong.

- (40) a. Ariovistus_i ad Caesarem_j legatos mittit, uti ex suis_j legatis
 Ariovistus.NOM to Caesar deputies.ACC send.3SG so that from his own deputies
 aliquem ad se_i mitteret
 someone.ACC to REFL send.IMP.F.SUBJ.3SG

‘Ariovistus sent deputies to Caesar so that he could send to him one of his own staff.’
 (Ros (2001: ex. (66)), my translation and glossing)

- b. biduo post Ariovistus ad Caesarem legatos misit: velle se de iis rebus quae inter eos
 egi coeptae neque perfectae essent agere cum eo: uti aut iterum conloquio diem
 constitueret aut, si id minus vellet, ex suis legatis aliquem ad se mitteret.

‘Two days afterwards Ariovistus sent deputies to Caesar. He wanted to discuss with him the matters that they had begun to discuss but had not completed. He should again designate a day for a meeting or if he did not want to, he should send on of his own staff to him.’ (CAES. *Gal.* 1.47.1)

There is no evidence to indicate that the alleged contrast between purpose clauses and consecutive clauses exists. But even if it did, without independent motivation, which Ros does not even attempt, the notion ‘complement-like’ only restates the observation that certain non-complement clauses allow long-distance $s\bar{e}$ and others do not.

Bertocchi (1986), in contrast, tries to reduce LDR to relative-tense interpretation. The idea is that $s\bar{e}$, whether local or long-distance, must be bound in its governing category, which is defined as follows:

A is a governing category for B iff A is the minimal category containing B, a SUBJECT accessible to B, and a clause K, whose INFL is marked [–TENSE], in which B appears (Bertocchi 1986: 77).

[–TENSE] is defined as a feature of INFL of a clause without absolute-tense interpretation. Exactly which clauses Bertocchi thinks lack absolute-tense interpretation is not clear but it certainly includes subjunctive clauses and AcIs.

Only a brief passage is devoted to explaining the proposal, and the reader is left to work out the implications. Her definition might rule out local $s\bar{e}$ (and this is how Ros (2001) parses it), but to me her prose is ambiguous and it may be that there is one definition of the governing category for long-distance $s\bar{e}$ and another one for local $s\bar{e}$. Needless to say, it is unclear how these would coexist.

Moreover, while the notion SUBJECT in her definition of governing category is not defined, standard GB definitions (essentially as AGR of a tensed clause, the subject of a non-finite clause or the possessor in an NP) conflict with the observation she makes that the antecedent of long-distance $s\bar{e}$ can occupy virtually any structural position.

She also claims that long-distance $s\bar{e}$ must always be syntactically bound in the sentence (Bertocchi 1986: 65) but then fails to explain how this is possible in passages of reported speech when there is no suitable overt matrix clause.¹

Let us assume that this could be remedied and look at the alleged link between [–TENSE] and long-distance $s\bar{e}$. [–TENSE] clearly does not refer to the absence of morphological expression of absolute tense, since this would make the proposal a notational variant of one that claims that long-distance $s\bar{e}$ is found in subjunctive and non-finite clauses. Instead it must refer to the presence of relative-tense interpretation. But this cannot be correct because purpose clauses and consecutive clauses are subjunctive clauses with sequence of tense (and thus relative-tense interpretation) that do not usually license long-distance $s\bar{e}$.

Solberg (2011), in contrast to all previous work, engages systematically with the data and proposes a comprehensive account of Latin LDR. He has two proposals, one syntactic and one discourse oriented. The syntactic one builds on Giorgi (2006, 2007), whose theory of LDR in Italian and Chinese assumes that the temporal coordinates of the speaker and the *bearer of attitude* have syntactic representations. The bearer of attitude is a participant who has a *propositional attitude* towards the embedded proposition. This attitude is expressed by a propositional-attitude event and the embedded proposition is temporally anchored to this event.

¹ This is a problem inherited from Bertocchi and Casadio (1983) who claim that $s\bar{e}$ is an anaphor (local $s\bar{e}$) or a proximate pronoun (long-distance $s\bar{e}$). The problem is that, by definition, a ‘proximate pronoun’ (Chomsky 1981) must have a sentence-internal antecedent.

It is the presence of the coordinates of the bearer of attitude that is responsible for binding long-distance reflexives and for the temporal anchoring of the embedded proposition. On the other hand, if the embedded event is temporally interpreted with respect to the speaker, LDR is blocked.

Solberg reasonably assumes that AcIs and subjunctive clauses have the same relative-tense interpretation and shows that they are not interpreted with respect to utterance time. It must therefore be the bearer of attitude and not the speaker which is relevant for such clauses, and for clauses adjoined to them.

This means that long-distance *sē* should be possible with the subject of the propositional-attitude verb as antecedent. But again purpose clauses and consecutive clauses pose a problem since there seems to be no way of distinguishing the relative temporal interpretation of such clauses from that of complements. One must therefore either abandon a unified theory of relative-tense interpretation or specifically block LDR in consecutive and purpose clauses. Another issue is that the theory would fail to explain why long-distance *sē* is sometimes found when there is no propositional attitude expressed as, for example, in relative clauses. Solberg therefore rejects this proposal and prefers a discourse-based explanation, which I will return to below.

4.2.2 Non-syntactic approaches

Milner (1978) equates the distributional constraints of long-distance *sē* with those of first and second person pronouns in reported speech. Since it is unclear how the distribution of such pronouns within reported speech should be modelled, it is difficult to evaluate this proposal beyond the intuitive correctness of singling out long-distance *sē* in contexts where there is a second set of ‘coordinates’ in addition to the deictic centre.

Bertocchi (1989: 454–6) instead appeals to *empathy* (Kuno and Kaburaki 1977) claiming that the reflexive is used when ‘the speaker identifies himself with the subject’s (or topic’s) point of view, that is, when he presents the facts from the perspective of the subject (or the topic)’. This is not elaborated on and is appealed to only as an *ad hoc* solution for data that does not fit a generative binding theory.

In general research on LDR, on the other hand, Latin is often mentioned as a language with logophoric effects (e.g. Bresnan 2001, Büring 2005, Culy 1997, Kuno 1987), but apart from a few examples little is said. The comparison with logophoric languages was, to my knowledge, first made by Clements (1975), who cites a fair amount of Latin evidence and shows how *sē* has a distribution very similar to that of logophoric pronouns.

Schoof (2005) is more specific and proposes that local *sē* is syntactically bound in a local domain while long-distance *sē* is a logophoric reflexive. As far as I know, this is the first proposal that ascribes equal importance to syntactic and non-syntactic mechanisms and clearly delineates their domains. But claiming that long-distance *sē* is a logophoric reflexive is unconvincing if it is not made clear how ‘logophoricity’ licenses it. Schoof ultimately equates the domain of long-distance *sē* with complements of *verba sentiendi et dicendi*, which is too restrictive (unless the class *verba sentiendi et dicendi* is extended beyond meaningfulness) and theoretically unsatisfying as it is not stated if these verbs lexically license long-distance *sē* or if there is some other principle at work.

Viti (2010) superficially compares long-distance *sē* to logophoric pronouns, relying on an intuitive understanding of logophoricity as something involving reports. Syntactic, semantic and

pragmatic explanations are arbitrarily invoked without explanation of when one or the other explanation is appropriate. There are, for example, supposed to be classes of logophoric predicates that ‘select’ long-distance reflexives (Viti 2010: 361), but LDR is still ‘lexically unconstrained, since all types of predicates may be involved in such structures’ (Viti 2010: 365). At the same time it is ‘syntactically constrained’ (Viti 2010: 365) in an unspecified manner, while the ‘focal nature’ of $s\bar{e}$, tight clause linking and the role of the speaker can explain why it regularly shows up in AcIs (Viti 2010: 365–6). In addition, ‘reflexives express subjectivity to the extent that they belong to non-presupposed information’ (Viti 2010: 367). With so many vague factors involved, it is no longer clear to the reader what the generalisation is.

Solberg (2011), finally, looks at long-distance $s\bar{e}$ from the perspective of Sells’ (1987) theory of logophoricity. Sells explains logophoricity in terms of three discourse-semantic roles. SOURCE is ‘one who is the intentional agent of communication’, SELF is ‘one whose mental state or attitude the content of the proposition describes’ and PIVOT is ‘one with respect to whose (space-time) location the content of the proposition is evaluated’ (Sells 1987: 457). These roles can be internal to the sentence, i.e. carried by an ‘internal protagonist’ in the sentence, or external, i.e. carried by the speaker. But because there is no communication unless a mental attitude is involved and because one cannot adopt someone’s mental point of view without also adopting their physical point of view, the roles combine in only four ways. In direct speech, all roles are external. In reported speech, all roles are internal, e.g. Max in (41a). Complements of ‘psych verbs’ have an internal SELF and PIVOT, e.g. Max in (41b). The final possibility is for PIVOT to be internal, e.g. Max in (41c), which Sells calls a *third-person point-of-view* (3POV) environment.

- (41) a. Max_i said that Louise loved him_i.
 b. That Louise ignored him_i, distressed Max_i.
 c. Max_i was reading when Maria came to visit him_i.

Solberg’s main conclusion is that the Latin logophoric reflexive usually refers to SELF, but that in certain instances they are oriented towards an internal PIVOT. I will return to this point in section 4.5.

4.2.3 Summary

Although the level of formalisation and underlying assumptions about binding vary, the question that previous syntactic approaches is preoccupied with is how the binding domain of long-distance $s\bar{e}$ should be characterised. I would like to emphasise that there are other questions that need to be addressed too: First, it should follow from one’s theory that there is no complementarity between long-distance $s\bar{e}$ and pronominals in the given binding domain. Second, the theory must explicitly account for local $s\bar{e}$ as well as long-distance $s\bar{e}$, i.e. it cannot be assumed that these are accounted for in some vaguely stated fashion by ‘different’ principles unless it clear how these principles can coexist. Third, since there is no trivial generalisation to be made based on mood or finiteness, it is important to ensure that the theory is sufficiently restrictive. Fourth, assumptions about reported speech must be made clear. If sentence-internal, syntactic binding is assumed, the antecedent must be represented in the syntax of sentences in reported speech. Previous work, with Solberg (2011) as the only exception, has not addressed these questions.

4.3 A binding theory

LFG's binding theory assumes that binding constraints are lexical properties of particular pronouns. This idea has non-LFG precedents, most notably Manzini and Wexler (1987), and stems from the observation that there are languages, Norwegian being a well-known example, with several anaphors and pronominals, each subject to different binding constraints.

Another characteristic of LFG's theory is that it is stated with reference to f-structure rather than c-structure. The rationale for this is summarised in Bresnan (2001: ch. 10). In other respects, the theory essentially works the same way and builds on the same intuitions as mainstream theories. It involves a notion of command or accessibility, a binding domain, specific constraints on the function of antecedents and a typology of pronouns.

I will not explain this in detail (see instead Bresnan (2001), Dalrymple (1993, 2001)) but focus on explaining the Latin-specific facts as outlined above on the basis of constraints proposed by Dalrymple (1993: 113–52, 2001: 278–88, 298–301).

The constraints, which are lexically associated with anaphors and pronouns, are on the following form:

$$(42) \quad ((\text{DomainPath GF } \uparrow) \text{AntecedentPath})_{\sigma} = (\uparrow_{\sigma} \text{ANTECEDENT}) \\ \neg(\rightarrow X)$$

Starting with the right-hand side of the expression, \uparrow is the f-structure of the anaphor itself. The notation f_{σ} designates the semantic projection of an f-structure f . \uparrow_{σ} is thus the semantic representation of the anaphor, and ANTECEDENT is an attribute in this representation.

The left-hand side of the expression can be read informally as follows. We start with the anaphor and, following the path DomainPath GF , we work our way outwards through f-structures making sure that we do not pass through an f-structure containing the attribute X . We then follow the path AntecedentPath back inwards again to a possible antecedent. The complete left-hand side of the expression is therefore the semantic representation of an antecedent. The constraint finally requires this semantic representation to be equal to the value of the ANTECEDENT attribute in the semantic structure of the anaphor.

The expression $(\text{DomainPath GF } \uparrow)$ involves inside-out functional uncertainty. This means that the expression picks out a set of less embedded f-structures, not necessarily a single, specific f-structure. By extension, the equation in (42) as a whole is satisfied whenever there exists some solution, not necessarily just one solution.

DomainPath is allowed to be empty ($\text{DomainPath} = \text{GF}^*$). This means that the path DomainPath GF is non-empty and that GF is the function of the anaphor itself. The notation $\neg(\rightarrow X)$ below DomainPath in the equation is an off-path constraint ensuring that DomainPath does not pass through an f-structure that contains the attribute X . The purpose of this is to delimit the binding domain without constraining the grammatical function of the anaphor itself. The equation in (43), for example, ensures that a possible antecedent of an anaphor must be found in the minimal f-structure that contains the anaphor and an SUBJ . This minimal domain is called the *minimal complete nucleus*.

$$(43) \quad ((\text{DomainPath GF } \uparrow) \text{AntecedentPath})_{\sigma} = (\uparrow_{\sigma} \text{ANTECEDENT}) \\ \neg(\rightarrow \text{SUBJ})$$

AntecedentPath is a singleton path (AntecedentPath = GF). Its purpose is to constrain the grammatical function of a possible antecedent. If the equation in (44) is associated with an anaphor, it will ensure that only subjects are possible antecedents of that anaphor.

$$(44) \quad ((\text{DomainPath GF } \uparrow) \text{SUBJ})_{\sigma} = (\uparrow_{\sigma} \text{ANTECEDENT})$$

Let us apply this to $s\bar{e}$. For the sake of argument, let us first assume that the expository distinction I have made between local and long-distance $s\bar{e}$ is matched in the lexicon by two lexical items $s\bar{e}_{\text{local}}$ and $s\bar{e}_{\text{LD}}$, and that the accusative pronominal *eum* is representative of pronominals.

For $s\bar{e}_{\text{local}}$ we need to ensure that it is bound in the minimal domain containing it and a subject, and that its antecedent is a subject. This is accomplished by combining the two equations shown above so that both must be satisfied at the same time:

$$(45) \quad ((\text{DomainPath GF } \uparrow) \text{SUBJ})_{\sigma} = (\uparrow_{\sigma} \text{ANTECEDENT}) \\ \neg(\rightarrow \text{SUBJ})$$

The example in (46),¹ whose f-structure is outlined in (47), illustrates how this works.

- (46) [Atticum_i me se_i=cum in Hispaniam ducere] intellexit.
 Atticus.ACC me.ACC REFL.ABL=with in Spain.ACC bring.3SG understood.3SG
 ‘He understood that Atticus is taking me with him to Spain.’

$$(47) \quad \left[\begin{array}{l} \text{SUBJ} \quad \text{“PRO”} \\ \text{PRED} \quad \text{‘intellegere<SUBJ, COMP>’} \\ \\ \text{COMP} \quad f_1: \left[\begin{array}{l} \text{SUBJ} \quad f_2: \text{“Atticum”} \\ \text{PRED} \quad \text{‘ducere<SUBJ, OBJ, OBL}_{\text{goal}}\text{’} \\ \text{OBJ} \quad \text{“me”} \\ \text{OBL}_{\text{goal}} \quad \text{“in Hispaniam”} \\ \text{ADJ} \quad \left[\begin{array}{l} \text{PRED} \quad \text{‘cum<OBJ>’} \\ \text{OBJ} \quad f_3: \left[\begin{array}{l} \text{PRED} \quad \text{‘PRO’} \\ \text{PRONTYPE} \quad \text{REFL} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right]$$

The f-structure corresponding to the minimal complete nucleus is labelled f_1 , the antecedent f_2 and the anaphor f_3 . Tracing our way outwards from the anaphor, we see that $(\text{DomainPath GF } \uparrow) = (\text{ADJ OBJ } \uparrow)$ is the f-structure labelled f_1 , while $((\text{DomainPath GF } \uparrow) \text{AntecedentPath}) = ((\text{ADJ OBJ } \uparrow) \text{SUBJ})$ is the f-structure labelled f_2 . The expression is therefore satisfied when the semantic structure of f_2 is equal to the semantic structure of f_3 :

$$(48) \quad ((\text{ADJ OBJ } \uparrow) \text{SUBJ})_{\sigma} = (\uparrow_{\sigma} \text{ANTECEDENT})$$

This also shows why the binding domain must be the minimal complete nucleus, i.e. why the off-path constraint makes reference to the presence of a SUBJ. The anaphor is in an adjunct to *ducere*. The adjunct has its own PRED-value so if we used the minimal f-structure with a PRED-value

¹ This made-up example combines Cic. *Att.* 10.9A.4 and Caes. *Gal.* 1.49.1, both cited above.

as binding domain, the ADJ f-structure would be the minimal domain for $s\bar{e}$. This is not what we want. On the other hand, we cannot allow the binding domain to extend beyond the smallest f-structure with a SUBJ-value since this would make the matrix subject a possible antecedent (which is not what we want for $s\bar{e}_{\text{local}}$).

The binding constraint for $s\bar{e}_{\text{local}}$ is a positive binding constraint. To express that the pronominal *enum* is free where $s\bar{e}_{\text{local}}$ is bound, we need a negative binding constraint:

$$(49) \quad ((\text{DomainPath GF } \uparrow) \text{SUBJ})_{\sigma} \neq (\uparrow_{\sigma} \text{ANTECEDENT}) \\ \neg(\rightarrow \text{SUBJ})$$

The constraint rules out the immediately higher subject as an antecedent, but does not impose any other restrictions thus allowing any non-subject and any higher subject to be the antecedent of *enum*. Complementary distribution between $s\bar{e}$ and *enum* within the minimal complete nucleus thus follows directly.

Under the assumption that $s\bar{e}_{\text{local}}$ and $s\bar{e}_{\text{LD}}$ are distinct, $s\bar{e}_{\text{LD}}$ cannot be bound in the minimal complete nucleus. The question now is within which domain $s\bar{e}_{\text{LD}}$ should be bound. Research on LDR points in the direction of four universally relevant domains. In Dalrymple's model these are called the *coargument domain*, the *minimal complete nucleus*, the *minimal finite domain* and the *root S*.¹ Each domain is properly contained within the larger ones. Therefore, since we know that finiteness is not the correct generalisation, only the root S domain is possible for $s\bar{e}_{\text{LD}}$. Since, in addition, the grammatical function of the antecedent of $s\bar{e}_{\text{LD}}$ is unconstrained, neither DomainPath or AntecedentPath should be constrained in this larger domain:

$$(50) \quad ((\text{DomainPath GF } \uparrow) \text{GF})_{\sigma} = (\uparrow_{\sigma} \text{ANTECEDENT}) \\ ((\text{DomainPath GF } \uparrow) \text{GF})_{\sigma} \neq (\uparrow_{\sigma} \text{ANTECEDENT}) \\ \neg(\rightarrow \text{SUBJ})$$

If we now assume that in reported speech there is always some matrix verb, null or overt, with a suitable (null or overt) argument that can be the antecedent of $s\bar{e}_{\text{LD}}$, we have an account that can accommodate almost all data discussed earlier. That it assumes two homophonous lexical items is not a problem since it is possible to join the constraints by a disjunction and instead ascribe them to a single lexical item.

What makes it an unsatisfying account is that it overgenerates. We could hypothesise that there are other domains that are relevant to binding (as Strahan (2011), for example, does). Shrinking the binding domain for $s\bar{e}_{\text{LD}}$ to the minimal subjunctive/AcI clause would improve the theory, but, as we have seen, it would not be perfect. More importantly, the theory would still overgenerate since not all antecedents in this domain are possible binders. In most of the reviewed data the antecedent is the participant whose speech or thought is reported. To make this work, we could constrain the antecedent to have this property, which in turn would be specified lexically by the predicate that the antecedent is an argument of. I will explore the extent to which this approach is successful in the next section.

¹ These correspond to the *coargument domain*, the *subject domain*, the *tense domain* and the *root domain* in Buring (2005: 66). Reuland and Koster (1991) omit the coargument domain, and label the remaining as domain 1, 2 and 3.

4.4 Logophoricity

A *logophoric pronoun* (Hagège 1974) is a pronoun that refers to ‘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’ (Clements 1975: 141). A classical example is the following from Ewe, a Niger-Congo language (Clements 1975: 142), where LOG glosses the logophoric pronoun:

- (51) a. Kofi_i be yè_i/*j/*s=dzo.
Kofi say LOG=leave
‘Kofi said that he (= Kofi) left.’
- b. Kofi_i be e_{*i}/j/*s=dzo.
Kofi say 3SG=leave
‘Kofi said that he/she (≠ Kofi) left.’
- c. Kofi_i be me=dzo.
Kofi say I=leave
‘Kofi said that I left.’

It appears that there are two types of languages with logophoric effects. *Logophoric languages*, like Ewe, are languages with dedicated logophoric pronouns. Icelandic (Maling 1984, Sigurðsson 1990, Thráinsson 1976), Japanese (Kameyama 1984, Oshima 2004), Mandarin (Xu 1993, Yu 1992, 1996), Latin (Clements 1975) and several other languages instead have reflexives that also have a logophoric use (Culy 1994, Roncador 1992). I will refer to such reflexives as *logophoric reflexives*.

Logophoric reflexives have much in common with logophoric pronouns. They do not necessarily have sentence-internal antecedents, and semantics and discourse factors play a significant role in determining their distribution. There are also differences. A logophoric pronoun can refer to a member of a set referred to by its antecedent, but a logophoric reflexive requires identity with its antecedent (Stirling 1993: 259).

It is unclear therefore whether logophoric pronouns and logophoric reflexives are, at some level, the same phenomenon. But the resemblance is still so striking that an explanation is required. Indeed, the following examples from Ewe all have close parallels in the Latin data I will discuss.

- (52) a. me-se tso Kofi_i gbɔ be yè_i-xɔ nunana.
PRO-hear from Kofi side that LOG-receive gift
‘I heard from Kofi that he [= Kofi] had received a gift.’ (Clements (1975: 158))
- b. Kɔmi xɔ agbalẽ tso Kofi_i gbɔ be yè_i-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.’ (Clements (1975: 159))
- c. Ama_i kpɔ dyidzɔ be yè_i-dyi vi.
Ama see happiness that LOG-bear child
‘Ama was happy that she [= Ama] bore a child.’ (Clements (1975: 163))

I will concentrate on ‘prototypical’ logophoricity first, i.e. long-distance *sē* in contexts that resemble those illustrated above and attempt to explain the logophoric use of long-distance *sē* as lexically licensed by certain matrix predicates. I will then look at some problematic points, in particular how a single logophoric domain can be maintained across an arbitrary stretch of reported speech and why we sometimes find non-arguments as antecedents.

4.4.1 Lexicalised logophoricity

I will hypothesise that long-distance *sē* is licensed within a *logophoric domain*. A *logophoric predicate* is a predicate that designates its complement argument as a logophoric domain and one of its (non-complement) arguments as the antecedent for logophoric *sē* within the appointed logophoric domain. I will refer to the designated antecedent as the *logocentre* and any instance of long-distance *sē* with the logocentre as antecedent within the designated logophoric domain as logophoric *sē*.

Although a lexical account opens up for lexical idiosyncrasy, it does not mean that there will be no patterns in the lexicon as to which verbs are logophoric predicates. It has been observed that there is an implicational relationship between classes of verbs that are logophoric predicates across languages. If a particular verb class contains logophoric predicates in a certain language, certain other classes in the same language also contain them. There is disagreement on the precise formulation of this hierarchy, but I expect some version of it to apply to Latin too. (53) shows three versions that have been suggested.

- (53) a. speech > thought > knowledge > perception (Culy 1994)
 b. communication > thought > psychological state > perception (Stirling 1993: 259)
 c. speech predicates > epistemic predicates > psychological predicates > knowledge predicates > perceptive predicates (Huang 2000: 185)

From this point of view it is unsurprising that prototypical logophoric predicates in Latin are utterance verbs like *dīcere* ‘say’, knowledge verbs like *scīre* ‘know’ and *intellegere* ‘understand’, propositional attitude verbs like *putāre* ‘think’, and some manipulative verbs that entail speech like *orāre* ‘ask’ and *iubēre* ‘order’. Such verbs can easily be accommodated by a lexical approach since the logocentre is the subject of the verb.

Whether perception verbs are logophoric predicates in Latin is less clear. There is much data similar to (54a) with a perception verb like *vidēre* ‘see’, but since this lexeme can be both a perception predicate and an acquisition of knowledge predicate, this type of data is inconclusive. But the example in (54b), which is the only example I am aware of, seems to require an interpretation in terms of sensory perception (Solberg *p.c.*) and suggests that the lowest class on the hierarchy is represented.

- (54) a. [nihil enim <a> me fieri ita> videbunt_i <[ut sibi_i sit
 nothing PCL by me be done.INF so see.3PL that REFL.DAT be.SUBJ.3SG
 delinquendi locus]].
 be delinquent.ND.GEN occasion.NOM
 ‘For they will see nothing in my behaviour to give them any pretext for delinquency.’
 (Cic. *Att.* 5.11.5)

- b. illi, ubi praeter spem quos fugere credebant
 they.NOM when against hope REL.ACC.PL.M flee.INF think.IMP.F.3PL
 infestis signis ad se ire viderunt, impetum modo ferre non
 in attack formation to REFL go.INF see.PERF.3PL attack.ACC even carry.INF not
 potuerunt ac primo concursu in fugam coniecti
 be able.PERF.3PL and first.ABL charge.ABL in flight.ACC throw.PPP.NOM.PL.M
 proximas silvas petierunt.
 nearest.ACC woods.ACC seek.PERF.3PL

‘When they unexpectedly saw that those who they thought were fleeing come towards them in attack formation, they could not even keep up the attack, were routed at the first charge and sought the nearest woods.’ (CAES. *Gal.* 6.8.6, Solberg (*p.c.*))

Exactly what ‘psychological state’ or ‘psychological predicates’ is supposed to cover is not clear. One possibility is that it covers certain desiderative verbs whose complements express the desired event. (55) shows examples with verbs meaning ‘hope’ and ‘fear’.

- (55) a. ... [totius Galliae sese_i potiri posse] sperant_i
 all.GEN Gallia.GEN REFL.ACC possess.INF be able.INF hope.3PL

‘they hope they can have power over all of Gaul’ (CAES. *Gal.* 1.3.8)

- b. celabat metuebat_i=que [te, ne tu sibi_i
 conceal.IMP.F.3SG fear.IMP.F.3SG=and you.ACC COMPL you.NOM REFL.DAT
 persuaderes, / ut abortioni operam daret puerum=que
 persuade.IMP.F.SUBJ.2SG COMPL abortion.DAT perform.IMP.F.SUBJ.3SG boy.ACC=and
 ut enicaret]
 COMPL kill.IMP.F.SUBJ.3SG

‘She hid it and feared that you would urge her to have an abortion and to kill the boy’ (PL. *Truc.* 201)

For this to be subsumed under logophoricity, the idea must be that it is the mental state of the experiencer that is reported. A different way of looking at such verbs is exemplified by (56) with the desiderative verb *velle* ‘want’. The verb here means ‘disposed to accept’ or ‘prepared to accept’, and one can infer that intentional communication would have taken place. The verb’s complement can therefore be construed as expressing a report. Such a view is not in any obvious way compatible with a lexical account as it is not clear that the inference can be made based on lexical semantics alone.

- (56) tum iis Bruti familiares_i ... [dare> volebant <quaternis, [si sibi_i
 then they Brutus.GEN friends give.INF agree.IMP.F.3PL 4% interest if REFL.DAT
 senatus consulto caveretur]]
 senate.GEN decree.ABL protect.PASS.IMP.F.SUBJ.3SG

‘Then Brutus’ friends ... agreed to lend at 4% providing they were safeguarded by a senatorial decree.’ (CIC. *Att.* 5.21.12, tr. Shackleton Bailey (1999: ii.99))

Another class of verbs that might belong under mental state is commentative verbs, as illustrated in (57) by *queri* ‘complain (that)’.

- (57) Caesar_i questus [quod, [cum ultro in continentem
 Caesar.NOM complain.PPP.NOM.SG.M COMPL when voluntarily to continent.ACC
 legatis missis pacem ab se_i petissent], bellum sine
 ambassadors.ABL send.PPP.ABL peace.ACC from REFL ask.PLUPERF.SUBJ.3PL war.ACC without
 causa intulissent] [ignoscere se imprudentiae] dixit.
 reason start.PLUPERF.SUBJ.3PL forgive.INF REFL.ACC thoughtlessness say.PERF.3SG

‘Caesar complained that after they had voluntarily sent ambassadors to the continent to ask him for peace, they had started a war [with him] without reason, and that he would forgive their thoughtlessness.’ (CAES. *Gal.* 4.27.5, Solberg (2011: 21))

Such verbs take finite complements in the indicative or subjunctive. Whether indicative complements can support logophoric *sē* is unclear since attested examples are in the subjunctive (Solberg 2011: 21). The problem with this type of complement is, as has been pointed out, that it is unclear where to draw the line between complements and causal adjuncts. The example in (58) illustrates the problem. The predicate (ὑπομεψυμοίρους) is highly unusual but it is possible to take it as a commentative predicate with a *quod*-complement. The more likely alternative is that the *quod*-clause is an explanation for why the letter had a complaining tone. I will return to the issue of causal clauses with long-distance *sē* in section 4.5.

- (58) Appius enim ad me ex itinere bis ter=ve ὑπομεψυμοίρους litteras
 Appius.NOM PCL to me from travel twice thrice=or querulous.ACC letters.ACC
 miserat [quod quaedam a se constituta rescinderem]
 send.PLUPERF.3SG COMPL some by REFL ordain.PPP rescind.IMPF.SUBJ.3SG

‘Appius sent me two or three rather complaining letters on his way home, [saying that/blaming me because/because] I rescinded some ordinances instituted by him.’ (CIC. *Att.* 6.1.2)

An indication that a lexical account is correct is that the lexemes in question are logophoric predicates independently of negation. One could reason that because the reported speech, thought, knowledge or perception is asserted not to be that of the logocentre, the logocentre is not actually the source of the report and there should be no logophoric effect. Yet (59) shows that *intellegere* ‘understand’ is a logophoric predicate even when negated.

- (59) ... non intellegunt_i [se_i de callido homine loqui, non de bono
 not understand.3SG REFL.ACC about cunning.ABL man.ABL talk.INF not about good.ABL
 viro].
 man.ABL

‘they don’t understand they are talking about a cunning person, not a good man.’ (CIC. *Att.* 7.2.4)

We can explain this by saying that the functional motivation for logophoricity is to single out the logocentre as the source of a report, but that what decides whether a particular lexeme will be lexically marked for logophoricity is whether it can be used to express the required type of report.

A lexical account should also trivially extend to idiomatic expressions. In the following example it is the VP *in mentem venire* ‘occur to’ that is the logophoric predicate, not the verb *venire* ‘come’. I assume that this is trivial because the idiomatic expression involved will have to be encoded in the lexicon anyway.

(60) at postea venit in mentem faeneratoribus_i [nihil se_i iuvare
but later come.PERF.3SG in mind lenders.DAT nothing.ACC REFL.ACC help.INF
illud senatus consultum] ...
this.ACC senate.GEN decree.ACC

‘But later on it occurred to the lenders that this decree was of no use to them’ (Cic. *Att.* 5.21.12, tr. Shackleton Bailey (1999: ii.102))

The example, incidentally, also shows that the logocentre need not be a subject and that it depends entirely on the subcategorisation frame of the logophoric predicate which grammatical function the logocentre will have.

4.4.2 An implementation

The idea, then, is that a verb like *narrabat* ‘he said’ in (61) has a lexical entry like (62), where @LOG(*f*) is a parameterised template that expands to suitable constraints that designate SUBJ the logocentre and COMP the logophoric domain. Constraints on *sē* will then ensure that the logocentre is a possible antecedent.

(61) atque [illud> Trebatius_i <se_i tibi dixisse] narrabat
but this.ACC Trebatius.NOM REFL.ACC YOU.DAT say.PERF.INF told.3SG

‘Trebatius said that he had told you this’ (Cic. *Att.* 13.23.3)

(62) *narrabat* V (↑ PRED) = ‘narrāre <SUBJ, COMP>’
@3SG
@IMPERFECT
@LOG(SUBJ)

Ash Asudeh (*Reflexives in the Correspondence Architecture*, talk given at the University of Iceland, 2 July 2009) has proposed a very preliminary implementation of constraints for lexically conditioned logophoricity based on the intuition that the logophoric predicate licences logophoricity and that the property of being a suitable domain for a logophoric reflexive ‘drips’ down into more deeply embedded *f*-structures. (63) shows the proposed constraints (omitting glue semantics) for the Icelandic logophoric utterance verb *segir* ‘says’.

(63) *segir* (↑ PRED) = ‘say<SUBJ, COMP>’

$$\left(\begin{array}{l} ((\uparrow \text{SUBJ})_{\varpi} \text{ LOGOCENTRE}) = + \\ (\uparrow \text{ LOGOPHORIC}) = + \\ (\uparrow \text{ GF}^+) \\ (\rightarrow \text{ MOOD}) =_c \text{ SUBJUNCTIVE} \\ (\uparrow \text{ LOGOPHORIC}) = (\rightarrow \text{ LOGOPHORIC}) \end{array} \right)$$

In Icelandic only a subject can be the antecedent in long-distance binding. The notation $(\uparrow \text{SUBJ})_{\varpi}$ refers to the anaphoric structure of such a subject. Anaphoric structure is a separate level of representation whose motivation I will not discuss here. What is important here is that the subject is flagged as a logocentre in anaphoric structure.

The attribute LOGOPHORIC is then used to mark the *f*-structure of the verb as being one through which the path from a logophoric reflexive to the logocentre can pass. The final three lines in

(63) ensure that the feature LOGOPHORIC ‘drips’ down into more deeply embedded f-structures as long as these have subjunctive mood. The correlation between subjunctive mood and logophoric reflexives is not perfect in Icelandic. There is dialectal variation as well as differences in judgement depending on the logophoric predicate involved (Sigurðsson 1986, Thráinsson 1976), but at least in one dialect the subjunctive restriction is a close approximation.

The relevant constraints on the reflexive are shown in (64).

$$(64) \quad ((\quad \text{GF}^* \quad \text{GF} \uparrow) \quad \text{SUBJ} \quad)_{\varpi} = \uparrow_{\varpi} \\ (\rightarrow \text{LOGOPHORIC}) \quad (\rightarrow_{\varpi} \text{LOGOCENTRE}) =_c +$$

The effect is to trace a path in f-structure outwards from the reflexive, which may have any grammatical function, through f-structures with the feature LOGOPHORIC and then inwards to a SUBJ, but only if this has been flagged as a logocentre in anaphoric structure. The anaphoric structure of the SUBJ is then identified with the anaphoric structure of the reflexive.

An unusual aspect about this formalisation is that it allows the logophoric property to ‘drip’ down into more deeply embedded structures. In more general terms, we can contrast two types of approaches. One uses outside-in functional uncertainty to look inwards into more deeply embedded f-structures. The other uses inside-out functional uncertainty to the effect of searching outwards into less deeply embedded f-structures. Anaphoric binding is accounted for exclusively using the inside-out approach, but Strahan (2009) argues, with reference to Icelandic and Faroese data, that an outside-in approach is required to ensure that, in my terminology, the correct logocentres are available in the correct logophoric domains for reflexives to locate. But, as is pointed out in a footnote in her paper, the evidence she gives can be explained more economically by a strict inside-out approach as long as the search for an antecedent has to pass through the COMP of the logophoric predicate. We will be in a better position to evaluate this after looking at how Asudeh’s proposal can be adapted for Latin.

A number of modifications are required for Latin. The logophoric domain clearly extends to ACIs and subjunctive complements, but it would not be correct to restrict the ‘drip’ of the logophoric property to such f-structures only. Participial clauses, infinitival control and raising complements, adjoined secondary predicates and deverbal nominalisations are all examples of structures without any mood feature that still host logophoric reflexives if embedded in a complement or adjunct that itself falls within a logophoric domain. The property should even ‘drip’ into f-structures corresponding to NPs since an NP may be modified by a subjunctive relative clause with logophoric *sē*.

The generalisation is that the ‘drip’ should apply to all embedded f-structures except those corresponding to material that is not part of the report. How this is marked in morphosyntax is an empirical question, which, as discussed earlier, has not yet been finally answered, but it appears to be a close approximation to say that everything except clauses with indicative mood (and structures embedded within them) is part of the report.

The logophoric property should ‘drip’ into f-structures with any grammatical function except that the first one must be a COMP. If the first element of the path is not required to be an COMP, a clause adjoined to the clause with the logophoric predicate would be part of the logophoric domain, which we have seen is incorrect. In the revised constraints in (65a) I factor out LogophoricPath for this purpose and give it the definition in (65b). Also, as far as I can tell, there is no reason why

the designation of a logocentre or the specification of the logophoric property should be optional, so this is omitted from the definition.

- (65) a. $\text{LOG}(f) = ((\uparrow f)_{\overline{\text{LOGOCENTRE}}}) = +$
 $(\uparrow \text{LOGOPHORIC}) = +$
 $(\uparrow \text{LogophoricDomainPath})$
 $(\rightarrow \text{MOOD}) \neq \text{INDICATIVE}$
 $(\uparrow \text{LOGOPHORIC}) = (\rightarrow \text{LOGOPHORIC})$
- b. $\text{LogophoricDomainPath} = \text{COMP GF}^*$

For the specification of $\overline{s\bar{e}}_{\text{LD}}$, the first modification is to allow the logocentre to have any grammatical function. One might object that the function of the antecedent should be an argument function, as by hypothesis the logocentre is always an argument, but the restriction to arguments is due to logophoric predicates having to designate an argument as a logocentre, and it is therefore not a property of $\overline{s\bar{e}}_{\text{LD}}$.

Second, the proposed constraints for Icelandic allow the logophoric reflexive to have an antecedent in its own f-structure if this f-structure happens to have a grammatical function flagged as a logocentre in anaphoric structure, as in (66), where *dícere* ‘say’ is the logophoric predicate and the asterisk on the subject pronoun indicates that it has been designated as a logocentre in anaphoric structure by the logophoric predicate.

- (66) $\left[\begin{array}{ll} \text{SUBJ} & \text{“PRO”}^* \\ \text{PRED} & \text{‘dícere<SUBJ, OBJ}_{\theta}, \text{COMP>}’ \\ \text{LOGOPHORIC} & + \\ \text{OBJ}_{\theta} & \text{“sibi”} \\ \text{COMP} & \dots \end{array} \right]$

This is not rectified by making the path pass through at least one f-structure with the feature LOGOPHORIC. The following shows a scenario where that would fail (*petere* ‘ask’ is a logophoric predicate that takes an oblique argument).

- (67) $\left[\begin{array}{ll} \text{SUBJ} & \text{“PRO”}^* \\ \text{PRED} & \text{‘dícere<SUBJ, COMP>}’ \\ \text{LOGOPHORIC} & + \\ \text{COMP} & \left[\begin{array}{ll} \text{SUBJ} & \text{“PRO”}^* \\ \text{PRED} & \text{‘petere<SUBJ, OBL}_{\theta}, \text{COMP>}’ \\ \text{LOGOPHORIC} & + \\ \text{OBL}_{\theta} & \left[\begin{array}{ll} \text{PRED} & \text{‘ā<OBJ>}’ \\ \text{LOGOPHORIC} & + \\ \text{OBJ} & \text{“se”} \end{array} \right] \\ \text{COMP} & \dots \end{array} \right] \end{array} \right]$

Since the LOGOPHORIC property drips into the OBL_{θ} , the subject of *petere* will be a possible antecedent for the reflexive. For the desired effect we need to ensure that the top of the path is COMP:

$$(68) \quad s\bar{e}_{LD} \quad ((\text{LogophoricDomainPath } GF \uparrow) \quad GF \quad)_{\varpi} = \uparrow_{\varpi} \\ (\rightarrow \text{LOGOPHORIC}) \quad (\rightarrow_{\varpi} \text{ LOGOCENTRE}) =_c +$$

This reasoning has led us to a point where there is significant redundancy in having a ‘drip’ mechanism. The constraint in (68) makes this clear by the repetition of *LogophoricDomainPath*. Dag Haug (*p.c.*) also points out that because the ‘drip’ is implemented using an existential constraint, it will fail if multiple logophoric reflexives are bound by a single logocentre – that would require a universal constraint ensuring that the feature ‘drips’ into all *f*-structures, not just along the path that happens to be instantiated. There is thus good reason to reevaluate the ‘drip’.

Let us return to the original premise. We know that a logophoric predicate singles out two of its arguments for special duty. One is the logocentre, the other the logophoric domain. Let us represent this in the following way:

$$(69) \quad \text{LOG}(f, d) = ((\uparrow f)_{\varpi} \text{ LOGOCENTRE}) = + \\ (\uparrow d \text{ LOGOPHORIC}) = +$$

The property lexically associated with $s\bar{e}_{LD}$ is that it must be bound by a logocentre. It does not matter which logocentre binds it as long there is a path from $s\bar{e}_{LD}$, passing through a logophoric domain, to an *f*-structure containing the logocentre. Let a logophoric domain be an *f*-structure with the attribute *LOGOPHORIC* and any *f*-structure within it except those that have indicative mood. We can formulate the constraint on $s\bar{e}_{LD}$ in (70).

$$(70) \quad s\bar{e}_{LD} \quad ((\quad GF \quad GF^+ \quad \uparrow) \quad GF \quad)_{\varpi} = \uparrow_{\varpi} \\ (\rightarrow \text{LOGOPHORIC}) (\rightarrow \text{MOOD}) \neq \text{INDICATIVE} \quad (\rightarrow_{\varpi} \text{ LOGOCENTRE}) =_c +$$

Compared to the revised ‘drip’ proposal, this makes some additional predictions. First, it allows a logophoric predicate to designate a non-COMP as the logophoric domain. This is not itself unreasonable if logophoricity is a lexical property. A logophoric predicate could, for example, designate a nominalised argument or a *dē*-phrase as its logophoric domain.¹ That the logophoric domain happens to be a COMP most of the time, is a consequence of the fact that COMP is the default realisation of a propositional argument. Second, it allows the highest clause in the logophoric domain to have indicative mood. It remains an open empirical question whether there are finite complements with indicative mood that also host logophoric $s\bar{e}$.

The following shows how this works for a complex example with multiply embedded logophoric predicates:

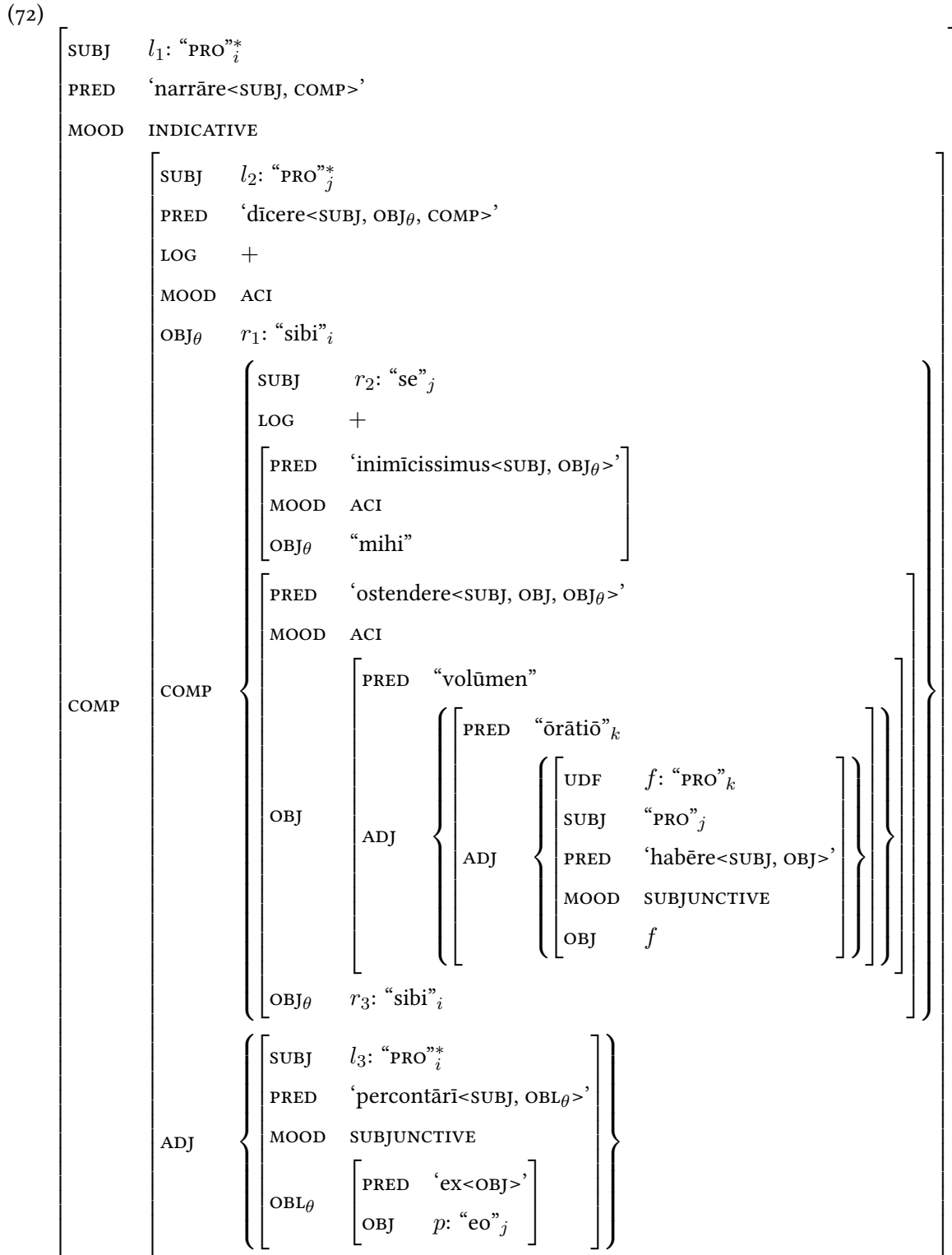
$$(71) \quad [\text{cum=que } eo_j \quad de \quad me \quad percontaretur_i], \text{ eum}_j \text{ sibi}_i \quad ita \text{ dixisse} > \\ \text{when=and from him.ABL about me.ABL ask.IMPF.SUBJ.3SG he.ACC REFL.DAT so say.PERF.INF} \\ \text{narrabat}_i, <[\text{se}_j \quad mihi \quad esse \quad inimicissimum], [\text{volumen=que sibi}_i \quad ostendisse}_j \\ \text{say.3SG REFL.ACC me.DAT be.INF enemy.SUP.ACC roll.ACC=and REFL.DAT show.PERF.INF} \\ \text{orationis} \quad \text{quam} \quad \text{apud} \text{ Caesarem} \quad \text{contra} \text{ me} \text{ esset}_j \quad \text{habiturus}]]]. \\ \text{speech.GEN REL.ACC at Caesar.ACC against me AUX.IMPF.SUBJ.3SG have.FAP.NOM}$$

‘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)

¹ We also know that Latin has logophoric predicates that designate an *xCOMP* as the logophoric domain. See (25) above.

The example contains three logophoric predicates, each with the specification @LOG(SUBJ, COMP): *percontaretur* ‘asked’, *dixisse* ‘said’ and *narrabat* ‘said’. The matrix clause is headed by *narrabat*. An ACI headed by *dixisse* is embedded within it. A *cum*-clause headed by *percontaretur* is adjoined to this ACI. Embedded within the same ACI are two conjoined ACIs that share a subject. Finally, the second conjunct ACI has an object whose attribute is modified by a subjunctive relative clause.

The f-structure is shown in (72), omitting irrelevant modifiers and abbreviating the attribute LOGOPHORIC to LOG.



The LOGOPHORIC feature is introduced by *narrāre*, which adds it to its COMP. Here it is also introduced by *dīcere*, which adds it to its COMP conjuncts. The reflexive marked r_1 cannot have the logocentre l_2 as its antecedent because the path must pass through an f-structure with the LOGOPHORIC attribute. The only possible antecedent is l_1 .

The two more deeply embedded reflexives r_2 and r_3 can have either l_1 or l_2 as antecedent because both COMPS have the LOGOPHORIC attribute and non-indicative mood. Native speakers' judgements on parallel constructions in Icelandic suggest that there is real ambiguity in such structures. Either logocentre is a possible antecedent for the long-distance reflexive in (73) according to Maling (1984).

- (73) Jón_i segir [að Haraldur_j viti [að Siggi elski sig_{i/j}]].
Jon says that Haraldur knows that Siggi loves REFL

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

The constraints given predict that the relative clause in the Latin example could have hosted logophoric $sē$ with l_1 or l_2 as antecedent. This is correct since the clause is part of the report whose source is l_2 , which in turn is part of the report whose source is l_1 .

The pronominal *eo* marked p is coreferent with l_2 in the immediately higher clause. Logophoric $sē$ would be impossible here because the path from p to l_2 passes through ADJ without the LOGOPHORIC attribute. l_3 is also not a possible antecedent because OBL_θ lacks the required LOGOPHORIC attribute.

The following sections discuss how this formalisation fares when confronted with other types of data.

4.4.3 Non-complementarity

One detail not yet covered concerns pronominals in logophoric domains. Usually, such pronominals signal disjointness from the logocentre:

- (74) is_i sperat [[si ei_j sit_k data] / sibi_i fore paratas
he hope.3SG if he.DAT AUX.SUBJ.3SG given.NOM.SG.F REFL.DAT be.FUT.INF ready.ACC.PL.F
clam uxorem excubias foris].
secretly wife.ACC quarters.ACC.PL.F outside

'He [= Lysidamus] is hoping that if she is given to him [= the slave], he [= Lysidamus] will have ready night quarters outside secret from his wife.' (Pl. *Cas.* 53–4)

But logophoric $sē$ is not obligatory in a logophoric domain, as in (75), where *ipsi* is used even though it is coreferent with the logocentre.

- (75) ei legationi Ariovistus_i respondit: [si quid ipsi_i a Caesare_j
this legation Ariovistus reply.PERF.3SG if something him.DAT from Caesare.ABL
opus esset,] sese_i ad eum_j venturum fuisse; [si quid
require.IMP.F.SUBJ.3SG REFL.ACC to him.ACC come.FAP.ACC AUX.PERF.INF if something
ille_j se_i velit,] illum_j ad se_i venire oportere.
he.NOM REFL.ACC want.SUBJ.3SG he.ACC to REFL.ACC come.INF should.INF

‘Ariovistus replied to the deputation that if he had needed anything from Caesar, he would have come to him, and if Caesar wanted anything from him, Caesar should come to him.’

(CAES. *Gal.* 1.34.3)

It may be here that the expression of contrast favours the use of the intensifier *ipse*, but there is evidently some choice on the part of the speaker involved. This is supported by Icelandic native-speaker judgements. The contrast between the reflexive *sig* and the pronominal *hann* in (76) amounts to a distinction between seeing the embedded proposition from the point of view of John or from somebody else’s point of view (Sigurðsson 1986).

(76) Jón_i segir að María elski sig_i/hann_i.
John says that Maria loves.SUBJ REFL/HIM

‘John says that Mary loves him.’ (Strahan (2009: 547))

Another way of looking at such contrasts is to say that a logophoric reflexive is used by the speaker to indicate the level of confidence in the reliability of the report (Culy 1994). Stirling (1993: 266f) explains that in logophoric languages a pronoun is used when the speaker has assimilated the reported proposition into his knowledge base, accepts its truth or approves of its content. Thus the use of a pronoun instead allows the speaker to express an attitude to the reported proposition.

For the lexical account, the crucial observation is that the non-complementary distribution of logophoric *sē* and pronominals entails that pronominals should not be specified as anti-logophoric. The constraints already proposed for pronominals are therefore sufficient.

4.4.4 Non-argument logocentres

It is a serious challenge for a lexical account that the logocentre can be a non-argument. In (77) the logocentre is in the *ex*-phrase and it is not obvious that this is an argument of *audire* ‘hear’.

(77) ibi ego audivi ex illo_i [sese_i esse Atticum].
there I.NOM hear.PERF.1SG from him.ABL REFL.ACC be.INF Attic.ACC

‘There I heard from him that he’s an Athenian.’ (TER. *An.* 927)

While a case can be made that the *ex*-phrase is an oblique argument of *audire* – and I believe it is – the grammars list a few examples with indisputable non-arguments. In (78) the logocentres are possessors. That the antecedents are the possessors and not the head nouns is confirmed by participial agreement in (78b) and (78c).

(78) a. ... quod elogium recitasti de testamento Cn. Egnati patris_i: ...
REL clause quote.PERF.2SG from will Gnaeus Egnatus.GEN father.GEN
[idcirco se_i exheredasse filium] ...
therefore REFL.ACC disinherit.PERF.INF son.ACC

‘The clause which you quoted from the will of of Gnaeus Egnatus’ father [saying] that he had disinherited his son’ (CIC. *Clu.* 135, Kühner and Stegmann (1912-1914: i.609))

b. canum_i vero tam fida custodia ... quid significat aliud nisi [se_i ad
dogs.GEN PCL so loyal protection what demonstrate.3SG else except REFL.ACC to
hominum commoditates esse generatos]?
men.GEN advantage AUX.INF create.PPP.ACC.PL.M

‘The loyal protection of dogs, what else does it demonstrate than that they were created for human comfort.’ (CIC. *N.D.* 2.158, Kühner and Stegmann (1912-1914: i.609))

c. quorum_i ipsa terga declarant [non esse se_i ad
REL.GEN.PL INTENS backs.NOM.PL.N declare.3PL not AUX.INF REFL.ACC for
onus accipiendum figurata]
load.ACC.SG.N receive.ND.ACC.SG.N shape.PPP.ACC.PL.N

‘Their [= the oxen’s] backs themselves declare that they are not shaped to take on a load.’ (CIC. *N.D.* 2.159, Solberg (2011: 29))

It must be emphasised that such examples are not numerous but they nevertheless cause problems for anyone seeking a constrained account of long-distance *sē*. Benedicto (1991) claims that antecedents of long-distance *sē* must be syntactically ‘prominent’ arguments but adds Topic position as an additional possibility to cater for the data in (78). Viti (2010: 364) too claims, with reference to (78b), that *canum* is the antecedent because it is ‘the most topical antecedent’. Schoof (2004) in turn invents a dedicated syntactic rule to account for this.

Before discussing other solutions, let us look at a type of example that is more systematically attested. This involves the sending of messages. Given the nature of my data, such examples are frequent and there is a frequent discrepancy between the participant actually communicating the report and the participant who is the ultimate origin of the report. The following example illustrates the discrepancy:

(79) legatos_j ad eum mittunt_i ..., qui_j dicerent [sibi_i esse in
ambassadors.ACC to him.ACC send.3PL REL.PL say.IMPF.SUBJ.3PL REFL.DAT be.INF in
animo iter per provinciam facere]
mind.ABL march.ACC through province.ACC make.INF

‘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, Solberg (2011: 24))

The antecedent of the logophoric reflexive is the subject of *mittunt*, which is the Helvetii. The constituent that will be picked out by the lexical constraints associated with the logophoric predicate *dicerent* is *qui*, which in turn refers to the ambassadors sent by the Helvetii.

A different variation is shown in (80) where only the matrix clause and a complement are present.

(80) a. misit_i enim puerum [se_i ad me venire]
send.PERF.3SG PCL boy.ACC REFL.ACC to me come.INF

‘he sent a boy [to say] that he is coming to me’ (CIC. *Att.* 10.16.5)

b. ... et ad Scipionem Pompeium=que nuntios mittit_i, [ut sibi_i
and to Scipio.ACC Pompei.ACC=and messengers.ACC send.3SG COMPL REFL.DAT
subsidio veniat].
help.DAT come.SUBJ.3SG

‘and he sends messengers to Scipio and Pompey [asking] them to come to his aid.’ (CAES. *Civ.* 3.80.3)

One way of interpreting this is to say that *mittere* has been lexicalised as a logophoric predicate meaning ‘send *x* to convey that’ where *x* is a messenger, a delegation, a letter, a message and so on, and that its complement is the reported message.

- (81) *mittit* V (↑ PRED) = ‘mittere <SUBJ, OBJ, COMP>’
@LOG(SUBJ, COMP)

But this does not help us with the general problem where the utterance verb is present as well. Moreover, not only *mittere* is attested in such structures. Messengers or letters can arrive from someone, be brought from someone or be carried by someone, and it is the ultimate source, the initiator of the directed motion, who is the logocentre:

- (82) a. ... litterae ei redduntur a Pompeio_i [mare transisse cum
letter.NOM.PL he.DAT give.PASS.3PL from Pompeius sea.ACC CROSS.PERF.INF with
legionibus Caesarem; properaret ad se_i cum exercitu venire ...]
legions Caesar.ACC hurry.SUBJ.IMPF.3SG to REFL.ACC with army come.INF
‘a letter from Pompeius is given him [saying] that Caesar had crossed the sea with
the legions and that he should hurry and come to him with the army’ (CAES. *Civ.*
3.33.1, Fruyt (1987: 210))
- b. legati ab iis_i venerunt, quorum_j haec fuit oratio:
ambassadors.NOM from them come.PERF.3PL REL.GEN.PL this be.PERF.3SG speech.NOM
... vel sibi_i agros attribuant vel patiantur eos tenere
either REFL.DAT fields.ACC assign.SUBJ.3PL or allow.SUBJ.3PL them.ACC keep.INF
quos armis possederint.
REFL.ACC.PL.M arms.ABL occupy.PERF.SUBJ.3PL
‘Ambassadors came from them [= the Germans] who gave the following speech: ...
either they [= the Romans] should assign them [= the Germans] fields or permit them
to keep those they had occupied with arms.’ (CAES. *Gal.* 4.7.2–4, Solberg (2011: 24))

Solberg (2011: 97–9) argues that these types of examples (both those involving messengers/messages and the ones with possessors) can be understood in terms of different discourse roles in Sells’ (1987) model. The participant that reads out the clauses of a will or a letter is the SOURCE, as are *custodia* ‘faithfulness’ and *tergum* ‘back’, which convey a report in a metaphorical sense. The participant on whose behalf the message is reported is the SELF, and the different roles are determined by discourse context.

This is a clever solution, but it does not make full use of our data. That the SOURCE participant is, in some hard to define way, the representative of SELF, is a crucial empirical observation that not only makes sense on an intuitive level but ought to be part of the explanation because it constrains the possible discrepancy between SELF and SOURCE.

A theoretical issue is that Sells’ theory is built on the premise that if a discourse participant is the SELF then it is also the SOURCE. Sells also seems to intend for SELF and SOURCE to be lexically assigned discourse roles. SELF is a role that goes with predicates expressing mental states, while SOURCE is assigned by predicates expressing reported utterances and thoughts. The reason is that by saying that languages can have logophoric expressions that mark an internal SOURCE or ex-

pressions that mark an internal SELF (and therefore by implication also an internal SOURCE), Sells explains part of the implicational hierarchy of logophoric predicates.¹

These objections in no way rule out a discourse explanation, and I will not be able to offer a superior characterisation of the relationship between the two ‘roles’, but my suggestion is that this type of data can be explained lexically if we hypothesise a mechanism outside syntax that resolves the reference of the reflexive. Let us refer to the participant conveying the report, i.e. the messenger, the letter, the clause in a will or some entity that metaphorically communicates a message, as the *medium* and the ultimate source of the message as the *actual logocentre*.

One might imagine that split reference is involved so that the reference of the logophoric reflexive is actually to both the medium and the actual logocentre. This is unsatisfying on an intuitive level and it also conflicts with the claim that logophoric reflexives, unlike logophoric pronouns, do not allow reference to a member of a set referenced by its antecedent. The agreement evidence also shows that the reference of the reflexive is to the actual logocentre.

Instead I propose that the medium, which is a syntactic argument of a logophoric predicate, is the argument lexically identified as the logocentre. The syntactic constraints will ensure that the logophoric reflexive gets the medium as its syntactic logocentre. The actual reference, however, is resolved outside syntax.

The mechanism outside syntax must rely on the fact that the logocentre and the actual logocentre are related referentially as if the logocentre is part of or a representative of the actual logocentre. The prediction is that the distribution of logophoric *sē* is more restricted than it would be if there were no lexical constraint involved. Specifically, it would not be possible for a participant that is inferred to be the source of the report to be the antecedent unless there is a suitable syntactic argument of a logophoric predicate present.

4.4.5 Reported speech

To explain logophoric *sē* in reported speech, we can posit null utterance verbs with a null subject as the logocentre. This is a simple solution in technical terms but hard to justify when the premise is that logophoricity is introduced lexically.

As an alternative to positing null utterance verbs, we could assign the function of introducing a logophoric domain to the highest clause in reported speech. Such clauses are invariably AClS, subjunctive *wh*-complements or subjunctive *ut*-complements (with or without an overt complementiser). Some support is found in the fact that there are logophoric languages with complementisers that are lexically specified for logophoricity, and since, as argued in section 3.2, the infinitive in the ACl carries the information normally carried by a complementiser, the clauses in question fit the profile for clauses that could introduce a logophoric domain on their own.

An additional issue concerns the null logocentre in reported speech. If its reference is determ-

¹ Taking this one step further, Stirling (1993) criticises this as a redundancy in Sells’ theory and argues that the two roles should be merged. He instead proposes an ‘epistemic validator’, which is ‘the individual to whom the speaker linguistically assigns responsibility for the discourse in question’ where ‘responsibility’ is explained as ‘responsibility for the truth of a proposition’, ‘the actuality of an eventuality’ or ‘the accuracy of the linguistic expressions used in asserting the proposition or describing the event’ (Stirling 1993: 283f). Under such a view it is reasonable to say that it is the sender of messages who validates the proposition or vouches for the actuality of the event or state. Stirling, in fact, claims to be able to reduce all three of Sells’ discourse roles to one primitive, but his only remark relevant to PIVOT is that ‘[it] seems very natural to state the deictic conditions on verbs like “come” and “go” in terms of the validator’ (Stirling 1993: 302), and I do not understand how he intends to explain 3POV environments in terms of a ‘validator’.

ined in the same way that pronouns get their reference, there is no problem – we can treat the null logocentre as a null referential pronoun. But it is possible that a passage of reported speech requires the reference of the null logocentre to remain fixed from sentence to sentence, or that it is constrained to a smaller set of possible referents. If this is so, we need some additional structure to keep track of previously activated logocentres.

The different options make slightly different empirical predictions. My data is insufficient for making an informed choice and it may be that native-speaker judgements are required to decide these questions. We can get a feeling for some of the principles involved from data like (83). Assuming the given punctuation, there are three sentences. The first sentence has a finite matrix clause and multiply embedded ACIs. The two other sentences are bare ACIs in reported speech. The indexing on logophoric *sē* in the first sentence shows that there are two logocentres. But in the following sentences only the structurally highest logocentre is accessed, as shown by the reflexive *sē* in the second sentence and the pronominal *illos* in the third sentence.

- (83) *ait_i [se_i nihil contra dicere, sed illos_j putare [talenta CC se_j say.3SG REFL.ACC nothing against say.INF but they.ACC think.INF talents.ACC 200 REFL.ACC debere]]. ea se_i velle accipere. debere_i autem illos_j paulo minus owe.INF that REFL.ACC want.INF accept.INF owe.INF PCL they.ACC little less*
 ‘He said he had no objection to offer but that the Salaminians thought they owed 200 talents. He would accept that but they actually owed him a little less.’ (CIC. *Att.* 5.21.12)

The reverse is the case in (84). Here it is the most deeply embedded logocentre that is picked up again in subsequent reported speech.

- (84) *atque [eum_j loqui> quidam ἀὐθεντικῶς_i narrabat <[Cn. Carbonis, and he.ACC talk.INF some firsthand authority tell.IMP.3SG Gnaeus Carbo.GEN M. Bruti se_j poenas persequi ...]. nihil Curionem se_j Marcus Brutus.GEN REFL.ACC revenge.ACC seek.INF nothing Curio.ACC REFL.ABL duce facere quod non hic Sulla duce commander.ABL do.INF REFL.ACC.SG.N not he.NOM Sulla.ABL commander.ABL fecisset. do.PLUPERF.SUBJ.3SG*
 ‘And one authority says that he [= Caesar] says that he [= Caesar] is seeking revenge for Gnaeus Carbo and Marcus Brutus ... [Caesar says that] Curio does nothing with him [= Caesar] as commander that he [= Pompey] had not done with Sulla as commander.’ (CIC. *Att.* 9.14.2)

What this data does not tell us is whether several logocentres can be accessed interchangeably in a passage of reported speech. It is also unclear to what extent an overt logophoric predicate is required to activate a logocentre. (85) is an interesting example in this respect as it introduces a logophoric complement without an overt matrix verb being present, but with an overt logocentre.

- (85) ... *statim quaero ex Acasto. ille_i [et tibi et sibi_i visum et ita at once from Acastus he.NOM and you.DAT and REFL.DAT seem.PPP and so se_i domi ex tuis audisse [ut nihil esset incommodi]] REFL.ACC at home from your hear.PERF.INF COMPL nothing be.SUBJ.IMP.3SG wrong.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, tr. Shackleton Bailey (1999: ii.171))

My suspicion is that logocentres can be introduced freely without overt logophoric predicates but that there is a strong preference for sustained reported speech to maintain reference to a single logocentre unless another one is introduced overtly. Further descriptive research is needed to uncover the required data to answer such questions.

4.5 Point of view

In some languages, logophoric pronouns and logophoric reflexives can be used to express what has been characterised as the ‘point of view’ of the speaker, independently of any logophoric predicate (Culy 1997). This is related to the notion *empathy* (Kuno 1987, Kuno and Kaburaki 1977), which is defined in (86).

(86) *Empathy*

Empathy is the speaker’s identification, which may vary in degree, with a person/thing that participates in the event or state that he describes in a sentence (Kuno 1987: 206).

Empathy originates in work on Japanese, where it has motivation independent of reflexives. Interestingly it appears to play a role in determining the distribution of the reflexive *zibun*, which, like *sē*, can be a locally bound anaphor or a long-distance reflexive. Oshima (2007) argues that long-distance *zibun* can express either logophoricity or empathy, and that these must be kept apart. The reason is that there are different constraints on *zibun* depending on its function. Logophoric *zibun* has three properties that empathic *zibun* does not have: It can appear with a first-person pronoun, it can have an extrasentential antecedent, and it requires a *de se* interpretation.

The first property requires explanation. The idea is that it is impossible for the speaker to empathise more with someone else than with himself (Kuno and Kaburaki 1977: 631). This property can then be explained in terms of the speaker’s *empathy locus*, which is the person/thing that receives the highest degree of empathy. If the speaker is present, the speaker must be the empathy locus. If empathic *zibun* is used, its referent must be the empathy locus. So if the speaker is present and empathic *zibun* is used at the same time, a conflict occurs (Oshima 2007).

Logophoric expressions used to express empathy are not particular to Japanese. Some of the data cited by Clements (1975) from Ewe, for example, has much in common with Japanese data. On the other hand, it is not an automatic property of logophoric reflexives that they have this use. The Icelandic long-distance reflexive *sig*, for example, is not an empathic reflexive (Oshima 2007: 31):

- (87) a. *Jón_i yrði glaður ef Sigga byði sér_i.
Jon would-be.SUBJ glad if Sigga invited.SUBJ REFL

‘John would be happy if Sigga invited him.’ (Maling (1984: 223))

- b. Taro_i-wa, mosi Hanako-ga zibun_i-o syotai-site-kure-tara,
 Taro-TOP if Hanako-NOM REFL-ACC invite-BEN-COND
 ooyorokobi-suru-daroo.
 be delighted-will

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

Another way of looking at this is to say that empathy is a type of logophoricity. This is essentially the view taken by Sells (1987), whose 3POV environments with an internal PIVOT are very similar to the environments with an empathic logophoric reflexive. It is clear from his analysis that unlike SOURCE or SELF, which are lexically introduced discourse roles, the use of an internal PIVOT in a 3POV environment is the result of a choice by the external speaker. Whether Sells is right in integrating 3POV environments into a single, coherent theory, or Oshima is right in keeping them separate, either approach makes a distinction between emphatic reflexives and logophoric reflexives.

The natural question is then if Latin also has an empathic reflexive. The grammars list a number of examples scattered around works by various authors that do not fit with their views on direct and indirect reflexives. These are instances of intrasentential long-distance *sē* whose antecedent is not the source of a report. Solberg (2011), who has examined the data in the grammars, claims that it fits well with Sells’ description of 3POV environments, and Solberg therefore concludes that Latin *sē* can mark an internal PIVOT.

The remainder of this section shows some examples of this phenomenon that are found in my corpus. The available data primarily involves restrictive relative clauses and causal clauses. Some clearly explains an action or a situation from a sentence-internal protagonist’s point of view. In other cases the shift of perspective is harder to justify in this manner, but it seems that the speaker temporarily chooses to step into the shoes of a sentence-internal protagonist for the duration of a relative clause, participial clause, purpose clause, causal clause or an adjunct expressing spatial orientation.

(88) shows a relative clause with this effect. 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 (88).

- (88) 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 successerit]]
 get angry.INF want.SUBJ.3SG that.DAT doctor.DAT REL.NOM REFL.DAT succeed.PERF.SUBJ.3SG
 si quae ipse in curando constituerit immutet ille ...]
 if REL he.NOM in cure.ND.ABL decide.PERF.SUBJ.3SG 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)

There is no obvious logophoric predicate in this sentence. The best candidate is *irasci* ‘get angry’ but only if it is correct that Latin allows for predicates expressing ‘psychological state’ to be logophoric predicates. If so, the stimulus argument must be a possible logophoric domain. This does

not quite make sense unless it is somehow construed as the reason for the anger, and this in turn works as a logophoric domain by the parallel with commentative predicates with complements that are logophoric domains.

(89) shows further examples that have in common with the above that a relative clause is involved and that the antecedent of long-distance *sē* is not a logocentre. (89a) has the form of a relative clause that requires a purposive reading, suggesting that the phenomenon in question extends to purpose clauses as well. (89b) might show that the phenomenon is not sensitive to subjunctive mood, unless the explanation for this particular example has to do with the syntax of the modal *nd*-form structure.

- (89) a. *pater_i adlegavit [vilicum [qui posceret / sibi_i father.NOM employ.PERF.3SG overseer.ACC REL.NOM ask.IMPV.SUBJ.3SG REFL.DAT istanc uxorem]].*
her.ACC wife.ACC

‘The father has employed his overseer to ask her to be his wife.’ (Pl. *Cas.* 52-3)

- b. [*eum_i fecisse> aiunt, <[sibi_i quod faciendum fuit]].*
he.ACC do.PERF.INF say.3PL REFL.DAT REL.NOM.SG.N do.ND.NOM.SG.N AUX.PERF.3SG

‘They say that he did what he had to do.’ (Pl. *Poen.* 956, Kühner and Stegmann (1912-1914: i.613))

It may also be that the phenomenon applies to certain participial clauses.

- (90) ... [*epistulam>=que ad me attulit_i [missam sibi_i a Caesare]]*
letter.ACC=and to me.ACC brought.3SG send.PPP.ACC.SG.F REFL.DAT by Caesar.ABL

‘He brought me a letter sent to him by Caesar.’ (Cic. *Att.* 13.45.1)

(91), finally, presents a problem for the hypothesis that the phenomenon at hand is empathy since the speaker is present and therefore should be the empathy locus (unless this it somehow construed as a hypothetical situation, in which case the empathy conflict can probably be avoided):

- (91) *ipsi hi_i quidem mihi dant viam, [quo pacto ab se_i INTENS they.NOM PCL me.DAT give.3PL road.ACC REL.ABL manner.ABL from REFL.ABL argentum auferam].*
money.ACC steal.SUBJ.1SG

‘They themselves are showing me in which way I can steal their money from them.’ (Pl. *Epid.* 193, Hahn (1963: 102))

The main problem with the empathy-based explanation for the divergent data is that it is unconstrained and easily abused as a container for data that otherwise contradicts apparent principles of binding. Take (92), for example. Under the assumption that object-control constructions are biclausal, (92a) should be unacceptable because *sibi* should be bound by the implicit subject of *dare*. Instead there is long-distance binding with a non-logocentre antecedent. The same problem is found in (92b).

- (92) a. reppulit mi manum, ne=que enim dare sibi_i / savium me
 push away.PERF.3SG me.DAT hand.ACC not=and PCL give.INF REFL kiss.ACC me.ACC
 sivit_i
 allow.PERF.3SG
 ‘She pushed away my hand and didn’t let me give her a kiss’ (PL. *Cas.* 888-8a)
- b. qui si passus_i esset [nos se_i=cum ... loqui ...]
 REL.NOM if let.PPP.NOM AUX.IMPF.SUBJ.3SG US.ACC REFL=with speak.INF
 ‘If he had let me talk to him’ (CIC. *Att.* 8.15A.2)

We have three options. One is that local binding is not subject-oriented. I am hesitant to draw this conclusion on the basis of two examples, but this is the explanation that is most likely. Another possible conclusion is that the matrix verbs are restructuring verbs in the sense of Wurmbrand (2003) so that the structures are monoclausal and *sē* locally bound. For this we would need independent evidence, and it is not trivial to identify such evidence. The last possibility is to invoke a third type of binding. The problem is that, at present, there is no way of saying if that is a sensible solution. The point here is that there are pockets of residual data that either constitute evidence against parts of my generalisations about local binding and logophoric reflexives, or constitute positive evidence for a third type of binding. Only future research can decide between these two options.

4.6 Conclusion

The evidence presented in this chapter shows that we have good reason to maintain the traditional distinction between direct and indirect reflexives, and to identify the former with locally bound anaphors and the latter with logophoric reflexives. The difficulty in determining the precise constraints on either type of reflexive is that a third type of binding is possible. This type, which might be associated with empathy, involves a choice by the speaker to temporarily adopt a sentence-internal protagonist’s point of view. Since this type of binding is possible, it is not always possible to distinguish clearly between effects of logophoricity and effects of empathy.

If we assume that it is possible to extend the lexical account to reported speech, we can explain the majority of instances of reflexives in non-finite clauses in a corpus sample. The residual class, which primarily occurs in complements expressing the content of a message delivered by one participant on the behalf of another, points in the direction that discourse also plays a role. The key question is whether this should be added to the theory of lexical logophoricity or if this too has its roots in empathy. The answer clearly hinges on future research making progress on the role of empathy in Latin.

5 Purpose clauses

Clauses whose function it is to express the purpose of another action can take several forms in Latin. (1) shows some examples. (1a) has a finite *ut*-clause, (1b) a phrase consisting of the preposition *ad* and an *nd*-form, (1c) a clause headed by an infinitive, (1d) a future participle, (1e) a dative noun, and (1f), finally, has two clauses, one with an *um*-supine and another with an *nd*-form.

- (1) a. *ibo ut erus quod imperavit Alcumenae nuntiem.*
 go.FUT.1SG COMPL master.NOM REL.ACC.SG.N order.PERF.3SG Alcumena.DAT
 tell.SUBJ.1SG
 ‘I’ll go to tell Alcumena what my master ordered.’ (Pl. *Am.* 291)
- b. *postero die Petreius ... occulte ad exploranda loca proficiscitur.*
 next.ABL day.ABL Petreius.NOM secretly to explore.ND.ACC.PL.N place.ACC.PL.N
 set out.3SG
 ‘Next day Petreius sets out secretly to explore the district.’ (CAES. *Civ.* 1.66)
- c. *nostra ilico / it visere ad eam.*
 our at once go.3SG visit.INF to her
 ‘Our mistress at once went to her to visit.’ (TER. *Hec.* 189)
- d. *... ut eat visura sororem ...*
 COMPL go.SUBJ.3SG see.FAP.NOM.SG.F sister.ACC
 ‘that she may go to see her sister’ (OV. *Met.* 6.476)
- e. *... subsidio suis ierunt ...*
 support.DAT their men go.PERF.3PL
 ‘they marched to the support of their comrades’ (CAES. *Gal.* 7.62.8)
- f. *ea lavatum dum it, servandum mihi dedit.*
 she.NOM wash.SUP while go.3SG keep.ND.ACC.SG.M me.DAT give.PERF.3SG
 ‘She gave it [= a ring] to me to look after while she went to have a bath.’ (TER. *Hau.* 655)

In this section I will look at the structures with a non-finite verb form, except for those with a future participle because these are not systematically attested until after Cicero. That leaves (1b), (1c) and (1f) for consideration.

Much research has already been done on the meaning, morphology, distribution and etymology of these verb forms, but an attempt to describe their function as heading purpose clauses has,

to my knowledge, not yet been attempted. I will therefore propose a formal description of their syntax with a particular emphasis on control and argumenthood, which are the key properties that syntactically distinguish purpose clauses from controlled non-finite complements.

I aim to show that purpose clauses headed by an *um*-supine are structurally comparable to certain infinitival purpose clauses in English. Purpose clauses with an *nd*-form, on the other hand, are structurally very different. Interestingly, however, their distribution and control properties are comparable. This fact is surprising because the *nd*-form is a passivised verbal form while English purpose clauses use active infinitives.

I therefore start this chapter with a theoretical introduction to purpose clauses in section 5.1. Then I move on to Latin clauses headed by an *um*-supine or an infinitive in section 5.2. The next two sections, section 5.3 and section 5.4, look at *nd*-forms with a purpose interpretation. The first of the two sections focuses on *nd*-forms that are traditionally analysed as predicative while the second focuses on those found in structures headed by the preposition *ad*.

5.1 Theoretical background

The first part of this section is a very brief review of some typological properties, the goal being to substantiate the notion ‘purpose clause’ as a pre-theoretic and language-independent notion with syntactic properties that recur in languages across the world.

The second, longer part deals with the syntax and semantics of English non-finite purpose clauses. English appears to be the only language whose non-finite purpose clauses have been studied in depth, and while the analysis cannot be transferred directly to Latin, it provides a background against which the Latin data can be compared. Moreover, assuming that some facts about such clauses ultimately have a semantic explanation, like their control properties, it is very likely that questions that surface in English will need to be answered for Latin as well and that the reasoning will be similar.

5.1.1 Typological properties

According to Dixon (2009: 17), ‘Purpose’ is a clause-linking strategy that contrasts with ‘Cause’ and ‘Result’, all of which involve ‘consequences’. The three strategies are explained as follows:

- (2) a. Cause: ‘The Supporting clause refers to the reason for the state or activity described by the Focal clause.’
- b. Result: ‘The Focal clause describes a natural consequence of what is described by the Supporting clause.’
- c. Purpose: ‘The Supporting clause describes what was done, volitionally, to ensure that the event or state of the Focal clause should take place.’

These are illustrated in (3), where the ‘Focal clause’ follows the ‘Supporting clause’.

- (3) a. Because John has been studying German for years, he speaks it well.
- b. John has been studying German for years, thus he speaks it well.
- c. John has been studying German for years, in order that he should speak it well.

Under this view, a *purpose clause* is the Focal clause in (3c), which describes the intended consequence of a volitional activity, which in turn is described by another clause.

Schmidtke-Bode (2009: 20) instead proposes a definition involving subordination:

[Purpose clauses] are part of complex sentence constructions which encode that one verbal situation, that of the matrix clause, is performed with the intention of bringing about another situation, that of the purpose clause.

This is the definition that I will adopt. Schmidtke-Bode (2009: 155–9) observes that while purpose clauses are generally thought to be adverbial, they often differ from other adverbial clauses in their morphosyntax. They can be reduced clauses, e.g. non-finite or with subjunctive mood, or may require the same complementiser, verb form or TAM features as complements. Their information status is also different. Causal and temporal clauses, for example, tend to provide given information, but purpose clauses usually provide new information. We would therefore expect such clauses to appear in focus position, but Schmidtke-Bode (2009: 113ff) finds that they actually tend to be positioned after the matrix clause in discourse-configurational languages.¹

Turning to the matrix clause, we find that the matrix verb is often a directed motion verb. A widespread idea is that the notion purpose can be construed metaphorically as the goal of motion. While there are languages that require the matrix verb to be a motion verb (Schmidtke-Bode 2009: 94–8), the more common instantiation is that the nominal marker used to mark goal or recipient arguments is also used to mark purpose clauses (Schmidtke-Bode 2009: 88ff).

What is striking about these observations is that they involve properties that make purpose clauses look morphologically and syntactically more like arguments than adjuncts. We must take care not to assume that this a universal, but it is safe to say that purpose clause are more prone to ‘tighter’ linking with the matrix event than other adverbial clauses.

5.1.2 Non-finite purpose clauses in English

It is generally recognised that English requires a distinction between *in order*-clauses (IOCs) and purpose clauses (PCs).² The bracketed clause in (4a) is an IOC. It is distinguished from the PC in (4b) by the presence of the element *in order*.

- (4) a. He bought a toy [in order to please his son].
b. He bought it [to play with].

Because *in order* can be omitted under certain circumstances, the distinction is not trivial. But what has been observed is that the possibility of inserting *in order*, correlates with several semantic and syntactic properties.

To start with, PCs must have one or two gaps³ (Bach 1982: 35–6). In (5) there is one gap, in (6) two. When there are two gaps, the subject is always one of them.

- (5) a. They_i hired him_j [____j to work on the report].

¹ The same happens in VO languages. OV languages show no preference.

² These are terms used by Jones (1991). Bach (1982) calls IOCs *in-order-to clauses*. Faraci (1974) and May (1990) use the term *rationale clauses*. Green (1992), Baxter (1999) and Metcalf (2004) instead use the terms *purpose infinitives* and *rationale infinitives*.

³ I will use this term for null elements whose theoretical status have not yet been determined.

- b. She_i brought it_j over [for my brother to review ___j].
 c. He gave me_i this project_j [for us to work on ___j].
- (6) a. I_i bought *War and Peace*_j [___i to read ___j to the children].
 b. They gave me_i New York_j [___i to fly to ___j].

(7) summarises the possible combinations. Jones (1991) refers to the type in (7a) as a *subject-gap purpose clause* (SPC) and the others, with non-subject gaps, as *object-gap purpose clauses* (OPCs).

- (7) a. ... [__/*for NP to V NP]
 b. ... [__/*for NP to V __]
 c. ... [__/*for NP to V NP on __]

IOCs, in contrast, do not require a gap at all (8a), may have a single gap (8b), but only if it is the subject (8c), and two gaps are impossible (8d) (Bach 1982: 35–6).

- (8) a. She_i brought it_j over [(in order) for my brother to review it_j].
 b. They_i hired him_j [(in order) ___i to work on the report].
 c. She_i brought it_j over [in order for my brother to review it/* ___j].
 d. I_i bought *War and Peace*_j [in order ___i to read it/* ___j to the children].

(9) shows the combinations for IOCs. Since *in order* is omissible, the surface form in (9a) without *in order* is ambiguous between a PC and an IOC. (9b), in contrast, is always an IOC since a PC requires a gap.

- (9) a. ... [(in order) __ to V the book]
 b. ... [(in order) for NP to V the book]
 c. *... [(in order) __/*for NP to V __]
 d. *... [(in order) __/*for NP to V NP on __]

5.1.2.1 Purpose clauses

PCs tend to appear with certain matrix predicates. Faraci (1974: 36) makes the following observations about SPCs:¹

... [SPCs] are usually complements to verbs of motion like *send*, *bring*, and *take*. An [SPC] characterizes an objective which involves the passive or active participation of the individual or thing which is acted on in the matrix clause ...

Bach (1982: 38) (with reference to SPCs and OPCs) instead chooses to list three types of matrix verb:

- (10) a. ‘*have*, *be* (in place, on hand, available, at one’s disposal, in existence...)’

¹ Faraci (1974) uses the terms *objective clauses* for SPCs and *purpose clauses* for OPCs.

- b. ‘Transitive verbs which involve continuance or change in the states of affairs indicated in [a] and are of a “positive” sort [...].’
- c. ‘Verbs of choice and use.’

The types are exemplified in (11).¹

- (11)
- a. *War and Peace* is available [__ to read __ to the students].
 - b. We always keep a fire-extinguisher in the kitchen [__ to use __ in case of fire].
 - c. I used it [__ to slice the salami with __].

The condition that type *b* verbs be ‘positive’ is aimed at contrasts like the following:

- (12) I keep it in/?out of my office [__ to amuse my students with __].

The intuition behind Bach’s type *c* is that the PC with these verbs is required. May (1990: 24–7) rightly objects to Bach singling out the verbs in *c* in particular, reasoning that if one can buy something without specifying its purpose (Bach’s type *b*), one can certainly also choose something for no specific purpose, as shown in (13).

- (13) I bought/chose it (to give to you).

Bach’s type *a* incidentally shows that the matrix predicate can be an adjective, as in (11a). Such adjectives typically involve ‘availability’ and ‘accessibility’ (Green 1992).² Baxter (1999) points out that even event-denoting nouns are possible:

- (14)
- a. The university’s hiring of Sandy_{*i*} [___{*i*} to teach English]...
 - b. Sandy’s purchase of beans_{*i*} [for her mother to plant ___{*i*} in the garden]...

Jones (1991), in contrast, offers an account that implies that the matrix predicate must have a theme argument. His use of the term *theme* is informal, but it is clear that he assumes a distinction between a moving ‘theme’ and an affected ‘patient’. A reasonable definition would therefore be the following from Kroeger (2004: 9):

- (15) *Theme*

A theme is the thematic role for an entity that undergoes a change of location or possession, or whose location is being specified.

Jones (1991) thereby predicts a wider distribution of PCs than Bach (1982), for whom intransitive motion verbs license only IOCs. It seems that Jones is correct since some speakers accept PCs with intransitive matrix verbs (May 1990: 29). (16), for example, must be a PC because of the object gap.

¹ These are Bach’s examples but with my bracketing and indexing.

² Green (1992) describes a suitable matrix predicate more generally as one that ‘affirms [...] or entails [...] availability, possession or control of the entity corresponding to the gap in the purpose infinitive by the inferred controller of the infinitive verb’. Whether this characterisation in practice works better than the alternatives, is an open question, but the idea that ‘availability’, possession and control play a role could be the foundation for a more concise explanation for the type of contrast in (12) than Bach was able to offer.

(16) The Dean came in [for us to talk to ___].

Suitable matrix predicates clearly share lexical traits but it is not clear if the lexical items in question subcategorise for PCs or if the correlation between such predicates and PCs follows from something else. Consequently, we cannot from this type of evidence conclude that PCs are arguments.

I will not take a position on the question of argumenthood, but I will offer a flavour of the syntactic arguments that have been used. A typical argument for adjunct status (Bach 1982, Baxter 1999, Green 1992, Jones 1991) is that PCs are always optional and that if matrix predicates do subcategorise for PCs, it is odd that there is no predicate which belongs to the lexical ‘class’ of suitable matrix predicates and is idiosyncratically marked not to take a PC.

Typical arguments for argumenthood (Jones 1984, Metcalf 2004) are that PCs cannot be iterated,¹ cannot be preposed, always precede IOCs, usually precede other modifiers and must be deleted when the VP is deleted.

The problem with these observations is that they may be explained as due to some third factor. Some can follow from assumptions about c-structure, like where in the structure PCs are adjoined or the ‘size’ of the PC constituent. Others, like the absence of idiosyncrasy, are more unexpected than actually incompatible with either analysis.

5.1.2.2 Control of OPCs

What is particularly interesting about OPCs, is that the non-subject gap is obligatorily coreferent with an element of the matrix clause (Bach 1982: 37). One way of showing this is (17) from Jones (1991) where unspecified object deletion in the matrix clause rules out an OPC.

- (17) a. We gave clothes_i to the Salvation Army [Δ to use ____i as they see fit].
 b. We gave \emptyset to the Salvation Army.
 c. *We gave \emptyset to the Salvation Army [Δ to use ___ as they see fit].

The gap in an OPC can be embedded within other clauses (18a) but only within non-tensed clauses (18b).

- (18) a. I bought it_i [to try to get John to read ____i]. (Jones 1991: 123)
 b. *I bought it_i [to tell my parents [that I’m reading ____i]]. (Jones 1991: 122)

If the judgements in (18) are correct, a long-distance dependency is involved. It seems to me that the path is constrained in a manner similar to how Dalrymple and King (2000) argue the long-distance dependency in *tough*-complements is constrained. The path can end in an object of a preposition, either in an adjoined PP (19a) or in an oblique argument (19b), but it may not end in an adjunct (19c) or a subject (19d).

- (19) a. She brought him_i [___ to sit next to ____i].
 b. She brought it_i [for you to put the sticker on ____i].

¹ Arguments by Green (1992: 109–10) to the effect that PCs can be iterated (and permuted) are deficient since, in the data given, one clause is a PC and the other an infinitival relative clause.

- c. *Tuesday_i is available [for you to see him ___i].
 d. *She brought him_i [for you to believe ___i kissed Mary].

The constraint on the long-distance path therefore looks something like this (assuming here that OPCs are adjuncts):

$$(20) (\uparrow \text{ADJ UDF}) = (\uparrow \text{ADJ XCOMP}^* (\text{ADJ} \mid \text{OBL}_{\theta}) \text{OBJ})$$

Note that it is unlikely that the gap is identified with the matrix argument directly by functional control since different cases may be assigned in these positions (cf. Hukari and Levine (1987) for other instances of this problem):

$$(21) \text{He}_i/\text{*him is available [for you to talk to __}_i].$$

I therefore assume that there is a UDF that is identified with the non-subject gap, and in the f-structure in (23), corresponding to (22), I assume that the coreference relation between the UDF and the matrix argument is established by obligatory anaphoric control.

$$(22) \text{Mary}_i \text{ brought John}_j \text{ [__}_i \text{ to talk to __}_j].$$

$$(23) \left[\begin{array}{l} \text{SUBJ} \quad \left[\text{"Mary"}_i \right] \\ \text{PRED} \quad \text{'bring<SUBJ, OBJ>'} \\ \text{OBJ} \quad \left[\text{"John"}_j \right] \\ \text{ADJ} \quad \left\{ \begin{array}{l} \left[\begin{array}{l} \text{UDF} \quad f: \left[\text{PRED} \quad \text{'PRO'}_j \right] \\ \text{SUBJ} \quad g: \left[\text{PRED} \quad \text{'PRO'}_i \right] \\ \text{PRED} \quad \text{'talk<SUBJ, OBL}_{\text{to}}\text{'}} \\ \text{OBL}_{\text{to}} \quad \left[\begin{array}{l} \text{PRED} \quad \text{'to<OBJ>'} \\ \text{OBJ} \quad f \end{array} \right] \end{array} \right\} \end{array} \right]$$

Turning to the subject, we see that it does not need a matrix controller (24a), control can be split, as in one possible reading of (24b), and the OPC subject itself can be overt (24c).

- (24) a. *Bambi*_i was brought [Δ_{arb} to read ___i to the children].
 b. (Addressed to the host at a dinner party:) Here is a bottle of wine. I_i brought it_k [$\Delta_{i/j/i+j}$ to drink ___k with our dinner]. (Dowty 1991: 559)
 c. I brought this wine_i over [for John to enjoy ___i].

This data suggests an analysis of the OPC subject in terms of non-obligatory control.

The resulting analysis is similar to the one proposed by Chomsky (1980), who places PRO in COMP of the OPC and indexes it to a trace in object position, and another PRO in subject position of the OPC. The analysis in Jones (1991) has essentially the same properties.¹

¹ A difference is that Jones (1991) analyses *for John* in (24c) not as the subject of the PC but as a PP. By having *John* control a subject gap in the PC, he can generalise that all PCs have a subject gap. Metcalf (2004) convincingly refutes his argumentation.

5.1.2.3 Control of SPCs

Jones (1991) uses (25) to show that there must be a matrix element controlling the subject of an SPC:

- (25) a. We've been hiring guards_i [Δ_i to watch the children].
 b. We've been hiring \emptyset .
 c. *We've been hiring \emptyset [Δ to watch the children].

He analyses subject gaps in SPCs in the same way as he analyses non-subject gaps in OPCs. He does this so that he can make the generalisation that the controller of the non-subject gap of an OPC and the controller of the subject gap of an SPC is always the theme argument of the matrix predicate. Ladusaw and Dowty (1988: 68), however, cite an example showing that the choice of controller can depend on context, thus weakening the motivation for Jones' analysis somewhat.

- (26) John has been spending the night at Mary's house a lot lately and using her toothbrush, which irritated her a great deal. So to appease her, John_i bought Mary_j a second toothbrush [$__i$ to brush *his_i* teeth with when he stayed at her house].

In Jones' favour, note that the relation in SPCs is obligatory and local, which means that it has more in common with an obligatory control relation (like the relation between the matrix theme and the UDF in an OPC) than with a non-obligatory control relation (like the possible relation between a matrix argument and the SUBJ in an OPC). I therefore treat this as an instance of obligatory anaphoric control:

- (27)
$$\left[\begin{array}{l} \text{SUBJ} \quad \text{"We"} \\ \text{PRED} \quad \text{'hire<SUBJ, OBJ>'} \\ \text{OBJ} \quad \text{"guards"}_i \\ \text{ADJ} \quad \left\{ \left[\begin{array}{l} \text{SUBJ} \quad \text{"PRO"}_i \\ \text{PRED} \quad \text{'watch<SUBJ, OBJ>'} \\ \text{OBJ} \quad \text{"the children"} \end{array} \right] \right\} \end{array} \right]$$

While some work presents this type of data as if there is a sharp distinction to be made between SPCs and OPCs, Green (1992) and Metcalf (2004) show that *bring* and *hire*, verbs used in standard examples to illustrate OPCs and SPCs respectively, are compatible with either type of PC:

- (28) a. Mary_i brought John_j along [(**in order*) $__j$ to talk to her_i].
 b. Mary_i brought John_j along [$__i$ to talk to $__j$].
- (29) a. I_i hired her_j [(**in order*) $__j$ to solve the problem].
 b. I_i hired her_j [$__i$ to talk to $__j$ about my financial problems].

But not all verbs are compatible with both clause types. May (1990: 16f), with reference to contrasts like (30), explains the SPC/OPC distinction in terms of an affected participant.

- (30) a. We brought him_i along [__ to talk to ___i].
 b. *We asked him_i along [__ to talk to ___i].
 c. We asked him_i along [___i to talk to us].

May says that what decides between an SPC or OPC reading is that the matrix object (*him*) must be affected and that the PC must express its resultant state, which in turn must have been brought about intentionally by the matrix agent. In (31) this is shown by the verb *brought along* inducing an effect on the theme, while *asked along* only expresses a possibility.

- (31) We #brought/asked him along, but he didn't come.

5.1.2.4 *In order*-clauses

The PC/IOC distinction is reflected by different control patterns. In the IOC in (32a) the controller of the subject gap is the matrix subject. An SPC would require control by the matrix theme/patient, as in (32b), and this rules out *in order*.

- (32) a. Mary_i brought John_j along [(in order) Δ_i to talk to him_j]
 b. *Mary_i brought John_j along [(in order) ___j to talk to her_i].

The distinction is also reflected by differences in the evidence for argumenthood. When the arguments for and against argumenthood for PCs are transferred to IOCs, it is clear that IOCs are adjuncts. For example, while PCs cannot be preposed, IOCs can be (Bach 1982: 36):

- (33) a. *For my brother to review she brought it over.
 b. (In order) to please his grandmother, he bought a piano.

Jones (1991), who assumes that both PCs and IOCs are adjuncts, solves this by saying that IOCs are adjoined higher in the clausal structure than PCs are (and that PCs are VPs while IOCs are full CPs).¹ One can turn this evidence on its head and say that different adjunction sites defines the PC/IOC distinction, and that this happens to correlate in a certain way with the possibility of inserting *in order*. Along these lines Whelpton (2002) claims that the PC/IOC distinction is semantic and that *in order* is compatible with either type of clause.

PCs are quite similar to control complements of manipulative verbs since the PC expresses the action that a participant engages in or the state he assumes after undergoing a change of state expressed by the matrix predicate. He proposes that the matrix predicate can effect the change required by a PC 'by virtue of natural development, by design, or by agentively controlled arrangement' (Whelpton 2002: 182).

IOCs, on the other hand, only express the intention of a sentient agent in bringing about an action. The antecedent of the subject of the IOC therefore need not be the matrix theme. In fact,

¹ Johnston (2000) attempts to correlate the difference in adjunction site with different interpretations of *for*-PPs. The idea is that a *for*-PP with a benefactive interpretation (*John left early for Mary*), where it is clear that the action is intended to please *Mary*, corresponds to an IOC (*John left early in order for Mary to move in*), while a recipient interpretation (one reading of *John baked a cake for Mary*) corresponds to a PC (*I baked a cake to eat with dinner*). He claims that the difference in adjunction sites is because benefactive adjuncts and IOCs are event-oriented, while recipient adjuncts and PCs are object-oriented, by which he means that they make reference to an affected matrix object. This is an interesting connection but does elucidate the syntactic structure of IOCs and PCs.

neither the matrix theme nor the matrix agent have to be involved in the action denoted by the IOC infinitive at all. All that is required is that the intentional agent brings about the IOC action.

5.2 Clauses with an *um*-supine

The first type of purpose clause to be discussed is headed by an *um*-supine. I will argue that these are clauses and not nominalisations, and have an obligatory null subject which is functionally controlled by a matrix argument. While the evidence available is too limited to say anything about argumenthood, the control pattern fits well with what has been observed for English SPCs. It is the matrix theme argument that is the controller and it is therefore plausible that *um*-supine-clauses are syntactically ambiguous with respect to argumenthood in the same way as their English counterparts.

5.2.1 The data

The sentence in (34) is a representative example of a purpose clause with an *um*-supine.

- (34) *deos atque amicos iit salutatum ad forum.*
 gods.ACC and friends.ACC went.3SG greet.SUP to market
 ‘He went to the market to greet the gods and his friends.’ (Pl. *Bac.* 347)

The matrix verb expresses a volitional action and the embedded verb expresses an intended consequence of this action. In this example, the matrix verb is a directed motion verb with a goal argument. The *um*-supine is formally an accusative noun. Since some goals are marked by the accusative in Latin, the *um*-supine could qualify formally as a goal argument.

The matrix verb is not always a directed motion verb. Take (35a), for example, in which the matrix action expresses transfer of possession. One might argue that this entails motion, but it is not reasonable to argue that such an entailment is present in (35b).

- (35) a. *qui-n tradis huc cruminam pressatum umerum?*
 why-Q give.2SG here wallet.ACC crush.SUP shoulder.ACC
 ‘Why don’t you hand the wallet over to weigh down my shoulder?’ (Pl. *As.* 663)
- b. *coctum ego, non vapulatum, dudum conductus fui.*
 cook.SUP I.NOM NEG be beaten.SUP recently hire.PPP.NOM.SG.M AUX.PERF.1SG
 ‘I was hired a while ago to cook, not to be beaten.’ (Pl. *Aul.* 457)

What the examples have in common, however, is that the *um*-supine expresses the state that the transferred or affected participant enters into or the action it is involved in after the completion of the matrix action.

(36) lists the matrix verbs in my corpus with translations that are appropriate to their context. The inventory resembles that of English PCs and can be characterised in very similar terms.

- (36) a. Intransitive (including reflexive) motion verbs: *venīre* ‘come’, *advenīre* ‘arrive’, *īre* ‘go’, *abīre* ‘leave’, *adīre* ‘go to’, *proficīscī* ‘depart’, *currere* ‘run’, *recurrere* ‘hurry back’, *incedere* ‘go inside’, *āvehī* ‘go away’, *perreptāre* ‘crawl’, *exīre* ‘go out’, *se recipere* ‘return’

- b. Transitive motion verbs: *mittere* ‘send’, *dūcere* ‘bring’, *addūcere* ‘bring’, *ferre* ‘carry’
- c. Other transitive verbs: *condūcere* ‘hire’
- d. Ditransitive verbs: *dare* ‘give’, *trādere* ‘hand over’

Turning now to arguments of the *um-supine*, we have seen in (35) that the *um-supine* can take a direct object in the accusative. Examples of non-object subcategorisation frames with verbs that are also well attested in finite structures with the same subcategorisation frames are shown in (37). In (37a) *operam dare* ‘pay attention to’ has a secondary object and (37b) in *orāre* ‘ask’ has a finite *ut*-complement.

- (37) a. *sici-ne oportet ire amicos homini amanti operam datum?*
 like this-Q should.3SG go.INF friends.ACC man.DAT lover.DAT attention.ACC give.SUP
 ‘Should friends walk like this in order to support a lovesick man?’ (PL. *Poen.* 512, tr. de Melo (2011-2012: iv.71))
- b. *oratum ierunt deam [ut sibi esset*
 ask.SUP go.PERF.3PL goddess.ACC COMPL REFL.DAT be.IMPFF.SUBJ.3SG
propitia].
 propitious.NOM.SG.F
 ‘They have gone to pray to the goddess that she be well-disposed towards them.’ (PL. *Poen.* 1134)

Note finally that the above data is characteristic of EL. *Um-supines* are found in CL too, as in (38), but clauses with *nd*-forms are more frequent (see section 5.4).

- (38) *Galliae legati ad Caesarem gratulatum convenerunt.*
 Gallia.GEN envoys.NOM to Caesar.ACC congratulate.SUP.ACC came
 ‘The envoys of Gaul came to congratulate Caesar.’ (CAES. *Gal.* 1.30.1)

5.2.2 Nominalisation or clause

In contrast to the infinitives, the *um-supine* has no TAM morphology and it never has an overt subject. This indicates that it heads a reduced clause or that it is a nominalisation. A reason to think that it is a nominalisation is that it is formally identical to noun. We know this because there are accusative forms of nouns with the morphology of an *um-supine* but no corresponding verbal stem.

To make this point clear, let us briefly look at the morphological forms labelled as supines in Latin grammar. The established view is that there are two: one in *-um* and one in *-ū*. There are also a small number of supines in *-uī* that some assimilate with those in *-ū* and others treat as a third supine.

The supines formally fall into the fourth declension of nouns whose masculine members end in *-ū* in the ablative, *-um* in the accusative, and *-uī* in the dative. There is little doubt that the supine in *-um* is historically an accusative form, but the development of the supines in *-ū* and *-uī* from ablative and dative forms is less clear.

	Noun	Supine	Participle
Nom./Voc.	frūct-us		dict-us (m.), -um (n.)
Acc.	frūct-um	dict-um	dict-um
Gen.	frūct-ūs		dict-ī
Dat.	frūct-uī, -ū	(dict-uī)	dict-ō
Abl.	frūct-ū	dict-ū	dict-ō

Figure 5.1: The traditional view on nouns in **-tu*, the supines and the perfect participle. The table shows the singular forms of the masculine noun *frūctus* ‘fruit’, attested and theoretical supine forms to the verb *dicere* ‘say’, and the masculine and neuter singular forms of the perfect participle of the same verb.

To cloud matters further, the *um*-supine can be formally identical to some forms of the perfect participle (see fig. 5.1). The perfect participle and the supine were historically distinguished by different vowel gradation in the root but this distinction was lost before our records start.

The *ū*-supine is mainly found with the *tough*-class of adjectives in constructions where the infinitive is also found. This type of construction is for reasons of space excluded from consideration in this dissertation.

This leaves the *um*-supine. From a historical perspective, the motivation for distinguishing it is simple. Latin supines are historically deverbal forms in **-tu*, and their cognates in Sanskrit are infinitives and in Balto-Slavic infinitive-like elements with purpose interpretation after verbs of movement. While it is mainly on this basis that prior work identifies them, the historic affinity with infinitive-like elements is not itself evidence for making a synchronic categorial distinction.

Against this evidence for an affinity with the nominal system, we know that, since the future participle is productively built from the same stem as *um*-supines, there is a verbal stem from which *um*-supines can be built. There is also no reason to doubt that it is an inflectional form since its formation from the verbal stem is regular with only a few idiosyncratic exceptions.

Moreover, since *um*-supines take verbal arguments, they are not ‘nominalisations’ in the sense of ‘action nouns’ or ‘event nominals’, which belong to the syntactic category noun, have nominal internal arguments and are idiosyncratically derived from verbal stems.

There is also no evidence of nominal modifiers with *um*-supines. The only type of modifiers that I have found are adverbial like the adverb *tanto opere* ‘very’ in (39a), although it is possible here that this adverb is adjoined not to the *um*-supine but to the dominating verb *īre*. The adjunct *sine meo periculo* ‘without danger to myself’ in (39b), on the other hand, seems to make sense only if it modifies the *um*-supine.

- (39) a. ... sine me [hoc exorare abs te, / [ut istuc
allow.IMP me.ACC this.ACC persuade.INF from you COMPL this.ACC.SG.N
delictum desistas tanto opere ire oppugnatum]].
misdeed.ACC.SG.N cease.SUBJ.2SG so very go.INF oppose.SUP

‘let me to persuade you to stop opposing this [your son’s] bad behaviour so much.’
(Pl. *Bac.* 1170–1)

- b. ... neque enim decet / sine meo periculo ire aliena ereptum
and not PCL be right.3SG without my danger go.INF other’s.ACC.PL.N seize.SUP
bona ...
goods.ACC.PL.N

‘and it’s not right for me to go and seize other’s property without danger to myself’
(Pl. *Per.* 62–3)

Other evidence does not discriminate between the two analyses. Negation is attested, but this negator can go with nominal and verbal categories:

- (40) *coctum ego, non vapulatum, dudum conductus fui.*
cook.SUP I.NOM NEG be beaten.SUP recently hire.PPP.NOM.SG.M AUX.PERF.1SG
‘I was hired a while ago to cook, not to be beaten.’ (Pl. *Aul.* 457)

Binding evidence too does not discriminate. The reflexive in (41) is a local reflexive since *sē* must be an object of the supine *perditum* and since the same verb is attested in finite clauses with unambiguous local reflexives. This supports the hypothesis that the *um-supine* has a null subject since local *sē* must be bound by the structurally closest subject. But it is also compatible with the *um-supine* being a nominalisation without a subject, in which case *sē* would have to be bound by the subject of the dominating verb *it*.

- (41) *quandoquidem ipsum perditum se it, secreto hercle equidem eum*
seeing that he.INTENS ruin.SUP REFL.ACC go.3SG secretly PCL PCL him.ACC
adiutabo, ...
help.FUT.1SG

‘Seeing that he is about to ruin himself, I will certainly help him secretly’ (Pl. *Truc.* 559)

Finally, evidence with secondary predicates can be interpreted in both ways. (42) shows data that may involve secondary predicates in the *um-supine*-clause. The *um-supine* in (42a) is embedded under the verb *incedere* ‘come in’, which heads an AcI. The infinitival subject is null (either generic or coreferent with *quoi*) but since the clause is an AcI, the infinitive assigns accusative case to it. The secondary predicate *impransum* ‘not having had one’s breakfast’ shows accusative case in agreement with the infinitival subject. This is explained if the *um-supine*-clause is indeed a clause and has a null subject, but the evidence is inconclusive because the secondary predicate may belong to the AcI, in which case it will agree with the accusative subject of *incedere*. The problem is the same in (42b), where *invitas* ‘unwilling’ may go with the AcI subject *canes* ‘dogs’ or the null subject of the *um-supine* *venatum* ‘hunt’.

- (42) a. *nam quoi paratum est quod edit, nostra gratia /*
for REL.DAT provide.PPP.NOM.SG.N AUX.3SG REL.ACC.SG.N eat.3SG our.ABL sake.ABL
nimia est stultitia [sessum impransum
great.NOM.SG.F be.3SG stupidity.NOM.SG.F sit.SUP not having had breakfast.ACC
incedere].
arrive.INF

‘For it is very foolish that he, for whom something to eat has been provided, comes to sit for our sake not having had breakfast.’ (Pl. *Poen.* 9–10)

- b. *stultitia=st, pater, venatum ducere invitas*
foolishness.NOM=AUX.3SG father.VOC hunt.SUP lead.INF unwilling.ACC.PL.F
canes.
dogs.ACC.PL.F

‘it is foolish, father, to lead unwilling dogs to hunt.’ (Pl. *St.* 97)

5.2.3 Control and controller choice

The *um*-supine never has an overt subject and its null subject is always interpreted as having an antecedent in the matrix clause. There are no attested supines whose subject does not have an antecedent in a higher clause, nor are there examples of split reference or of non-local coreference relations.

The null subject is also the only possible gap in the embedded clause. There are examples like (43), which may look like a clause with an object gap, but it actually shows detransitivisation.

- (43) quia venimus_i [_i coctum ad nuptias].
because come.PERF.1SG cook.SUP to wedding.ACC

‘Because we came to cook for the wedding.’ (Pl. *Aul.* 429)

There is thus good reason to assume that the null subject of the *um*-supine is controlled by a matrix argument. (44) demonstrates a general pattern: If the matrix verb is intransitive, the controller is the matrix subject. If the matrix verb is transitive, its object is controller, and if passive, the subject.

- (44) a. tu=ne es [qui_i hau multo prius / abiisti hinc [_i erum
you.SG.NOM=Q be.2SG REL.NOM not much earlier left.2SG here master.ACC
accersitum]]?
fetch.SUP

‘Aren’t you the one who left here not long ago to fetch your master?’ (Pl. *Rud.* 1056)

- b. per Dionysia / mater pompam me_i _i
during festival of Dionysius.ACC mother.NOM procession.ACC me.ACC
spectatum duxit.
watch.SUP bring.PERF.3SG

‘During the festival of Dionysus mother took me to watch the procession.’ (Pl. *Cist.* 89–90)

- c. coctum ego, non vapulatum, dudum conductus fui.
cook.SUP I.NOM NEG be beaten.SUP recently hire.PPP.NOM.SG.M AUX.PERF.1SG

‘I was hired a while ago to cook, not to be beaten.’ (Pl. *Aul.* 457)

This means that the controller is the grammatical function lowest on the hierarchy SUBJ > OBJ. But the OBJ is always a theme argument of the matrix verb, so another way of stating the same generalisation is to say that the controller is the theme argument. LMT will map this argument to OBJ when the verb is transitive and SUBJ when it is intransitive or passive.

This makes it very unlikely that anything but SUBJ and OBJ are possible controllers. This appears to be confirmed by the evidence. The only configuration with a matrix OBJ_θ in my data set consists of the matrix verb *dare* ‘give’ and the *um*-supine *nuptum* ‘get married to’, which itself can take a dative NP argument denoting the partner. It is therefore not entirely certain if the dative NP in (45a), for example, is the recipient argument of *dare* or belongs to *nuptum*. In (45b), on the other hand, it is reasonable to take the dative NP *nostro vilico* ‘our overseer’ to go with *detur* ‘is given’ because of the parallel construction without *nuptum* later.

- (45) a. *datur=ne illa_i Pamphilo hodie Δ_i nuptum?*
 give.PASS.3SG=Q she.NOM Pamphilus.DAT today get married.SUP
 ‘Is she being married to Pamphilus today?’ (TER. *An.* 301)
- b. ... *ut detur_i [Δ_i nuptum] nostro vilico, / ... / potius*
 so that give.SUBJ.PASS.3SG get married.SUP our.DAT overseer.DAT rather
quam [illi servo nequam des] ...
 than this.DAT slave.DAT useless give.SUBJ.2SG
 ‘so that she is given to the overseer to be married ... rather than that you give her to that useless slave ...’ (PL. *Cas.* 254-7)

If this is correct, it demonstrates that OBJ_{θ} is not the controller in these clauses, and so the choice of controller is not a matter of picking the grammatical function lowest on the hierarchy of grammatical functions $SUBJ > OBJ > OBJ_{\theta}$, but rather about the semantic role of the controller.

5.2.4 Argumenthood

A verb may have multiple OBL_{θ} arguments but they must be associated with different thematic roles. If the *um-supine*-clause is an argument of the matrix verb, data like (46) is a problem for the idea that purpose clauses are goal arguments since the verb has another goal argument.

- (46) *dominus me_i [Δ_i boves mercatum] Eretriam misit.*
 master.NOM me.ACC oxen.ACC buy.SUP Eretria.ACC sent.3SG
 ‘My master sent me to Eretria to buy oxen.’ (PL. *Per.* 322)

There are ways around this problem. One is based on the observation that in (47) multiple constituents (*huc* and *ad me*) make up a single complex goal argument (Ricca 2009: 130-2).

- (47) *ubi domi metues malum, / fugito huc ad me!*
 when at home fear.FUT.2SG bad.ACC flee.IMP here to me
 ‘When you fear something bad at home, flee here to me!’ (PL. *Truc.* 880)

But it does not seem very plausible that the *um-supine*-clause in (46) forms some type of complex goal argument with the NP *Eretriam*. A more likely approach would be to say that purpose clauses in general have their own thematic role. There is no agreed-upon set of thematic roles so stipulating a semantic role ‘purpose’ for argumental purpose clauses is possible.

It is therefore theoretically possible for *um-supine*-clauses to be arguments, but there seems to be no evidence that in practice discriminates between argument- and adjunct-status.

Um-supine-clauses are probably optional, but even if it could be shown empirically that this is correct, it would leave the problem unsolved since arguments need not be obligatory. Iteration of *um-supine*-clauses is unattested, but may easily be an accident of attestation. The *um-supine*-clause in (48) answers the question *quam ob rem?* ‘why’, which might be taken to point in the direction of adverbial status since other answers to this questions are adverbial clauses (e.g. a causal *quia*-clause in PL. *Capt.* 669), but this is not a convincing strategy for arguing adjunct status.

- (48) sed quaeso, quam ob rem nunc Epidamnum venimus? / an quasi mare omnis
 but please why now Epidamnus.ACC come.PERF.1PL Q like sea all go
 circumimus insulas? / – fratrem quaesitum geminum germanum meum.
 around.1PL islands.ACC brother.ACC seek.SUP twin.ACC my.ACC

‘But please, why did we come to Epidamnus? Are we going around all islands like the sea?
 – To look for my twin brother.’ (PL. *Men.* 230-2)

Since adverbial clauses in Latin are strong islands (Danckaert 2012: 140–1), we may be able to use extraction evidence to discriminate between the analyses. (49) shows relevant data.

- (49) a. nunc [quam rem Δ_i oratum huc veni_i primum]
 now REL.ACC.SG.F thing.ACC.SG.F ask.SUP here come.PERF.1SG first
 proloquar.
 announce.FUT.1SG

‘I will now first announce what I have come here to ask [of you].’ (PL. *Am.* 50–1)

- b. hic ille=st parasitus, [quem Δ_i arcessitum missa_i sum].
 here this.NOM=be.3SG parasite.NOM REL.ACC fetch.SUP send.PASS.PERF.SG

‘Here’s that parasite I was sent to fetch.’ (PL. *St.* 196)

There are two ways of interpreting this: The position of the *wh*-word in each example is compatible with it being *in situ* or fronted in the finite clause. It is very plausible that the *wh*-word has been fronted since this is what happens in relativisation elsewhere, but we cannot tell for sure.

But even if we assume that extraction has taken place, there is reason to doubt that this proves argumenthood. Jones (1991: 73–8) shows that *wh*-extraction is possible from English PCs, yet assumes on the basis of other evidence that they are adjuncts. The judgements below are those of Jones (1991: 29, 47):

- (50) a. What_i did John_j go out [___j to do ___i]?
 b. ?Who_i did you bring John_j along [___j to meet ___i]?

Indeed, it may be that the Adjunct island constraint is not as general as has been thought because it is a mix of syntactic and non-syntactic restrictions (cf. Falk (2009: 270–2)). With this in mind, we see that the Latin *wh*-extraction evidence is unhelpful.

In the absence of any usable evidence, I adopt the conventional view, which means that *um-*supine-clauses are adjuncts, and since control is systematic and obligatory, I have chosen to formalise this as functional control. The f-structure in (51b) illustrates this for the sentence in (51a) (= (46)).

- (51) a. dominus me_i [Δ_i boves mercatum] Eretriam misit.
 master.NOM me.ACC oxen.ACC buy.SUP Eretria.ACC sent.3SG

‘My master sent me to Eretria to buy oxen.’ (PL. *Per.* 322)

b.	SUBJ	“dominus”									
	PRED	‘mittere<SUBJ, OBJ, OBL _{goal} >’									
	OBJ	<i>f</i> : “me”									
	OBJ _{goal}	“Eretriam”									
	XADJ	<table style="border-collapse: collapse; margin-left: 10px;"> <tr> <td style="border-left: 1px solid black; padding-left: 10px;">SUBJ</td> <td style="padding-left: 10px;"><i>f</i></td> <td rowspan="4" style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 10px;"> </td> </tr> <tr> <td style="border-left: 1px solid black; padding-left: 10px;">PRED</td> <td style="padding-left: 10px;">‘mercatum<SUBJ, OBJ>’</td> </tr> <tr> <td style="border-left: 1px solid black; padding-left: 10px;">OBJ</td> <td style="padding-left: 10px;">“boves”</td> </tr> <tr> <td style="border-left: 1px solid black; padding-left: 10px;">VFORM</td> <td style="padding-left: 10px;">UM-SUPINE</td> </tr> </table>		SUBJ	<i>f</i>		PRED	‘mercatum<SUBJ, OBJ>’	OBJ	“boves”	VFORM
SUBJ	<i>f</i>										
PRED	‘mercatum<SUBJ, OBJ>’										
OBJ	“boves”										
VFORM	UM-SUPINE										

5.2.5 Periphrases

Um-supines are systematically found in periphrases expressing posteriority in the passive in ACIs (see section 3.2.1.1):

- (52) sed, ut philosophi ambulant, has tibi redditum iri
 but as philosophers.NOM walk.3PL these.ACC you.DAT return.SUP AUX.PASS.INF
 putabam prius.
 think.IMPF.1SG earlier

‘But, as [slow as] philosophers wander, I imagine this [letter] will reach you earlier.’ (Cic. *Att.* 7.1.1)

The periphrasis is unusual in that it is the auxiliary *irī* that is marked with passive morphology and not the main verb. It is possible that this oddity is a remnant of a prehistoric development, perhaps from a purposive construction.

In the synchronic grammar, however, *irī* is an uninflected passive posterior auxiliary that only appears in ACIs. The clearest evidence for its auxiliary status is that it lacks meaning of its own. It is a passive infinitive form of the movement verb *ire* ‘go’, but whenever the periphrasis is used to express movement, the *um-supine* itself is a movement verb. There is also no consistent purposive meaning attached to this periphrasis, thus *irī* does not contribute to the meaning of the periphrasis.

Since *irī* is an auxiliary, one might wonder if the active infinitive *ire* is ever an auxiliary when combined with an *um-supine*. This would not be surprising since motion verbs are known have developed into elements that express futurity in other languages. Indeed, in (53) (and in (41) above) it does not seem that any movement is involved.

- (53) a. in mea vita tu tibi laudem is quaesitum, scelus?
 in my.ABL life.ABL you.NOM you.DAT praise.ACC go.2SG ask.SUP scoundrel.VOC
 ‘Are you trying to win glory for yourself at the risk of my life, you scoundrel?’ (Ter. *Hau.* 315)

- b. soror si mea esses, / qui magis potueritis mi
 sister.NOM if my.NOM be.SUBJ.2SG how more be able.PERF.SUBJ.2PL me.DAT
 honorem ire habitum, / nescio ...
 respect.ACC go.INF hold.SUP not know.1SG

‘If you [= Gymnasium] were my sister, I don’t see how you [= Gymnasium and her mother] could have shown more regard for me’ (Pl. *Cist.* 3–5)

Letoublon (1983) claims that *īre* still cannot be a future auxiliary because the *um*-supine occurs together with many different movement verbs, not just *īre*. This is not a good argument. Even if *īre* were an auxiliary it would not entail that *um*-supines could only be dependent on *īre*.

Pinkster (1985: 203f) more convincingly observes that it is unlikely that *īre* is an auxiliary since its subject is always human and the *um*-supine always expresses a controllable event or state. This may be an accident of attestation, but it is surprising since if *īre* were an auxiliary, we would not expect any restrictions on the subject or the complement of *īre*.

Pinkster also observes that *īre* with an *um*-supine can be embedded under verbs like *velle* ‘want’ and *polliceri* ‘promise’. While he does not explain what he thinks this means, it is interesting that this is possible since as control verbs these verbs enforce a particular temporal interpretation on the complement that makes *īre* as a marker of futurity redundant. He also claims that there is no instance that is incompatible with a movement reading. This is a view I find it difficult to share, especially in the case of (41). I instead find a gloss like ‘[to] seek or try or be about to’, which is suggested by the OLD (*eō*¹ 12a), to be more credible. The meaning of *īre* has thus been generalised, perhaps by lexicalisation of a former inference, but it has not been grammaticalised as an auxiliary.

5.2.6 Purposive infinitives

Not only *um*-supines but also infinitives are found in purpose clauses. A historical explanation for this is that the active infinitive in *-re* is derived from the dative-locative form of a verbal noun (Leumann 1972: §429, Jeffers 1975: 142, 1977: 18–9) and that infinitives in pre-historical Latin therefore could be adjoined as purposive adverbials. This is supported by evidence that infinitives can express purpose in several old IE languages (Jeffers and Pepicello 1979). It is most clear in Vedic where dative infinitives in *-tave* or *-tavai*, as well as accusative infinitives in *-tum* (which are cognates of the Latin *um*-supine), have purposive interpretation. From this perspective it is hardly surprising that infinitives are found in purpose clauses in Latin.

What is surprising, then, is perhaps not that infinitives can have this function, but that they are only sporadically attested in this function. Let us first see why the infinitives in question can be compared to *um*-supines. First, only active present infinitives are attested. This is reflected by *um*-supines having active a-structure and no TAM marking. Second, control patterns in the same way. (54) shows examples with motion verbs and a pattern of coreference between matrix NPs and the subjects of the infinitives that matches that found with purposive *um*-supines.¹

- (54) a. [militis parasitus]_i modo / venerat [Δ_i aurum petere] hinc ...
 soldier.GEN parasite.NOM just came.3SG gold.ACC seek.INF here
 ‘The soldier’s parasite just came to demand the money from here’ (PL. *Bac.* 631–1a)
- b. [Δ_i reddere hoc], [non Δ_i perdere] erus me_i misit.
 return.INF this.ACC NEG lose.INF master.NOM me.ACC sent.3SG
 ‘My master sent me to pay this back, not to lose it.’ (PL. *Ps.* 642)
- c. era atque haec dolum ex proximo hunc
 mistress.NOM and this.NOM.SG.F trick.ACC.SG.M from next door.ABL this.ACC.SG.M
 protulerunt, / ego_i [hunc > missa sum < Δ_i ludere].
 come up with.PERF.3PL I.NOM this.ACC.SG.M send.PPP.NOM.SG.F AUX.1SG trick.INF

¹ The second infinitive in (54b), *perdere* ‘lose’, lacks an overt object but the contrast makes it clear that this is an asyndetic coordination and that the second infinitive has a null referential object.

‘My mistress and this woman from next door have hatched this trick, and I’ve been sent to fool him.’ (Pl. *Cas.* 687–8, tr. de Melo (2011–2012: ii.85))

As is the case with purposive *um*-supines, the control relation is obligatory and exhaustive and there is only one gap, which has to be the subject. (55) is possible counter-evidence to this latter claim, but I suspect that the infinitive here has a null referential object.

(55) ... *recurre_i* [Δ_i *petere* *re* *recenti*].
 hurry back.IMP fetch.INF thing.ABL recent.ABL

‘hurry back and fetch it before it’s too late.’ (Pl. *Trin.* 1015)

The following almost minimal pair from the same Plautine play illustrates how closely related the two structures are but offers no hint as to why one form is used rather than the other.

(56) a. *nunc hinc parasitum_i in Cariam misi meum* / [Δ_i *petitum*
 now hence parasite.ACC to Caria.ACC send.PERF.1SG my.ACC ask.SUP
 argentum a meo sodali mutuom].
 money.ACC from my.ABL friend.ABL loan.ACC

‘Now I’ve sent my parasite off to Caria to ask a friend of mine for a loan.’ (Pl. *Cur.* 67–8)

b. *minime, nam parasitum_i misi nudiusquartus Cariam* / [Δ_i *petere*
 not at all for parasite.ACC send.PERF.1SG three days ago Caria.ACC ask.INF
 argentum], *is hodie hic aderit*.
 money.ACC he.NOM today here be present.FUT.3SG

‘Not at all, three days ago I sent my parasite to Caria to fetch money and he’ll be here today.’ (Pl. *Cur.* 206–7)

There is very little evidence available for us to use¹ so if there are syntactic differences between the two structures, we are prevented from identifying them.

But the data shows how closely related infinitival complement clauses and non-finite purpose clauses are in that both require matrix clauses with suitable controllers. By extension it is fair to say that the *um*-supine is a type of infinitive and that it, like infinitival control complements, heads clauses with an obligatory null subject that must be controlled. Conversely, the reason why infinitives show up in PCs at all must be because the pattern of control is so similar to infinitival complements that the border between complements and adjuncts is blurred.

5.3 Purposive *nd*-forms without *ad*

The *um*-supine-clauses discussed in section 5.2 fulfill a similar role in Latin syntax as SPCs do in English syntax. Taking the analogy with English one step further, we might expect to find some structure that is the functional equivalent of English OPCs. The example in (57) shows this.

(57) *illic hanc mihi servandam dedit*.
 he.NOM that.ACC.SG.F me.DAT keep.ND.ACC.SG.F give.PERF.3SG

‘He gave it to me to keep safe.’ (Pl. *As.* 676)

¹ In my corpus there are only 12 infinitives.

The comparison with English is made on the basis that a similar class of matrix verbs is involved and because the *nd*-form expresses a state or an action that an affected participant of the matrix clause participates in as a result of the matrix action.¹

The syntactic structure of (57) is, however, quite different from English OPCs. The *nd*-form is a passive participle adjoined to the matrix clause. Its logical object, i.e. its syntactic subject, is obligatorily coreferent with the matrix theme with which it agrees in gender, number and case. This agreement is the result of structurally licensed functional control. The logical subject of the *nd*-form may be identified with a matrix argument but need not be. The resolution of its reference does not happen in syntax since the logical subject is unrepresented in the syntax.

Finally, a subset of matrix verbs induce a causative interpretation instead of a purposive interpretation. Although surface equivalent, the causative structure is different since the matrix verbs in question subcategorise for a constituent that consists of a patient argument and an *nd*-form.

5.3.1 The data

The structures in question are found with three-participant matrix situations like *dare* ‘give’ (58a), *tradere* ‘hand over’ (58b) and *attribuere* ‘assign’ (58c).

- (58) a. dedit mihi epistulam legendam tuam ...
gave.3SG me.DAT letter.ACC.SG.F read.ND.ACC.SG.F your.ACC.SG.F
‘He gave me your letter to read’ (CIC. *Q. fr.* 3.1.19)
- b. ... quae mihi defendenda tradita est ...
REL.NOM.SG.F me.DAT defend.ND.NOM.SG.F given.PPP.NOM.SG.F AUX.3SG
‘which [= Sicily] has been given to me to defend’ (CIC. *Ver.* 5.188, Kühner and Stegmann (1912-1914: i.731))
- c. ...singula=que latera castrorum singulis attribuit
one each.ACC.PL.N=and side.ACC.PL.N camp.GEN one each.DAT.PL assign.3SG
legionibus munienda...
legion.DAT.PL fortify.ND.ACC.PL.N
‘he assigns sides of the camp to each legion to fortify’ (CAES. *Civ.* 1.42)

This data shows that the *nd*-form agrees with the matrix theme argument in gender, number and case. When the matrix verb is active, this entails agreement with an accusative object, as in (58a) and (58c). When it is passive, it means agreement with the subject, as in (58b).

The *nd*-form can have secondary objects, obliques and adjuncts of its own, as in (59) with the oblique *ad te*.

- (59) ... [me aliquanto ante ... librum L. Cossinio ad te
me.ACC somewhat earlier document.ACC.SG.M Lucius Cossinius.DAT to you
perferendum dedisse].
deliver.ND.ACC.SG.M give.PERF.INF

¹ The matrix verbs attested in Latin are translational equivalents of a subset of the verbs enumerated for English PCs by Bach (1982: 38) (see section 5.1.2.1). The remaining verbs appear with purposive *nd*-forms with the preposition *ad*. The exception is the verb *esse* (both as copula and possessive verb). This verb in combination with an *nd*-form produces a structure with obligatory modal interpretation. It is unlikely to be a coincidence that infinitival relatives with object gaps also have obligatory modal interpretation in English (Bhatt 1999) and that a similar effect is found in Romance (Giurgea and Soare 2010). Such structures will not be discussed further here.

‘I had given Lucius Cossinius a document somewhat earlier to deliver to you.’ (Cic. *Att.* 2.1.1)

The *nd*-form itself is always a transitive verb, and its logical object is always understood to be coreferent with the matrix argument that the *nd*-form agrees with. In contrast, the reference of the logical subject varies. The prevalence of three-participant matrix verbs means that there is often a secondary object in the matrix clause, and the logical subject of the *nd*-form tends to share its reference. Since this is the exact behaviour of English OPCs, this effect can be brought out in translation by using an active form of the infinitive, as in my translations in (58) and (59).

In (60), in contrast, there is no coreference with a matrix argument. The logical subject is here best taken to have generic reference (and a passive infinitive captures this fact well in translation).

(60) caedundum conduxī ego illum.
slaughter.ND.ACC.SG.M bring.PERF.1SG I.NOM that.ACC.SG.M
‘I bought it [= a lamb] to be slaughtered.’ (Pl. *Aul.* 567)

In the following I will place an index on the *nd*-form to indicate coreference between its logical subject and a matrix argument or mark the *nd*-form with *arb* when its logical subject has generic reference.

5.3.2 Previous work on the *nd*-form

The standard view is that what I refer to as the *nd*-form is actually two different forms. One, the gerund, inflects like a noun but only has some forms in the singular. The other, the gerundive, inflects like an adjective. The full paradigm is shown in fig. 5.2.

Case	Gerund	Gerundive					
		Singular			Plural		
		Masculine	Neuter	Feminine	Masculine	Neuter	Feminine
Nom.		amandus	amandum	amanda	amandī	amanda	amandae
Voc.		amande	amandum	amanda	amandī	amanda	amandae
Acc.	amandum		amandum	amandam	amandōs	amanda	amandās
Gen.	amandī		amandī	amandae	amandōrum		amandārum
Dat.	amandō		amandō	amandae	amandīs		amandīs
Abl.	amandō		amandō	amandā	amandīs		amandīs

Figure 5.2: Inflectional paradigm for the gerund and gerundive of *amāre* ‘to love’.

The distinction between the gerund and gerundive in a particular sentence is made on the basis of two criteria. If the *nd*-form unambiguously has an accusative direct object, it is a gerund. If the *nd*-form has no logical object at all, it is a gerund. The gerundive is the otherwise case.

The examples in (61) show four characteristic uses of the *nd*-forms. In (61a) it is a circumstantial adjunct headed by the preposition *in*, in (61b) a converb typically having a cause or manner interpretation, in (61c) a dependent of a noun, and in (61d) it has an obligatory modal interpretation.

(61) a. ...ut ipse_i in [cohortandis_i militibus] pronuntiaverat.
as he in encourage.ND.ABL.PL soldier.ABL.PL.M state.PLUPERF.3SG

‘as he himself had stated when encouraging the soldiers.’ (CAES. *Civ.* 3.94)

- b. *ilicet, pariter hos_i perire [amando_i] video, uterque insaniunt.*
 no use likewise they.ACC die.INF love.ND.ABL see.1SG both be insane.3PL

‘No use. I see they’re both dying of love, both are insane.’ (PL. *Cur.* 187)

- c. *[abiendi_i] nunc tibi_i etiam occasio=st*
 leave.ND.GEN now you.SG.DAT still chance.NOM=be.3SG

‘You still have a chance to leave now.’ (PL. *Am.* 1034c)

- d. *Caesari_i omnia uno tempore erant agenda_i.*
 Caesar.DAT all.NOM.PL.N one.ABL time.ABL AUX.IMP.F.3PL do.ND.NOM.PL.N

‘Caesar had to do everything at the same time.’ (CAES. *Gal.* 2.20.1)

The *nd*-form in (61a) is a gerundive because of the logical object it agrees with. The same applies to (61d). (61b) and (61c) are labelled as gerunds because they lack a logical object.

In addition to (61), we find structures such as (62) without agreement between the *nd*-form and its logical object. A greater range of data will show that the NP behaves like an accusative direct object of the *nd*-form in such structures.

- (62) ... *ut spatium [pila in hostes coiciendi_{arb}] non daretur.*
 COMPL time.NOM javelins.ACC.PL.N in enemy.ACC throw.ND.GEN not give.PASS.3SG

‘that there was no time for throwing javelins at the enemy.’ (CAES. *Gal.* 1.51)

Such lack of agreement is attested in all *nd*-form-constructions but it is only a common alternative in the constructions shown in (61b) and (61c), and it is favoured when features clash in coordination or with certain types of neuter or plural logical objects (Miller 2000).

Previous work concerned with the *nd*-form has been preoccupied with its etymology and pre-historic syntax. This is not a simple undertaking especially since there is no uncontroversial cognate of the Latin *nd*-form in any non-Italic IE language. The question usually asked is whether the gerund or the gerundive was the ‘original’ *nd*-form. Those who answer that the gerund is derived from the gerundive (Harling 1960, Jasanoff 2006, Risch 1984) either say that the gerund is a nominalisation of the gerundive or that the gerund developed from a gerundive with default agreement features. Those who derive the gerundive from the gerund (Aalto 1949, Blümel 1979, Drexler 1962, Hahn 1943, 1965, Hettrich 1993, Kirk 1942, 1945, Stempel 1994, Strunk 1962) hypothesise some form of reanalysis of a gerund and a nominal dependent in the same case form.

Based on the lack of tangible results in existing work I think it is safe to conclude that progress on the pre-history of the *nd*-form will be made only if significant new evidence comes to light or if our understanding of the synchronic facts is radically improved.

Existing work also presupposes that it is meaningful to distinguish the gerund and gerundive as two morphological forms with intrinsic properties whose histories can be traced. It is a problem that the forms of one are a proper subset of the forms of the other, as shown in fig. 5.2, so that formal ambiguity is widespread, but also that the definitional criteria conflict. While a direct accusative object and agreement with a logical object are two sides of the same coin in almost all cases, an exception is made for modal *nd*-forms, which are usually labelled as gerundives regardless of

agreement and the presence of a logical object. It is also not clear why *nd*-forms without a logical object should not be gerundives with default agreement.

Less attention is paid to the syntax of the sentences that the *nd*-forms would be embedded in and how this relates to the stipulated morphological distinction between two *nd*-forms. Steintal (1967) is unusual in suggesting that the *nd*-form is a single morphological form that displays variation with respect to agreement but does so mainly for didactic reasons.

The traditional point of view offers no explanation for why there should be optionality in the grammar and why agreeing and non-agreeing *nd*-forms coexist in the grammar. It is a paradox that when faced with data with ambiguous agreement, a child acquiring Latin would have no basis for making a decision between the gerund and the gerundive. This must have been a problem since the structures that the gerund and gerundive appear in would be quite different.

The assumption that the gerund is a noun because it inflects like a noun, and the gerundive an adjective because it inflects like an adjective, also needs a better foundation. Particularly the labelling of the gerundive as an adjective needs to be substantiated. One would want to know specifically whether it is an adjective or a participle as it is well-known that the relationship between passivisation, adjectives and participles is non-trivial.

Some facts about the synchronic state of affairs are clear. The *nd*-form clearly has no formal marking of tense, aspect or voice, but there is no agreement on whether the forms have intrinsic values for any of these features.

The *nd*-form is also clearly an inflectional verbal form and not a deverbal adjective. In CL the stem of *nd*-form is transparently derived from the inflectional stem of the present participle (see the two leftmost columns in table 5.1).¹ In EL we find the same forms but also forms with the vowel preceding the *nd*-affix in the third and fourth conjugation replaced by *-u-* except after stems in *-v* or *-u*. These are instead synchronically derived from the third person plural of the present indicative (see the two rightmost columns in table 5.1). While this means that the synchronic rule for forming the *nd*-form must have changed over time, it does not change the fact that it is transparently and regularly formed from the present stem of all verbs with only a few lexical gaps.

Present participle	<i>E</i> -form	<i>U</i> -form	Present indicative
ama-nt-em ‘loving’	ama-nd-	ama-nd-	ama-nt
mone-nt-em ‘warning’	mone-nd-	mone-nd-	mone-nt
scribe-nt-em ‘writing’	scribe-nd-	scribu-nd-	scribu-nt
facie-nt-em ‘doing’	facie-nd-	faciu-nd-	faciu-nt
fere-nt-em ‘carrying’	fere-nd-	feru-nd-	feru-nt
audie-nt-em ‘hearing’	audie-nd-	audiu-nd-	audiu-nt
eu-nt-em ‘going’	eu-nd-	eu-nd-	eu-nt
fa-nt-em ‘speaking’	fa-nd-	fa-nd-	fa-ntur

Table 5.1: Relationship between the inflectional stems of *nd*-forms and the present participle and third person plural forms of the present indicative.

We also do not find derivational prefixes or negative forms with the *in*-prefix, both of which are found in adjectival derivation. Finally, there is a closed class of lexemes with the *nd*-affix that are clearly adjectives and nouns (see Risch (1984: 62–92) for a detailed survey). Their behaviour is

¹ The table shows accusative singular forms of the present participle rather than nominative singular forms because the verb *īre* ‘go’ forms its nominative participle *ie-ns* using an altered stem.

idiosyncratic in a number of respects, but most conspicuously they have a different distribution. They do not appear in any of the syntactic structures that regular *nd*-forms are found in and instead distribute as ordinary adjectives and nouns. There is therefore no reason to think that there is a rule of productive *nd*-form to adjective conversion in the language.

Assuming therefore that gerundives are participles, there are two ways of explaining that the logical subject is always absent. It could result from demotion by passivisation and, since *nd*-forms never have an agent phrase, a constraint that prevents agent phrases from being used. Alternatively, it could be that the logical subject is obligatorily null. Miller (2000), following the latter intuition, has proposed that the subject is always PRO. The problem with this is that we would have to posit agreement with a syntactic object for the gerundive, something that is unmotivated elsewhere in Latin. Thus both solutions have clear weaknesses.

5.3.3 The traditional analysis

Let us now return to the construction with a purpose interpretation. Kühner and Stegmann (1912-1914: i.731) say that the *nd*-form here expresses purpose or intention and that it is a ‘predicative’ gerundive attached to the accusative object of certain verbs (or their subjects in the passive).

It is not clear to me if they mean to say that the *nd*-form is licensed syntactically by specific verbs. If we assume that they intend for the link with certain matrix to be derived from some non-syntactic property, the key claim is that the *nd*-form is ‘predicative’. I interpret ‘predicative’ to mean that the *nd*-form is adjoined to the matrix clause.

This fits well with how participles adjoined to clauses can behave. In (63), for example, the present (active) participle *pugnans* ‘fighting’ agrees in gender, number and case with the matrix subject *ipse* and the subject of the participle is referentially identified with *ipse*.

(63) *ipse* *pro castris fortissime pugnans* *occiditur.*
 he.INTENS.NOM.SG.M before camp.ABL bravely fight.PAP.NOM.SG.M kill.PASS.3SG
 ‘He is himself killed before the camp fighting bravely.’ (CAES. *Gal.* 4.37.1)

Agreement and referential identification is obligatory, and it is reasonable to derive this from functional control with the participle having the open adjunct function XADJ.

The analogy is not perfect. Adverbial participles have a range of different adverbial interpretations. (63), for example, has a manner or temporal interpretation. These are perhaps not a major obstacles since it could be that it is something about the semantics of the *nd*-form specifically that prevents it from having such a range of interpretations.

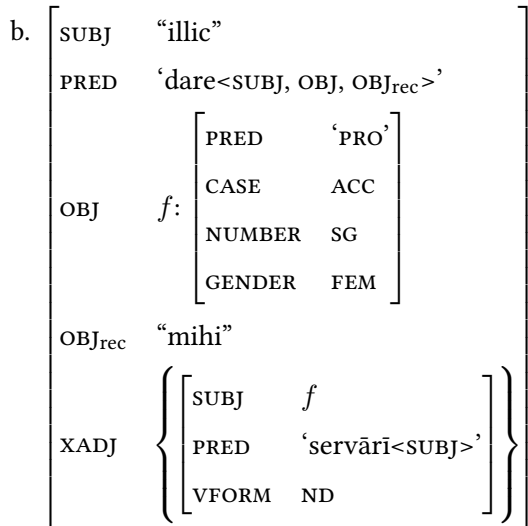
The view of Kühner and Stegmann (1912-1914) is that the *nd*-form has the a-structure of a passive verb. It is therefore its syntactic subject that controls agreement and is identified with the matrix theme argument. The demoted logical subject is obligatorily unrealised in syntax, but presumably still semantically active so that its reference can be inferred in the same way that the logical subject of a canonical passive is inferred when there is no agent phrase.

The f-structure corresponding to (64a) under this analysis is given in (64b). Agreement is here ensured by standard subject-predicate agreement, i.e. lexical specifications on the *nd*-form itself (64c). The function XADJ is assigned in the same manner that grammatical function is assigned to other constituents in S. The only catch is ensuring that the subject of the *nd*-form is identified with

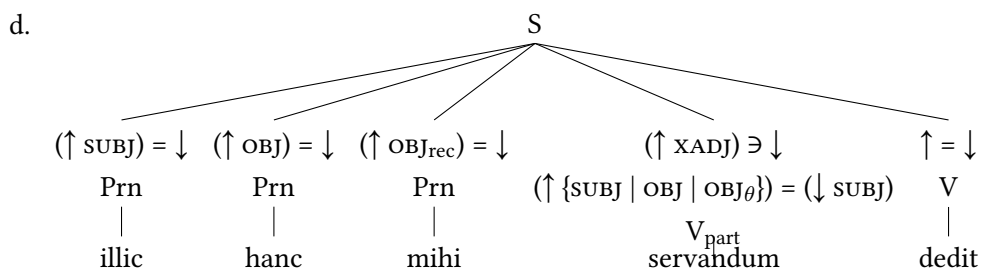
a matrix term function. I assume in (64d) that it is possible to introduce this rule as a c-structure annotation.

- (64) a. *illic hanc mihi servandam dedit.*
 he.NOM that.ACC.SG.F me.DAT keep.ND.ACC.SG.F give.PERF.3SG

‘He gave it to me to keep safe.’ (Pl. As. 676)



- c. *servandam* V (↑ PRED) = ‘servārī<SUBJ>’
 (↑ SUBJ CASE) = ACC
 (↑ SUBJ NUMBER) = SG
 (↑ SUBJ GENDER) = FEM
 (XADJ ↑)



5.3.4 Discussion

As is often the case with purpose clauses, it is not straightforward to determine if we are dealing with an adjunct or an argument. The correlation between a class of matrix predicates and the *nd*-form structure does not necessarily call for an explanation in terms of the *nd*-form being an argument.

Also, there seems to be some empirical evidence for optionality. In the following pair of examples from the same text with very similar main clauses, one has an *nd*-form and the other not, even though what is expressed is virtually the same. It is therefore doubtful that the matrix verb in (65b) entails a purpose argument in any sense, which in turn is likely to mean that the *nd*-form in (65a) is a non-argument.

- (65) a. *ita populus Romanus consuli potius Crasso quam privato*
 so people.NOM Roman.NOM consul.DAT rather Crassus.DAT than private person.DAT

Africano bellum gerendum dedit
 Africanus.DAT war.ACC.SG.N wage.ND.ACC.SG.N give.PERF.3SG

‘So the Roman people gave the waging of the war to the consul Crassus rather than the private person Africanus.’ (Cic. *Phil.* 11.18)

- b. nam Sertorianum bellum a senatu privato
 for Sertorian.NOM.SG.N war.NOM.SG.N by senate private person.DAT
 datum est...
 give.PPP.NOM.SG.N AUX.3SG

‘For the war with Sertorius was assigned by the Senate to a private person’ (Cic. *Phil.* 11.18)

Extraction is probably possible too (66),¹ but as we have seen this is not necessarily a problem for an adjunct analysis.

- (66) scyphos [quos utendos_i dedi Philodamo_i],
 cups.ACC.PL.M those.ACC.PL.M use.ND.ACC.PL.M give.PERF.1SG Philodamus.DAT
 rettulit=ne?
 give back.PERF.3SG=Q

‘The cups that I gave Philodamus to use, did he return them?’ (Pl. *As.* 444)

A more complex question prompted by the traditional analysis concerns the *a*-structure of the *nd*-form. As mentioned above, Miller (2000) has suggested that the *nd*-form has active *a*-structure and an obligatory PRO subject. I will call this the *PRO-analysis* and the traditional view the *passive analysis*.

Assimilating this under the theoretical assumptions made here, the choice is between the structures that have been schematically outlined in (67). (67a) shows the passive analysis with functional control of the logical subject of the *nd*-form. (67b) shows the *PRO-analysis* with a structure parallel to English OPCs, with obligatory control of a *UDF*, which in turn is identified with the logical object of the *nd*-form.²

- (67) a. illic hanc_j mihi_i [$\Delta_{j,\text{SUBJ}}$ servandam_i] dedit.
 b. illic hanc_j mihi_i [$\Delta_{j,\text{UDF}}$ [$\Delta_{i,\text{SUBJ}}$ $\text{---}_{j,\text{OBJ}}$ servandam]] dedit.

An argument in favour of the *PRO-analysis* is that, if we look at *nd*-forms not just in purpose constructions but in general, they are hardly ever attested with *ab*-phrases, and even when found with an *ab*-phrase, it is not clear that this phrase is an agent phrase. This is unlike PPPs, which do support agent phrases.³ But it is not a defining property of passives that they take agent phrases so this is not a strong argument against the passive analysis.

¹ An idiomatic translation of this example would be ‘the cups I lent to Philodamus’. I have chosen the more literal interpretation because it fits well with the patterns of coreference observed in purposive constructions, but the example can also be given the causative reading (section 5.3.5) ‘the cups I let Philodamus use’, and it is the causative nuance that might lead us to translate *utendos* as ‘borrow’.

² A third possibility is to omit the *UDF* and have obligatory control target the logical object directly. This is theoretically less desirable since it means that control would have to be able to target syntactic objects.

³ It is thus not directly relevant that the perfect (passive) participle too is found in constructions, like the ablative absolute, where it does not have an agent phrase. The point here is that the lack of an agent phrase applies to *nd*-forms across constructions.

A fairly strong argument in favour of the passive analysis is agreement. Subject-predicate agreement is an indicator of subjecthood for finite verbs, and it holds also for analytic infinitives. For participles the general case is potentially more complex because participles can have adverbial and adnominal functions, but at least in adverbial function there is good reason to think that subject-predicate agreement is operative.

The burden of evidence is therefore on those who suggest that the *nd*-form has an obligatory null subject because this would lead to object-verb agreement, which is otherwise unmotivated. What type of evidence can practically be used to show that the PRO-analysis is superior?

Let us start with binding. If the PRO-analysis is correct, a local reflexive should be able to appear as the object of the *nd*-form and be bound by the PRO subject of the *nd*-form. We should observe this as coreference between the reflexive and the matrix theme argument because the PRO subject is always identified with the matrix theme argument.

Under the passive analysis, assuming that my conclusions about local binding in chapter 4 are correct, the antecedent of a local reflexive as the syntactic subject of the *nd*-form should be the subject of the matrix clause. Since the subject of the matrix clause is not necessarily the matrix theme, there is an observable difference in coreference patterns. Unfortunately, reflexives are not found in the data that I have collected for this type of *nd*-form construction.

Another type of evidence that could be used is control. Under the theoretical assumptions I have adopted a demoted subject is unrepresented in syntax and control is a syntactic mechanism. If it could therefore be shown that the logical subject of the *nd*-form is controlled, it would make the passive analysis impossible. If there is no control, coreference between the logical subject and some matrix argument would have to be inferred outside syntax. The problem with this type of argument is that if there is control of the logical subject, it will be non-obligatory control, and we do not have diagnostics for distinguishing between non-obligatory control of a PRO subject and resolution of the reference of a demoted logical subject.

As the burden of evidence falls on proponents of the PRO-analysis, the conclusion here must be that the passive analysis should stand.

5.3.5 Causatives

In both EL and CL there are sentences with the same surface form as the constructions discussed so far but without the purposive interpretation. (68) shows this. The matrix verb is a form of *dare* ‘give’, which we have seen as the matrix verb in purposive constructions. There is an accusative NP that could be its theme argument *inauris* ‘earrings’ and it is followed by an *nd*-form that agrees, as expected, with the theme NP. The dative NP is not a matrix argument here, but this is not crucial.

(68) ... *inauris* *da* *mihi* *faciendas*_{arb} ...
 earring.ACC.PL.F give.IMP me.DAT make.ND.ACC.PL.F

‘have earrings made for me’ (PL. *Men.* 541)

The difference is that the matrix verb does not express transfer of possession, as it usually does. The earrings in questions have not yet been made and it therefore cannot be that the *nd*-form expresses the action that the earrings should undergo after the completion of the matrix action. A purposive analysis is therefore ruled out.

This instead shows that the matrix verb is causative. While causative readings are obligatory for some matrix predicates, e.g. *curāre* ‘ensure’, for the verb *dare* it is not. (69) illustrates how there can be ambiguity between purposive and causative readings.

- (69) ... et confirmandorum militum causa diripiendas_i
 and encourage.ND.GEN.PL.M soldier.GEN.PL.M cause.ABL plunder.ND.ACC.PL.F
 his_i civitates dedit
 them.DAT.PL.M town.ACC.PL.F gave.PERF.3SG

‘and in order to encourage his soldiers he gave them the town to plunder/let them plunder the town.’ (CAES. *Civ.* 3.31)

The example also illustrates that there are different causal relations involved. In the ambiguous example in (69), the plundering of the city is a reward for the soldiers. It is probably the intention of the matrix agent that the handing over of the town to the soldiers should lead to the town being plundered, but under the causative reading the matrix verb only expresses that the matrix agent permits the plundering to take place. This contrasts with examples with an obligatory causative reading, like (68), where the element of permission is absent.

Similar distinctions are known from causatives in other languages. I will distinguish three types of relation between the causer and the causee. A ‘neutral’ relationship, as in the English example in (70a), a coercive type in which the causer influences the causee in a coercive way (70b), and the permissive type in which the causer simply allows the causee to proceed (70c).

- (70) a. He had me build the bridge. (neutral)
 b. He made me build the bridge. (coercive)
 c. He let me build the bridge. (permissive)

It is a pattern in my data that two-place matrix verbs without a dative NP have an unambiguous neutral causative reading. Three-place matrix verbs can be unambiguous causative verbs too, but often there is ambiguity and then it is only a permissive causative reading that is possible. The coercive type is not found.

Focussing on unambiguous causatives, like the examples in (71), we see that the accusative NP is not an argument of the matrix verb. In (71a) only the causer and the caused events are matrix arguments. In (71b), the second causative structure also has a dative NP corresponding to the causee,¹ which is relatively rare in unambiguous causatives in my data.

- (71) a. ... ibi nunc statuem volt dare auream / solidam
 there now statue.ACC.SG.F want.3SG give.INF golden.ACC.SG.F solid.ACC.SG.F
 faciundam_{arb} ex auro Philippo ...
 make.ND.ACC.SG.F from gold.ABL Philippic.ABL

‘He now wants to have a solid gold statue [of himself] made there from Philippic gold.’ (PL. *Cur.* 439–40)

¹ It is common across languages to find that grammatical function used to mark recipient arguments of underived ditransitives is the grammatical function used to mark the causee in causatives (Baker 1988).

- b. si hercle ego te non elinguendam_{arb} dedero
 if PCL I.NOM you.ACC not tear tongue out of.ND.ACC.SG.F give.FUTPERF.1SG
 usque ab radicibus, impero auctor=que ego sum, ut tu me
 right from roots order.1SG approver=and I.NOM be.1SG COMPL you.NOM me.ACC
 cuivis_i castrandum_i loces.
 anyone you like.DAT castrate.ND.ACC.SG.M place.FUT.2SG

‘If I don’t have your tongue torn out by the very roots, I order and authorise that you have anyone you like castrate me.’ (Pl. *Aul.* 250–1)

One way of explaining this would be to say that the matrix and embedded predicates are composed to form a complex predicate and therefore a monoclausal structure. I will not go into the details of how this might be done and only point out two issues with this. Consider the two sentences below, which are simplified versions of examples given above.

- (72) a. mihi inauris faciendas dat.
 me.DAT earring.ACC.PL.F make.ND.ACC.PL.F give.3SG

‘He is having earrings made for me.’

- b. his me castrandum locat.
 them.DAT I.ACC castrate.ND.ACC.SG.M place.3SG

‘He is having them castrate me.’

One issue is that it would neutralise the difference between the secondary object in (72a), which is a beneficiary argument, and the secondary object in (72b), which is a causee. The correspondences between complex predicates, grammatical functions and semantic roles are summarised below:

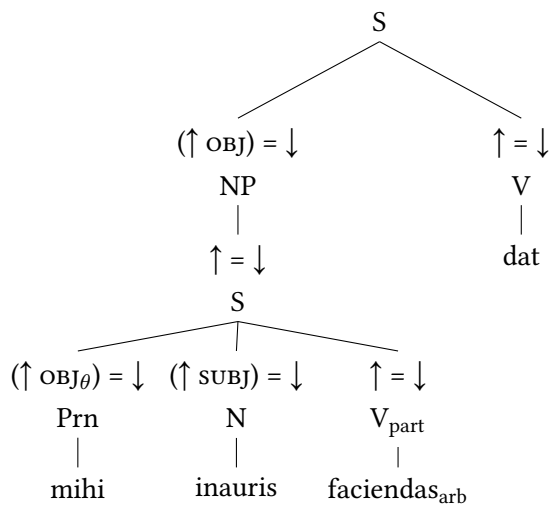
(73)		Causer	Causee	Patient	Beneficiary
	dat-faciendas<SUBJ, OBJ, OBJ _θ >	SUBJ	∅	OBJ	OBJ _θ
	locat-castrandum<SUBJ, OBJ, OBJ _θ >	SUBJ	OBJ _θ	OBJ	∅

The type of ambiguity in question was probably real. The question is whether it should be reflected in the mapping from θ -structure to *a*-structure or if it is better explained as a *c*-structural ambiguity.

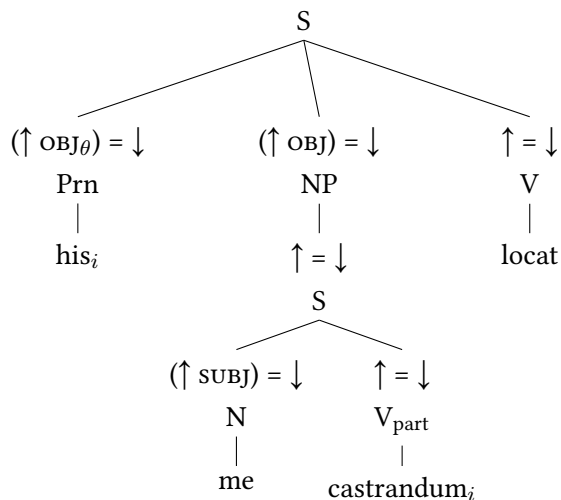
A more worrying issue with the monoclausal analysis is that it entails agreement between the *nd*-form and the object of the complex predicate. As explained above, this is not an ideal situation.

A biclausal structure eliminates both issues. My proposal is outlined in the *c*-structures in (74). The key point is that the patient NP and the *nd*-form form a constituent that has the function OBJ and is subcategorised for by the causative matrix verb. The patient NP is the subject of the *nd*-form and agreement between them follows by subject-predicate agreement.

(74) a.



b.



I will return to the motivation for and licensing of the constituent consisting of a subject NP and an *nd*-form predicate in section 5.4. Note that my simplified examples obscure the fact that NP and *nd*-form are not always string adjacent, and that extraction is probably possible from such constituents as indicated by (75).

(75) naves=que triremes duas, quas Brundisii faciendas
 ships.ACC=and triremes.ACC two.ACC which.ACC.PL.F Brundisium.GEN make.ND.ACC.PL.F
 curaverat ...
 had seen to.3SG

‘...and that two triremes which he had had built at Brundisium...’ (CAES. *Civ.* 3.24)

This may or may not be a problem for this analysis depending on how discontinuities are constrained.

5.4 *Ad*-clauses

The construction discussed in the previous section plays a role in Latin syntax similar to that of OPCs in English. In this section we will look at a type of purpose clause consisting of the preposition *ad* followed by an accusative *nd*-form. It has a wide distributional range and is therefore not so easily identifiable with any particular English purpose clause.

Leaving aside a subset of such clauses that are very likely to be arguments and also lack a clear purposive interpretation, I will claim that the remainder are adjoined clauses. The logical subject often has the same reference as the matrix theme and the clause is then interpreted as a purpose clause. But the reference may also be that of the matrix agent, and the interpretation is then that of a clause expressing the intention of the matrix agent. This flexibility in interpretation fits well with the logical subject being a demoted subject and therefore not in any control relation with the matrix clause.

5.4.1 The data

The structure consists of the preposition *ad*, an accusative *nd*-form and very often an accusative NP. The preposition *ad* assigns accusative case to its complement, so the case of the *nd*-form and the NP is in one way or another the result of this. The NP is interpreted as the logical object of the *nd*-form, as (76) shows, and there is agreement between it and the *nd*-form in gender and number.

- (76) ... atque eum_i in Thurinum [ad sollicitandos_i pastores] praemisit.
 and him.ACC to Thurine to raise.ND.ACC.PL.M farmer.ACC.PL.M send ahead.PERF.3SG
 ‘and he sent him on ahead to the Thurine district to raise the farmers.’ (CAES. *Civ.* 3.21)

The NP is generally present if the *nd*-form is a predicate with a patient or patient-like argument, and only arguments that would surface as accusative objects in active finite clauses can appear in agreement with the *nd*-form.

If the *nd*-form is a predicate that lacks this type of argument, the *nd*-form appears alone with default agreement features:

- (77) [ad denegandum_i] ut celeri lingua utamini
 to refuse.ND.ACC.SG.N how swift.ABL tongue.ABL use.SUBJ.2PL
 ‘how you use your swift tongue to refuse.’ (PL. *Truc.* 8)

Lack of agreement is probably attested even when the *nd*-form does have a logical object, as in (78), but this is exceptionally rare and the data is textually problematic.¹

- (78) qaedam loca eadem [alia ad serendum_{arb}] idonea
 certain areas same other.PL.N for sow.ND.SG.N suitable.PL.N
 ‘certain places are suitable for planting other [crops] at the same time’ (Var. R. 1.23.6, Kühner and Stegmann (1912-1914: 735))

The rarity of lack of agreement is particularly noteworthy because it is widespread in other structures with *nd*-forms.

In terms of modifiers and other arguments, attestation is scanty, as with other purpose clauses, but adverbial modifiers are possible and the *nd*-form can take non-object arguments with the same morphosyntactic realisation as in a finite clause.

¹ Kühner and Stegmann (1912-1914: 735) list two examples from Varro. Miller (2000: 297–9) discusses their syntax and some other potential examples. In Post-Classical Latin and Late Latin the phenomenon increases in frequency.

- (79) a. *nimis doctus ille_i est [ad male faciendum_i].*
 very expert.NOM he.NOM be.3SG to badly do.ND.ACC.SG.N
 ‘He’s very experienced at acting mischievously.’ (PL. *Epid.* 378)
- b. *[[ad eorum voluntatem mihi conciliandam_i] maximo te_i mihi_j*
 to their will.ACC.SG.F me.DAT win over.ACC.SG.F great.DAT you.ACC me.DAT
usui fore] video.
 use.DAT be.FUT.INF see.1SG
 ‘I think you will be of great use to me in winning them over to me.’ (CIC. *Att.* 1.2.2)

Let us now turn to representative examples of attested matrix predicates. In a substantial portion of my material the matrix verb is a motion verb (80) or, more generally, one with a theme argument (81). The pattern of coreference is the same as in PCs in English, and it is understood that the matrix theme argument and the logical subject of the *nd*-form have the same reference.

- (80) a. *...plerasque naves_i in Italiam remittit [ad reliquos*
 most.ACC.PL.F ship.ACC.PL.F in Italy.ACC send back.3SG to remaining.ACC.PL.M
milites equites=que transportandos_i] ...
 soldier.ACC.PL.M knight.ACC.PL.M=and transport.ND.ACC.PL.M
 ‘...[Antonius] sends back most of his ships to Italy to transport the rest of his infantry and cavalry, ...’ (CAES. *Civ.* 3.29)
- b. *[ad hos opprimendos_i] ... Afranius_i de nocte proficiscitur...*
 to them.ACC.PL.M crush.ND.ACC.PL.M Afranius.NOM in night.ABL set out.3SG
 ‘Afranius sets out at night to crush them’ (CAES. *Civ.* 1.51)
- (81) *is ... indignari coepit [regem_i [ad causam dicendam_i*
 he.NOM be indignant.INF begin.PERF.3SG king.ACC to cause.ACC.SG.F plead.ND.ACC.SG.F
evocari] ...
 summon.PASS.INF
 ‘He began to express his indignation that the king should be summoned to plead his cause...’ (CAES. *Civ.* 3.108)

This type of data is particularly characteristic of CL but hardly found in EL. It seems reasonable to understand this as an effect of the use of *um*-supine-clauses, which play a very similar role in functional terms, and are correspondingly more frequent in EL than in CL.

In both EL and CL, however, we find matrix predicates without a theme argument, or matrix predicates with a theme argument but coreference between the logical subject and a non-theme matrix argument. (82) exemplifies the latter. It is plausible to say here that the matrix object is a theme argument, yet the logical subject of the *nd*-form is coreferent with the matrix agent because it is not the laws themselves that provoke excitement. Instead the coreference here is determined by the intentionality of the matrix agent. This, in other words, has more in common with English IOCs than SPCs.

- (82) *... [ad hominum excitanda_i studia] ... duas*
 to men.GEN excite.ND.ACC.PL.N enthusiasm.ACC.PL.N two.ACC.PL.F
promulgavit_i ...
 promulgate.PERF.3SG

‘he promulgated two laws to kindle general enthusiasm’ (CAES. *Civ.* 3.21)

For a third type of data the relation to purposive constructions is harder to justify, and indeed it seems justified to think of these structures as arguments of the matrix predicate. We find this with a range of verbs and adjectives. Characteristic meanings are ‘useful (for)’ (83a), ‘suitable (for)’ (83b), ‘free (to)’ (83d), ‘hindered (from)’ (83d) and ‘ready (to)’ (83e).¹

- (83) a. *onerarias naves ... [ad reliquas armandas;
transport ship.ACC.PL.F to remaining.ACC.PL.F arm.ND.ACC.PL.F
reficiendas_i=que] utuntur_i.
repair.ND.ACC.PL.F=and use.3PL*
‘they use the transport ships [that are not properly fitted] to arm and repair the rest.’
(CAES. *Civ.* 1.36)
- b. *... quod illa aetas_i magis [ad haec utenda_i] idonea=st ...
because this age more to this.ACC.PL.N enjoy.ND.ACC.PL.N suitable.NOM=be.3SG*
‘because this age is more suitable for enjoying them’ (TER. *Hau.* 133)
- c. *... ne [vacuom esse me_i nunc [ad narrandum_i]] credas.
COMPL.NEG free.ACC be.INF me.ACC now to tell.ND.ACC.SG.N believe.SUBJ.2SG*
‘so you shouldn’t think I’m free now to explain.’ (TER. *An.* 705–6)
- d. *quibus_i [ad sequendum_i] impeditis ...
who.ABL.PL.M to follow.ND.ACC hinder.PPP.ABL.PL.M*
‘Since they were hindered from pursuing...’ (CAES. *Civ.* 3.76)
- e. *Scipio_i [ad sequendum_i] paratus ...
Scipio.NOM to follow.ND.ACC.SG.N ready.NOM.SG.M*
‘Scipio was ready to pursue’ (CAES. *Civ.* 3.38.1)

Similarly, there are nouns that regularly feature with such clauses. Typical examples are ‘time (for)’ (84a) and ‘opportunity to’ (84b).

- (84) a. *[sex dies [ad eam rem conficiendam_i]] spatii
six days to this.ACC.SG.F business.ACC.SG.F execute.ND.ACC.SG.F period.GEN
postulant_i
demand.3PL*
‘They demand a period of six days to execute this business’ (CAES. *Civ.* 1.3)
- b. *... aliquam Caesar_i [ad insequendum_i] facultatem
some.ACC.SG.F Caesar.NOM to pursue.ND.ACC.SG.N opportunity.ACC.SG.F
haberet ...
have.IMPF.3SG*
‘Caesar might have some opportunity to pursue’ (CAES. *Civ.* 3.29.1)

¹ There is a clear parallel here with the ‘eager-class’ of adjectives in English, most of which take infinitival complements. The semantic field of ‘usefulness’ and ‘availability’ also overlaps with matrix predicates in purposive constructions. Note, for example, how Bach (1982: 38) includes in his list of matrix predicates for English PCs *use* and *be available* (see section 5.1.2.1).

These are not unusual, but the more frequent form of attestation is with a genitive *nd*-form. For reasons of space, I am going to focus on the structures that are reasonably assimilated under purposive constructions.

Finally, note the example in (85) with a reflexive as the logical object.

- (85) *his_i ego duobus generibus facultatem [ad se_i aere alieno
 them.DAT I.NOM two.ABL ways.ABL opportunity.ACC to REFL.ACC debt.ABL
 liberandas_i aut levandas<sub>i}] dedi
 free.ND.ACC.PL.F or lighten.ND.ACC.PL.F give.PERF.1SG</sub>*

‘I have given them the opportunity to free themselves from debt or lighten it in two ways.’

(Cic. *Att.* 6.2.4)

Since this sentence is not found in a logophoric domain, there are two explanations for why the reflexive is bound by a non-subject. One explanation is that my conclusion that local binding is subject-oriented is wrong. The other explanation is that there is a null subject in the *nd*-form-clause. Since I only have one example of this, I hesitate to draw any conclusion from it.

5.4.2 Discussion

Under the view that the *nd*-form in this structure is a passive participle, the logical object, when present, is the syntactic subject of the participle. Since the structure is headed by a preposition and has morphology associated with nominal categories, it would not be unreasonable to say that the logical object and the *nd*-form form an NP. Moreover, since both elements of the NP have accusative case and attributive participles agree with a nominal head, it would also not be unreasonable to take the noun to be the head and the participle to be its attribute.

A different analysis would then be needed in case the logical object is absent. In that case there would be no head for the *nd*-form to modify and it is not likely that there is a null element occupying the position of the head. Instead we are forced to accept that the *nd*-form is the head. The conventional view is essentially this, that the *nd*-form as head is an active verbal noun, the gerund, while as attribute it a participle or deverbal adjective, the gerundive. In other words, headedness is a function of whether a logical object is present or not, and by extension the a-structure of the *nd*-form is a function of its headedness.

There is, as far as I can tell, no evidence to suggest that there is such a difference in a-structure, nor is there independent evidence for a difference in headedness. Even if this is the correct way to analyse the structure, there is a problem when the *nd*-form is attributive and the logical object is a proper name (86a) or a pronoun (86b). If the *nd*-form is an attribute in the same sense that adjectives, restrictive relative clauses, other attributive participles or infinitival relative clauses are, it would entail restricting the reference of the proper noun or the pronoun, which by all accounts should be impossible.

- (86) a. *profectum item Domitium ad occupandam Massiliam
 set out.PPP.ACC.SG.M also Domitius.ACC to occupy.ACC.SG.F Massilia.ACC.SG.F
 navibus actuariis septem ...
 ship.ABL.PL merchant.ABL.PL seven*

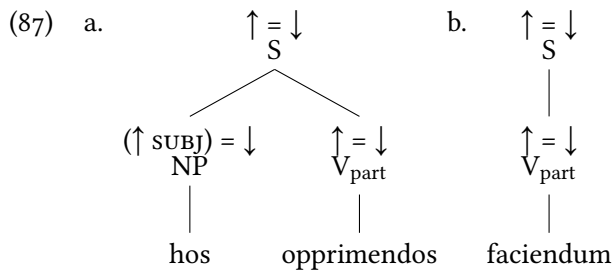
‘Also that Domitius had set out to occupy Massilia with seven merchant ships’ (CAES. Civ. 1.34.1)

- b. sed cum ego faciam omnia quae facere possim ad me
 but since I.NOM do.SUBJ.1SG all.ACC REL.ACC do.INF be able.SUBJ.1SG to me.ACC
 adiuvandum ...
 help.ND.ACC.SG.M

‘But since I am doing everything I can to help myself...’ (CIC. Att. 12.38A.22)

Even if restriction is not automatically involved, it is not obvious that pronouns allow nominal modifiers in c-structure. Clearly, then, for the attributive viewpoint to be correct, the relation between head and attribute is unlike other head-attribute relations in both semantic and syntactic terms. If we combine this with the lack of independent evidence for the difference in headedness and a-structure, this point of view is beginning to look quite unlikely.

The facts of agreement are compatible with the NP and the *nd*-form being subject and predicative. An alternative analysis is therefore to say that the *nd*-form is the head and the NP its optional subject. We thereby dispense with the difference in headedness (87).



This also dispenses with the motivation for positing a difference in a-structure. The *nd*-form can have a demoted logical subject in both cases. It is tempting to compare this with canonical passives of transitive verbs and subjectless passives of unergative verbs. This is not entirely misguided, but *facere* ‘make’, ‘do’ in (87b) is hardly a characteristic example of a verb that forms subjectless passives. What is characteristic of the *nd*-forms found in structure (87b) is that they are detransitivised in a manner reminiscent of unspecified object deletion.

For a verb to be able to appear in structure (87a) it must have a patient-like argument that would be mapped to an accusative object in a finite clause. This makes (87a) specific to some lexical items. There is no comparable lexical specificity in (87b). Any verb can in theory appear, and several verbs are in fact attested both in (87a) and (87b), while others are found only in (87b).

Yet the full implications are hard to evaluate properly because the distribution of *nd*-forms with and without logical objects is skewed. Purpose clauses generally favour *nd*-forms with a logical object, while *nd*-forms without a logical object are overrepresented in clauses that are arguments of adjectives and nouns. Prototypically the argumental clauses are arguments of adjectives that ascribe a property to their subject. The *nd*-forms therefore tend to express generic actions, e.g. ‘(he is ready) to talk’, ‘(he is good) at eating’. The purposive clauses in contrast express actions that a matrix participant is involved in as consequence of some matrix action, e.g. ‘(he went there) to talk to him’, ‘(he invited him over) to discuss the case’. The former therefore tends to appear with structure (87b) and the latter with (87a), and it could be that this skewed lexical distribution obscures some fact about a difference in a-structure between (87a) and (87b).

Two particularly peculiar examples of adjoined *ad*-clauses are shown in (88). (88a) is identical to examples that I compare to English OPCs, where the *nd*-form obligatorily agrees with a matrix theme argument. Since the missing logical object is understood to be the neuter singular noun *oppidum* ‘town’, the only difference in structure is the presence of *ad*. The only way to accommodate this unusual example in my analysis is to assume detransitivisation of the *nd*-form in the same manner as in (87b). The problem in (88b) is similar; the structure would have been easier to explain if *hae partes* had accusative case and was positioned after the preposition, but presumably this too is a detransitivised use of the *nd*-form verb.

- (88) a. ... [ad diripiendum_i] militibus_i concessit
to plunder.ND.ACC.SG.N soldier.DAT.PL.M gave over.3SG

‘...[he] gave it [= the town] over to the soldiers to plunder.’ (CAES. *Civ.* 3.80)

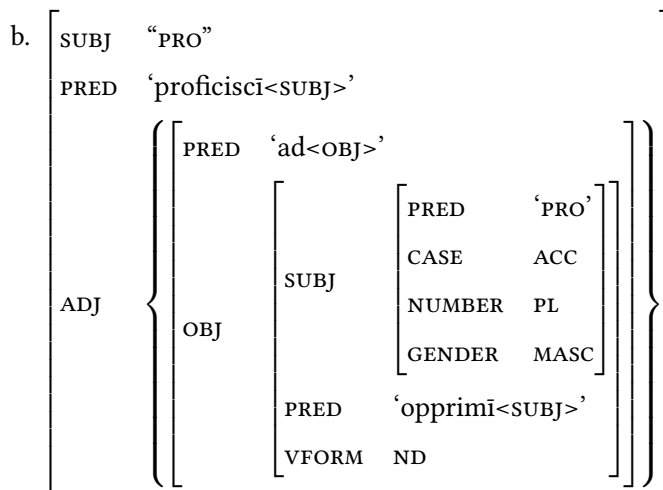
- b. ... legati, quibus_i hae partes [ad defendendum_i]
lieutenants.NOM REL.DAT.PL these.NOM sections.NOM to defend.ND.ACC
obvenerant ...
be assigned.PLUPERF.3PL

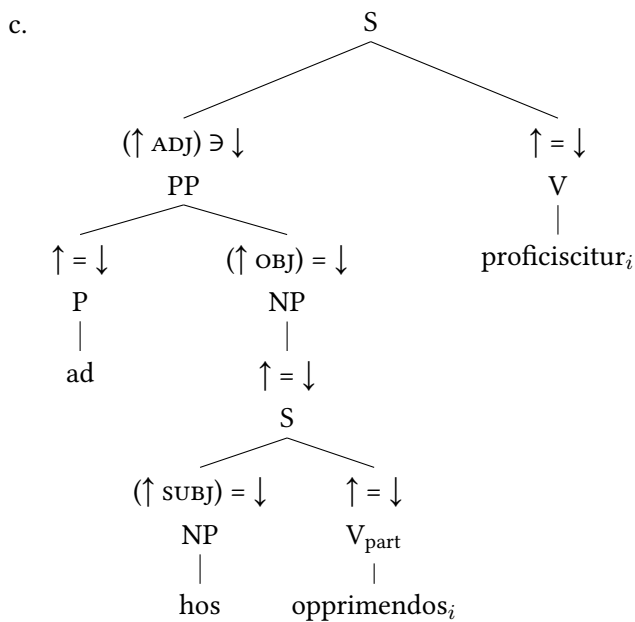
‘the lieutenants who had been assigned these sections to defend’ (CAES. *Gal.* 7.81.6)

In spite of this, I find the solution that makes no distinction in headedness or a-structure to be more economic than one that does since it is not clear what the solution that makes a distinction is able to predict that we would otherwise be unable to account for. For the purposive construction in in (89a), I therefore propose the f-structure in (89b) and the corresponding c-structure in (89c).

- (89) a. [ad hos opprimendos_i] proficiscitur_i.
to them.ACC.PL.M crush.ND.ACC.PL.M set out.3SG

‘He sets out to crush them.’





The remainder of this section discusses some further details and some of the challenges it poses.

Subject-predicate agreement is ensured in the same way as for finite verbs and infinitives by having the lexical entry of the *nd*-form, shown in (90), specify the subject's number and gender. I also include agreement in case. I do this because I assume that the *nd*-form agrees with its subject, like participles do, and that subject-predicate agreement is a mechanism that works the same way regardless of the structure. In adverbial participial clauses, the participle will agree in case, number and gender with the controller of its subject, so case agreement should be part of the lexical specification of the *nd*-form too.

- (90) *opprimendos* V_{part} (\uparrow PRED) = 'opprimī<SUBJ>'
 (\uparrow SUBJ CASE) = ACC
 (\uparrow SUBJ NUMBER) = PL
 (\uparrow SUBJ GENDER) = MASC

Accusative case assignment by the preposition *ad* is less straightforward. Since V_{part} is the head of the structure, assignment of accusative case by *ad* means that it is the f-structure corresponding to V_{part} that will get a CASE attribute, not the NP's f-structure. Ensuring identification of CASE and the subject's CASE requires some work-around. My solution is simple but has no obvious empirical support: The lexical specification of the *nd*-form includes a constructive-case specification so that the *nd*-form can have the function OBJ.

- (91) *opprimendos* V_{part} (OBJ \uparrow)

With this specification the assumptions made here about the category S and constructive case are sufficient to license an S constituent headed by the *nd*-form. This solution cannot be relied on for *nd*-form constituents beyond the purposive structures discussed here, because my assumptions about constructive case are in conflict with subjects having non-nominative and non-accusative case. This probably shows that constructive case is not the right solution. One way of addressing this (apart from abandoning constructive case) would be to assume that the subject-predicate constituent is part configurational and that NPs are only optionally equipped to construct their

own grammatical function. A rule like (92) (along with a version with the order of NP and V_{part} reversed) could achieve this by ensuring that the NP is always the subject of the *nd*-form.

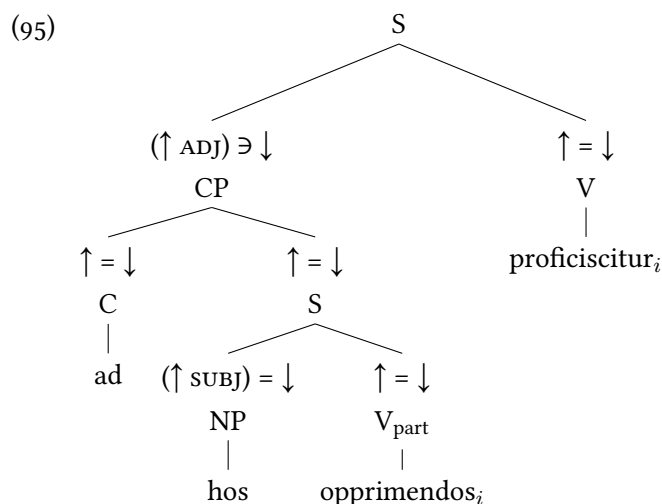
$$(92) \quad S \rightarrow \begin{array}{cccc} X^* & (\text{NP}) & V_{\text{part}} & X^* \\ (\uparrow (\text{GF})) = \downarrow & (\uparrow \text{SUBJ}) = \downarrow & \uparrow = \downarrow & (\uparrow (\text{GF})) = \downarrow \end{array}$$

Also needed is a rule to allow the S constituent to distribute like an NP and be the object of the preposition. Such a rule is given in (93).

$$(93) \quad \text{NP} \rightarrow \begin{array}{c} S \\ \uparrow = \downarrow \end{array}$$

At this juncture it is reasonable to ask whether *ad* is a preposition or a complementiser. It clearly does not have semantic content. Rather than the specification in (94a), we could posit the specification in (94b) so that *ad* heads a CP with a clause as its complement (94c).

$$(94) \quad \begin{array}{ll} \text{a. } ad & P \quad (\uparrow \text{PRED}) = \text{'ad<OBJ>'} \\ & (\text{ADJ} \in \uparrow) \\ \text{b. } ad & C \quad (\text{ADJ} \in \uparrow) \\ & (\uparrow \text{VFORM}) = {}_c \text{ND} \end{array}$$



Apart from the lack of semantic content, there is little evidence to suggest that this is correct. *Ad* is clearly a case assigner, just like other prepositions assign case in other *nd*-form constructions. Lack of semantic content is also not unique to *ad* when it heads *ad*-clauses. The primary function of *ad* is to encode oblique arguments. Some arguments are goals or recipients but others are not so clearly allative. Since we need to account for such cases, it makes sense to reuse the same solution for *ad*-clauses. That speaks against making *ad* a member of C.

The ideal type of evidence to support this point would be coordination of an NP and an *nd*-form in a PP headed by *ad*. Coordination of NPs and *nd*-forms is found in other types of *nd*-form construction, and it is probably an accident that this is not found with *ad* in my data.

We also do not find other properties that we might expect of CPs such as fronting of *wh*-words. Other word order evidence is compatible with both a CP and PP view. Both phrases prevent discontinuity but have at least one position for fronting of material. The only notable aspect about the word order is that fronting, as in (96), is uncommon.

- (96) ... atque [advortendum ad animum] adest benignitas.
 and direct.ND.ACC.SG.M to mind.ACC.SG.M be present.3SG kindness.NOM
 ‘and [if you] have the kindness to pay attention.’ (PL. *Mer.* 15)

The daughters of the S constituent otherwise show all orders, as we would expect: initial in (97a), V final in (97b) and V medial with a discontinuous NP in (97c).

- (97) a. tantum [ad narrandum argumentum] adest benignitas
 so much to narrate.ND.ACC.SG.N plot.ACC.SG.N be present.3SG kindness.NOM
 ‘so benevolent am I when it comes to telling you the summary’ (PL. *Men.* 16, tr. de Melo (2011-2012: ii.429f))
- b. [ad aquam praebendam_i] commodum adveni_i domum ...
 to water.ACC.SG.F offer.ND.ACC.SG.F just in time arrive.PERF.1SG home
 ‘I have come home just in time to fetch water’ (PL. *Am.* 669)
- c. ... ipse cum equitatu antecedit [ad Castra exploranda
 he.NOM with cavalry go on ahead.3SG to camp.ACC.PL.N explore.ND.ACC.PL.N
 Cornelia] ...
 Cornelian.ACC.PL.N
 ‘he goes on in front with his cavalry to explore the Cornelian camp’ (CAES. *Civ.* 2.24)

Another trait shared with PPs is that the clitic *-que* attaches not to the preposition *ad* but to the next word in the string. This is the pattern in other PPs too where clitic attachment to *ad* is only occasionally attested.

- (98) ... ut cum Lentulus_i consul [ad aperiendum_i aerarium]
 COMPL when Lentulus.NOM consul.NOM to open.ND.ACC.SG.N treasury.ACC.SG.N
 venisset [ad pecuniam=que Pompeio ex senatus consulto
 came.3SG to money.ACC.SG.F=and Pompeius.DAT from decree of the senate.ABL
 proferendam_i]...
 bring out.ND.ACC.SG.F
 ‘...that when the consul Lentulus had come to open the treasury in order to fetch money for Pompeius in accordance with a decree of the senate...’ (CAES. *Civ.* 1.14)

In sum the evidence for a non-prepositional analysis of *ad* is too weak, and we must conclude that the *nd*-form and logical object forms a constituent that is nominalised as an NP.

5.5 Conclusion

The three types of purpose clause discussed in this section have morphological and distributional properties associated with NPs. The case for a treating them as clausal heads is still strong because they are inflectional forms derived from verbal stems, have syntactic subjects and take verbal arguments and modifiers.

In c-structural terms, however, it is clear that the *nd*-form belongs to structures that are NPs. Further work on other participles in the ‘dominant construction’ (or *ab urbe condita* construction), which has many of the same c-structural and semantic properties, will enable us to say more about

the categorial status of the *nd*-form. But as a passivised verb form, its behaviour is quite unlike what one would expect of the head of a purpose clause compared to what we find in English. That there are parallels between the languages in terms of matrix predicates and the situations that are suitable for purpose clauses to appear in, is perhaps not surprising, but that *nd*-forms and English infinitives should pattern in a comparable way with respect to coreference is not obvious.

One can draw two types of conclusion from this depending on one's theoretical perspective. If one adheres to the idea that the demoted subject in a passive is represented in syntax, the Latin evidence is another data point that confirms the plausibility of this view. If, on the other hand, the theoretical stance is that the demoted subject is not represented in syntax – as is common in LFG and other lexicalist work – the Latin data shows that the referential properties of the logical subject are determined in the same way that the reference of the null pronoun in non-obligatory anaphoric control is determined.

Finally, we should keep in mind that the PRO-analysis of the *nd*-form is not conclusively ruled out by any of this. The PRO-analysis analysis would, in practical terms, make clauses headed by *nd*-forms syntactically equivalent to English purpose clauses. Two contradictions have to be resolved for this analysis to be convincing. First, one would need to explain why this particular construction would show object agreement. Second, one must be able to explain how this relates to the 'dominant construction', which presumably does not show object agreement.

A possible way of doing so would be to show that there are examples of the *nd*-form in purpose clauses without object agreement, because this could indicate that object agreement is a historical remnant and that the logical object in fact is the syntactic object. This type of data is not found in Latin from the time period I have looked at, which is odd, since agreement shows much variation in other constructions with the *nd*-form. Lack of agreement is, however, found later, which might mean that the structure did change, but only at a later point in time.

6 Conclusions

Theories that seek to explain the external and internal syntax of non-finite clauses have been and still are one of the key research areas in syntax. Some lasting problems in Latin syntax also involve non-finite clauses, so combining the two is likely to yield interesting results.

In this study I hope to have shown the importance of two strategies for identifying sentence-internal participants across clausal boundaries. Lexically licensed control in infinitival complementation, structurally licensed control in purpose clauses and logophoric reflexives in reported speech all serve to link participants in one clause to participants in a subordinate clause.

In control there is usually a clear sense in which the subordinate clause is temporally situated after, at the same time as or within the matrix clause, and the participant that is linked by control participates in both situations usually after having undergone a change of state in the matrix situation.

Logophoric reflexives, in contrast, link together participants in clauses that are usually not related in this way. A logophoric reflexive is therefore rarely found in the same sentence as control. One might speculate that there is some deeper, underlying complementarity between control and logophoricity, but this seems to me to be misguided. Logophoric reflexives are part of the evidential system of the language, while control is a clause-linking strategy that links together semantically dependent situations.

The key result in this study is that a lexicalist approach largely explains the distribution of both phenomena in Latin. OC in infinitival complementation is lexically conditioned by certain matrix verbs that require the embedded subject to be identified with one of its arguments. Logophoric reflexives, unlike locally bound reflexives, require a lexically designated logocentre as antecedent.

Another key result in this study is that the AcI and purpose clauses headed by *nd*-forms, both structures that have nominal properties, are clausal structures with surprising properties. The AcI licenses its own subject and assigns case to it, and in fact has more prototypically finite properties than subjunctive clauses do. *Nd*-forms head subject-predicate structures and can take verbal arguments and modifiers. Both clause types are, if one assumes an English point of view, atypical or unexpected realisations of content clauses and purpose clauses, respectively.

Exploring the wider theoretical consequences of this for control theory and for the notion of ‘finiteness’ has been beyond the scope of this work, but I hope that future work will be able to build on results such as these.

Bibliography

- Aalto, Pentti (1949). *Untersuchungen über das lateinische Gerundium und Gerundivum*. Helsinki: Suomalaisen Tiedeakatemia.
- Ackerman, Farrell and John C. Moore (2001). *Proto-properties and Argument Encoding: A Correspondence Theory of Argument Selection*. Stanford: CSLI Publications.
- Adams, J. N. (1976). 'A typological approach to Latin word order'. *Indogermanische Forschungen* 81, 70–99.
- . (1977). 'A type of hyperbaton in Latin prose'. *Proceedings of the Cambridge Philological Society* 197, 1–16.
- Agbayani, Brian, Chris Golston and Dasha Henderer (2011). 'Prosodic Movement'. In *Proceedings of the 28th West Coast Conference on Formal Linguistics*. Ed. by Mary Byram Washburn et al. Somerville, Massachusetts: Cascadilla Proceedings Project, 231–239.
- Aikhenvald, Alexandra (2004). *Evidentiality*. Oxford: Oxford University Press.
- Allen, W. Sidney (1964). 'Transitivity and Possession'. *Language* 40 (3), 337–343.
- Alsina, Alex (1996). *The Role of Argument Structure in Grammar*. Stanford: CSLI Publications.
- Andrews, Avery D. (1971). 'Case Agreement of Predicate Modifiers in Ancient Greek'. *Linguistic Inquiry* 2 (2), 127–151.
- . (1982). 'The Representation of Case in Modern Icelandic'. In *The Mental Representation of Grammatical Relations*. Ed. by Joan Bresnan. Cambridge, Massachusetts: MIT Press, 427–503.
- . (1990). 'Case Structures and Control in Modern Icelandic'. In *Syntax and Semantics 24: Modern Icelandic Syntax*. Ed. by Joan Maling and Annie Zaenen. San Diego: Academic Press, 187–234.
- Asudeh, Ash (2004). 'Resumption as Resource Management'. PhD dissertation. Stanford University.
- . (2010). 'Towards a Unified Theory of Resumption'. In *Resumptive Pronouns at the Interfaces*. Ed. by Alain Rouveret. Amsterdam: Benjamins, 121–188.
- . (2012). *The Logic of Pronominal Resumption*. Oxford: Oxford University Press.
- Asudeh, Ash and Mary Dalrymple (2006). 'Binding Theory'. In *Encyclopedia of Language and Linguistics. Volume 2*. Ed. by Keith Brown. 2nd ed. Amsterdam: Elsevier, 23–31.
- Asudeh, Ash, Mary Dalrymple and Ida Toivonen (2008). 'Constructions with Lexical Integrity: Templates as the Lexicon-Syntax Interface'. In *Proceedings of the LFG08 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 68–88.
- Asudeh, Ash and Ida Toivonen (2009). 'Lexical-Functional Grammar'. In *The Oxford Handbook of Linguistic Analysis*. Ed. by Bernd Heine and Heiko Narrog. Oxford: Oxford University Press, 425–458.

- Austin, Peter and Joan Bresnan (1996). 'Non-configurationality in Australian aboriginal languages'. *Natural Language and Linguistic Theory* 14 (2), 215–268.
- Bach, Emmon (1982). 'Purpose clauses and control'. In *The Nature of Syntactic Representation*. Ed. by P. I. Jacobson and G. K. Pullum. Dordrecht: Reidel, 35–57.
- Baker, Mark (1988). *Incorporation: a theory of grammatical function changing*. Chicago: University of Chicago Press.
- Baker, Mark, Kyle Johnson and Ian G. Roberts (1989). 'Passive Arguments Raised'. *Linguistic Inquiry* 20 (2), 219–251.
- Baldi, Philip (1976). 'Remarks on the Latin *R*-form Verbs'. *Zeitschrift für vergleichende Sprachforschung* 90 (1-2), 222–257.
- Baldi, Phillip and Andrea Nuti (2010). 'Possession'. In *New Perspectives on Historical Latin Syntax. Volume 3: Constituent Syntax: Quantification, Numerals, Possession, Anaphora*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 239–387.
- Barron, Julia (2001). 'Perception and Raising Verbs: Synchronic and Diachronic Relationships'. In *Time over Matter: Diachronic Perspectives on Morphosyntax*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 73–103.
- Barsby, John (2001). *Terence*. 2 vols. Cambridge, Massachusetts: Harvard University Press.
- Baxter, D. P. (1999). 'English Goal Infinitives'. PhD dissertation. University of Illinois, Urbana-Champaign.
- Benedicto, Elena (1991). 'Latin long-distance anaphora'. In *Long-distance anaphora*. Ed. by Jan Koster and Eric J. Reuland. Cambridge: Cambridge University Press, 171–184.
- Bennett, Charles E. (1910). *Syntax of Early Latin. Volume I: The verb*. Boston: Allyn and Bacon.
- Berman, Judith (1999). 'Does German Satisfy the Subject Condition?' In *Proceedings of the LFG99 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications.
- Bertocchi, Alessandra (1986). 'Anaphor and Tense in Latin'. In *Papers on Grammar II*. Ed. by Gualtiero Calboli. Bologna: University of Bologna, 63–86.
- . (1989). 'The role of antecedents of Latin anaphors'. In *Subordination and Other Topics in Latin. Proceedings of the Third Colloquium on Latin Linguistics, Bologna, 1-5 April 1985*. Ed. by Gualtiero Calboli. Amsterdam: Benjamins, 441–462.
- Bertocchi, Alessandra and Claudia Casadio (1980). 'Conditions on Anaphora: An Analysis of Reflexive in Latin'. In *Papers on Grammar I*. Ed. by Gualtiero Calboli. Bologna: University of Bologna, 1–46.
- . (1983). 'Anaphoric Relations, Pronouns and Latin Complementation'. In *Latin Linguistics and Linguistic Theory*. Ed. by Harm Pinkster. Amsterdam: Benjamins, 27–39.
- Bhatt, Rajesh (1999). 'Covert Modality in Non-finite Contexts'. PhD dissertation. University of Pennsylvania.
- Blevins, James P. (2006). 'Passives and Impersonals'. In *Encyclopedia of Language and Linguistics*. Ed. by Keith Brown. 2nd ed. 5 vols. Oxford: Elsevier, 236–239.
- Blümel, Wolfgang (1979). 'Zur historischen Morphosyntax der Verbalabstrakta im Lateinischen'. *Glotta* 57 (1-2), 77–125.

- Boeckx, Cedric, Norbert Hornstein and Jairo Nunes (2010). *Control as Movement*. Cambridge: Cambridge University Press.
- Bolkestein, A. Machtelt (1976a). 'A.c.i.- and ut-clauses with verba dicendi in Latin. Part I: A.c.i.-clauses versus OBJECT + COMPLEMENT Patterns'. *Glotta* 54 (3-4), 263-291.
- . (1976b). 'The Relation between Form and Meaning of Latin Subordinate Clauses Governed by verba dicendi [part 1]'. *Mnemosyne, Fourth Series* 29 (2), 155-175.
- . (1976c). 'The Relation between Form and Meaning of Latin Subordinate Clauses Governed by verba dicendi [part 2]'. *Mnemosyne, Fourth Series* 29 (3), 268-300.
- . (1977). 'A.c.i.- and ut-clauses with verba dicendi in Latin. Part II: The Differences between Free and Obligatory ut-Clauses'. *Glotta* 55 (3-4), 231-250.
- . (1979). 'Subject-to-object raising in Latin'. *Lingua* 48 (1), 15-34.
- . (1981). 'Embedded Predications, Displacement and Pseudo-Argument Formation in Latin'. In *Predication and Expression in Functional Grammar*. Ed. by A. Machtelt Bolkestein et al. New York: Academic Press, 63-112.
- . (1983). 'Genitive and dative possessors in Latin'. In *Advances in Functional Grammar*. Ed. by Simon C. Dik. Dordrecht: Foris, 55-91.
- . (1989). 'Expression of embedded predications'. In *Subordination and other topics in Latin*. Ed. by Gualtiero Calboli. Amsterdam: Benjamins, 3-35.
- . (1990). 'Sentential Complements in Functional Grammar: Embedded Predications, Prepositions, Utterances in Latin'. In *Layers and Levels of Representation in Language Theory: A Functional View*. Ed. by Jan Nuyts, A. Machtelt Bolkestein and Co Vet. Amsterdam: Benjamins, 71-100.
- . (1998). 'Word order variation in complex noun phrases in Classical Latin'. In *Estudios de lingüística latina: Actas del IX Coloquio Internacional de Lingüística Latina*. Ed. by Benjamín García-Hernández. Madrid: Ediciones Clásicas, 185-202.
- . (2001). 'Random scrambling? Constraints on discontinuity in Latin noun phrases'. In *De lingua latina novae quaestiones. Actes du Xème Colloque International de Linguistique Latine (Paris-Sèvres, 19-23 avril 1999)*. Ed. by Claude Moussy. Paris: Peeters, 245-258.
- Booij, Geert (1992). 'Morphology, semantics, and argument structure'. In *Thematic Structure: Its Role in Grammar*. Ed. by Iggy M. Roca. Berlin: Foris, 47-64.
- Bouchard, Denis (1984). *On the content of empty categories*. Dordrecht: Foris.
- Brenous, Joseph (1895). *Etude sur les hellenismes dans la syntaxe latine*. Paris: Klincksieck.
- Bresnan, Joan (1982a). 'Control and Complementation'. In *The Mental Representation of Grammatical Relations*. Ed. by Joan Bresnan. Cambridge, Massachusetts: MIT Press, 282-290.
- . (1982b). 'Control and Complementation'. *Linguistic Inquiry* 13 (3), 343-434.
- . (2001). *Lexical-Functional Syntax*. Oxford: Blackwell.
- Bresnan, Joan and Jonni M. Kanerva (1989). 'Locative Inversion in Chicheŵa: A Case Study of Factorization in Grammar'. *Linguistic Inquiry* 20 (1), 1-50.
- Bresnan, Joan and Sam A. Mchombo (1987). 'Topic, Pronoun, and Agreement in Chicheŵa'. *Language* 63 (4), 741-782.
- Bresnan, Joan and Lioba Moshi (1990). 'Object asymmetries in comparative Bantu syntax'. *Linguistic Inquiry* 21 (2), 147-185.

- Bresnan, Joan and Annie Zaenen (1990). 'Deep unaccusativity in LFG'. In *Grammatical Relations: A cross-theoretical perspective*. Ed. by Katarzyna Dziwirek, Patrick Farrell and Errapel Mejias-Bikandi. Stanford: CSLI Publications, 45–57.
- Büring, Daniel (2005). *Binding Theory*. Cambridge: Cambridge University Press.
- Butt, Miriam (2006). *Theories of Case*. Cambridge: Cambridge University Press.
- Butt, Miriam et al. (1999). *A Grammar Writer's Cookbook*. Stanford: CSLI Publications.
- Cabrillana, Concepción (1999). 'On the integration of theme constituents in the predication in Latin'. *Euphrosyne* 27, 417–427.
- Calboli, Gualtiero (1983). 'The development of Latin (Cases and Infinitive)'. In *Latin Linguistics and Linguistic Theory*. Ed. by Harm Pinkster. Amsterdam: Benjamins, 41–57.
- . (2005). 'The accusative as a 'default' case in Latin subordinate clauses'. *Indogermanische Forschungen* 110, 235–266.
- . (2009). 'Latin syntax and Greek'. In *New Perspectives on Historical Latin Syntax. Volume 1: Syntax of the sentence*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 65–193.
- Cann, Ronald (1983). 'Raising in Latin: a phrase structure analysis of the accusative and infinitive'. In *Order, Concord and Constituency*. Ed. by Gerald Gazdar, Ewan Klein and Geoffrey K. Pullum. Dordrecht: Foris, 113–137.
- Cantrall, William R. (1974). *Viewpoint, reflexives, and the nature of noun phrases*. The Hague: Mouton.
- Cecchetto, Carlo and Renato Oniga (2002). 'Consequences of the Analysis of Latin infinitival Clauses for the Theory of Case and Control'. *Lingue e Linguaggio* 1 (1), 151–189.
- . (2004). 'A Challenge to Null Case Theory'. *Linguistic Inquiry* 35 (1), 141–149.
- Cennamo, Michela (1998). 'The Loss of the Voice Dimension Between Late Latin and Early Romance'. In *Historical Linguistics 1987*. Ed. by Monika S. Schmid, Jennifer R. Austin and Dieter Stein. Amsterdam: Benjamins, 77–100.
- Chomsky, Noam (1973). 'Conditions on Transformations'. In *A Festschrift for Morris Halle*. Ed. by S. Anderson and P. Kiparsky. New York: Hold, Rinehart & Winston, 232–286.
- . (1980). 'On Binding'. *Linguistic Inquiry* 11 (1), 1–46.
- . (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- . (1986). *Barriers*. Cambridge, Massachusetts: MIT Press.
- . (1995). *The Minimalist Program*. Cambridge, Massachusetts: MIT Press.
- Chomsky, Noam and Howard Lasnik (1977). 'Filters and Control'. *Linguistic Inquiry* 8 (3), 425–504.
- . (1993). 'The theory of principles and parameters'. In *Syntax: An International Handbook of Contemporary Research*. Ed. by Joachim Jacobs et al. Berlin: Walter de Gruyter.
- Clackson, James and Geoffrey Horrocks (2007). *The Blackwell History of the Latin Language*. Oxford: Blackwell.
- Clark, Eve V. (1978). 'Locational: Existential, Locative, and Possessive Constructions'. In *Universals of Human Language. Volume 4: Syntax*. Ed. by Joseph H. Greenberg. Stanford: Stanford University Press, 85–126.
- Clements, George N. (1975). 'The logophoric pronoun in Ewe: its role in discourse'. *Journal of West African Languages* 10 (2), 141–177.

- Coleman, Robert (1971). 'The Origin and Development of Latin Habeo + Infinitive'. *The Classical Quarterly, New Series* 21 (1), 215–232.
- . (1975). 'Greek influence on Latin syntax'. *Transactions of the Philological Society* 74 (1), 101–156.
- Comrie, Bernard (1977). 'In Defense of Spontaneous Demotion: The Impersonal Passive'. In *Syntax and Semantics 8: Grammatical Relations*. Ed. by Peter Cole and Jerrold M. Sadock. New York: Academic Press, 47–58.
- . (1985). *Tense*. Cambridge: Cambridge University Press.
- Corbett, Greville G. (2006). *Agreement*. Cambridge: Cambridge University Press.
- Culicover, Peter W. and Ray Jackendoff (2005). *Simpler Syntax*. Oxford: Oxford University Press.
- Culy, Christopher (1994). 'Aspects of logophoric marking'. *Linguistics* 32 (6), 1055–1094.
- . (1997). 'Logophoric pronouns and point of view'. *Linguistics* 35 (5), 845–859.
- Cuzzolin, Pierluigi (1991). 'Sulle prime attestazioni del tipo sintattico *dicere quod*'. *Archivio glottologico italiano* 76 (1), 26–78.
- . (1994). *Sull'origine della costruzione dicere quod: aspetti sintattici e semantici*. Florence: La nuova Italia.
- Cuzzolin, Pierluigi and Gerd Haverling (2009). 'Syntax, sociolinguistics, and literary genres'. In *New Perspectives on Historical Latin Syntax. Volume 1: Syntax of the sentence*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 19–64.
- Dalrymple, Mary (1993). *The Syntax of Anaphoric Binding*. Stanford: CSLI Publications.
- . (2001). *Lexical functional grammar*. San Diego, California: Academic Press.
- Dalrymple, Mary, Helge Dyvik and Tracy Holloway King (2004). 'Copular Complements: Closed or Open?' In *Proceedings of the LFG04 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 188–198.
- Dalrymple, Mary and Ronald M. Kaplan (2000). 'Feature Indeterminacy and Feature Resolution'. *Language* 76 (4), 759–798.
- Dalrymple, Mary, Ronald M. Kaplan and Tracy Holloway King (2004). 'Linguistic Generalizations over Descriptions'. In *Proceedings of the LFG04 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 199–208.
- Dalrymple, Mary and Tracy Holloway King (2000). 'Missing-object constructions: lexical and constructional variation'. In *Proceedings of the LFG00 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 1–22.
- Dalrymple, Mary and Irina Nikolaeva (2011). *Objects and information structure*. Cambridge: Cambridge University Press.
- Danckaert, Lieven Jozef Maria (2012). *Latin Embedded Clauses: The left periphery*. Amsterdam: Benjamins.
- de Jong, Jan R. (1983). 'Word order within Latin Noun Phrases'. In *Latin Linguistics and Linguistic Theory*. Ed. by Harm Pinkster. Amsterdam: Benjamins, 131–144.
- . (1989). 'The position of the Latin subject'. In *Subordination and other topics in Latin. Proceedings of the Third Colloquium on Latin Linguistics, Bologna, 1-5 April 1985*. Ed. by Gualtiero Calboli. Amsterdam: Benjamins, 521–540.

- de Melo, Wolfgang David Cirilo (2006). 'If in Doubt, Leave It in: Subject Accusatives in Plautus and Terence'. *Oxford University Working Papers in Linguistics, Philology & Phonetics* 11, 5–20.
- . (2007). *The Early Latin Verb System*. Oxford: Oxford University Press.
- . (2010). 'Possessive Pronouns in Plautus'. In *Colloquial and Literary Latin*. Ed. by E. Dickey and A. Chahous. Cambridge: Cambridge University Press, 71–99.
- . (2011–2012). *Plautus*. 4 vols. Cambridge, Massachusetts: Harvard University Press.
- Deckman, Alice Anna (1920). 'A Study of the Impersonal Passive of the Ventum Est Type'. PhD dissertation. University of Pennsylvania.
- Devine, Andrew M. and Laurence D. Stephens (2006). *Latin word order: structured meaning and information*. Oxford: Oxford University Press.
- Dixon, R. M. W. (2006). 'Complement Clauses and Complementation Strategies in Typological Perspective'. In *Complementation: A Cross-Linguistic Typology*. Ed. by R. M. W. Dixon and Alexandra Y. Aikhenvald. Oxford: Oxford University Press, 1–48.
- . (2009). 'The Semantics of Clause Linking in Typological Perspective'. In *The Semantics of Clause Linking*. Ed. by R. M. W. Dixon and Alexandra Y. Aikhenvald. Oxford: Oxford University Press, 1–55.
- Dowty, David R. (1991). 'Thematic Proto-Roles and Argument Selection'. *Language* 67 (3), 547–619.
- Drexler, Hans (1962). 'Über Gerundium und Gerundivum'. *Gymnasium* 69, 429–445.
- du Pontet, Renatus (1900). *C. Iuli Caesaris Commentariorum*. 2 vols. Oxford: Clarendon.
- Dyvik, Helge (1999). 'The Universality of F-structure: Discovery or Stipulation? The Case of Modals'. In *Proceedings of the LFG99 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications.
- Ernout, A. (1909). *Recherches sur l'emploi du passif latin à l'époque républicaine*. Paris: Champion.
- Ernout, A. and F. Thomas (1964). *Syntaxe latine*. 2nd ed. Paris: Klincksieck.
- Falk, Yehuda N. (1984). 'The English Auxiliary System: A Lexical-Functional Analysis'. *Language* 60, 483–509.
- . (2001). *Lexical-Functional Grammar: An Introduction to Parallel Constraint-Based Syntax*. Stanford: CSLI Publications.
- . (2003). 'The English Auxiliary System Revisited'. In *Proceedings of the LFG03 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications.
- . (2006). *Subjects and Universal Grammar*. Cambridge: Cambridge University Press.
- . (2008). 'Functional relations in the English auxiliary system'. *Linguistics* 46 (5), 861–889.
- . (2009). 'Islands: A Mixed Analysis'. *Proceedings of the LFG Conference 2009*, 261–281.
- Faltz, L. M. (1985). *Reflexivization: a study in universal syntax*. New York: Garland.
- Faraci, Robert Angelo (1974). 'Aspects of the Grammar of Infinitives and For-phrases'. PhD dissertation. MIT.
- Farkas, Donka F. (1988). 'On obligatory control'. *Linguistics and Philosophy* 11, 27–58.
- . (1992). 'On Obviation'. In *Lexical Matters*. Ed. by Ivan A. Sag and Anna Szabolcsi. Stanford: CSLI Publications, 85–109.
- Fedriani, Chiara (2009). 'The "Behavior-Before-Coding-Principle": Further Evidence from Latin'. *Archivio Glottologico Italiano* 94 (2), 156–184.

- Ferraresi, Gisella and Maria Goldbach (2003). 'Some Reflections on Inertia: Infinitive Complements in Latin'. *Zeitschrift für Interkulturellen Fremdsprachenunterricht* 8 (2-3), 240–251.
- Fleischman, Suzanne (1982). *The future in thought and language: Diachronic evidence from Romance*. Cambridge: Cambridge University Press.
- Frank, Anette and Annie Zaenen (2002). 'Tense in LFG: Syntax and Morphology'. In *How we say WHEN it happens*. Ed. by Hans Kamp and Uwe Reyle. Tübingen: Niemeyer, 17–53.
- Franks, Steven and Norbert Hornstein (1991). 'Secondary predication in Russian and proper government of PRO'. In *Control and grammar*. Ed. by Richard K. Larson et al. Dordrecht: Kluwer, 1–50.
- Freeze, Ray (1992). 'Existentials and Other Locatives'. *Language* 68 (3), 553–595.
- Fruyt, Michèle (1987). 'Interprétation sémantico-référentielle du réfléchi latin'. *Glotta* 65 (3-4), 204–221.
- Garuti, Giovanni (1954). *Il tipo -turus + sum nel latino arcaico*. Bologna: Gallo.
- Giorgi, Alessandra (2006). 'From Temporal Anchoring to Long Distance Anaphors'. *Natural Language and Linguistic Theory* 24 (4), 1009–1047.
- . (2007). 'On the Nature of Long Distance Anaphors'. *Linguistic Inquiry* 38 (2), 321–342.
- Giurgea, Ion and Elena Soare (2010). 'Modal non-finite relatives in Romance'. In *Modal interpretation, mood selection, and mood alternation*. Ed. by Martin G. Becker and Eva-Maria Remberger. Berlin: Mouton de Gruyter, 67–94.
- Goldbach, Maria (2003). 'Repercussions of Morphology on Syntactic Checking: the Latin Accusativus cum Infinitivo'. *Linguistische Berichte* 193, 57–90.
- Green, Georgia M. (1992). 'Purpose Infinitives and Their Relatives'. In *The Joy of Grammar. A Festschrift in Honor of James D. McCawley*. Ed. by Diane Brentari, Gary N. Larson and Lynn A. Macleod. Amsterdam: Benjamins, 95–127.
- Grimshaw, Jane (1990). *Argument Structure*. Cambridge, Massachusetts: MIT Press.
- Hagège, C. (1974). 'Les pronoms logophoriques'. *Bulletin de la Société de Linguistique de Paris* 69, 287–310.
- Hahn, E. Adelaide (1943). 'Voice of Non-Finite Verb Forms in Latin and English'. *Transactions and Proceedings of the American Philological Association* 74, 269–306.
- . (1950). 'Genesis of the Infinitive with Subject-Accusative'. *Transactions and Proceedings of the American Philological Association* 81, 117–29.
- . (1952). 'The Moods in Indirect Discourse in Latin'. *Transactions and Proceedings of the American Philological Association* 83, 242–266.
- . (1963). 'The Supposed Reflexive Pronoun in Latin'. *Transactions and Proceedings of the American Philological Association* 94, 86–112.
- . (1965). 'Was There a Nominative Gerund?: (Iterum de Gerundio et Gerundivo)'. *Transactions and Proceedings of the American Philological Association* 96, 181–207.
- Hale, Mark (2007). *Historical Linguistics: Theory and Method*. Oxford: Blackwell.
- Halla-Aho, Hilla (2010). 'Requesting in a letter: context, syntax and the choice between complements in the letters of Cicero and Pliny the Younger'. *Transactions of the Philological Society* 108 (3), 232–247.

- Harling, Martin (1960). 'Die lateinische Gerundivkonstruktion'. *Gymnasium* 67, 422–440.
- Haug, Dag T. T. and Marius L. Jøhndal (2008). 'Creating a Parallel Treebank of the Old Indo-European Bible Translations'. In *Proceedings of the Language Technology for Cultural Heritage Data Workshop (LaTeCH 2008), Marrakech, Morocco, 1 June 2008*. Ed. by Caroline Sporleder et al. Marrakech: ELRA, 27–34.
- Haug, Dag T. T., Marius L. Jøhndal et al. (2009). 'Computational and Linguistic Issues in Designing a Syntactically Annotated Parallel Corpus of Indo-European Languages'. *Traitement automatique des langues* 50 (2), 17–45.
- Haverling, Gerd (2009). 'Actionality, tense, and viewpoint'. In *New Perspectives on Historical Latin Syntax. Volume 2: Constituent Syntax: Adverbial Phrases, Adverbs, Mood, Tense*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 237–523.
- Havers, Wilhelm (1911). *Untersuchungen zur Kasussyntax der indogermanischen Sprachen*. Straßburg: Trübner.
- Heine, Bernd (1997). *Possession: cognitive sources, forces, and grammaticalization*. Cambridge: Cambridge University Press.
- Herman, Jozsef (1989). 'Accusativus cum infinitive et subordonnée à quod, quia en latin tardif — nouvelles remarques sur un vieux problème'. In *Subordination and other topics in Latin. Proceedings of the Third Colloquium on Latin Linguistics, Bologna, 1-5 April 1985*. Ed. by Gualtiero Calboli. Amsterdam: Benjamins, 133–152.
- Hettrich, Heinrich (1992). 'Die Entstehung des lateinischen und griechischen AcI'. In *Rekonstruktion und relative Chronologie: Akten der VIII. Fachtagung der Indogermanischen Gesellschaft*. Ed. by Robert Beekes, Alexander Lubotsky and Jos Weitenberg. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck, 221–234.
- . (1993). 'Nochmals zu Gerundium und Gerundivum'. In *Indogermanica et Italica: Festschrift für Helmut Rix zum 65. Geburtstag*. Ed. by Gerhard Meiser. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck, 190–208.
- Hofmann, J. B. and Anton Szantyr (1972). *Lateinische Syntax und Stilistik*. Munich: Beck.
- Hooper, Joan B. (1975). 'On Assertive Predicates'. In *Syntax and Semantics 4*. Ed. by John P. Kimball. New York: Academic Press, 91–124.
- Hooper, Joan B. and Sandra A. Thompson (1973). 'On the Applicability of Root Transformations'. *Linguistic Inquiry* 4 (4), 465–497.
- Hornstein, Norbert (1999). 'Movement and control'. *Linguistic Inquiry* 30 (1), 69–96.
- . (2003). 'On Control'. In *Minimalist syntax*. Ed. by Hendrick Randall. Oxford: Blackwell, 6–81.
- Howard, Albert A. (1890). 'On the use of the perfect infinitive in Latin with the force of the present'. *Harvard Studies in Classical Philology* 1, 111–138.
- Huang, Y. (2000). *Anaphora. A cross-linguistic study*. Oxford: Oxford University Press.
- Huddleston, Rodney and Geoffrey K. Pullum (2002). *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Hukari, Thomas E. and Robert D. Levine (1987). 'Rethinking connectivity in unbounded dependency constructions'. *Proceedings of the West Coast Conference of Formal Linguistics* 6, 91–102.
- Jackendoff, Ray (1983). *Semantics and Cognition*. Cambridge, Massachusetts: MIT Press.

- . (1985). 'Believing and Intending: Two Sides of the Same Coin'. *Linguistic Inquiry* 16 (3), 445–460.
- . (1987). 'The Status of Thematic Relations in Linguistic Theory'. *Linguistic Inquiry* 18 (3), 369–411.
- . (1990). *Semantic structures*. Cambridge, Massachusetts: MIT Press.
- Jackendoff, Ray and Peter Culicover (2003). 'The semantic basis of control in English'. *Language* 79, 517–556.
- Jaeggli, Osvaldo A. (1986). 'Passive'. *Linguistic Inquiry* 17 (4), 587–622.
- Jasanoff, Jay H. (2006). 'The Origin of the Latin Gerund and Gerundive: A New Proposal'. In *A Festschrift in Honor of Michael Flier*. Ed. by Harvey Goldblatt and Nancy Kollman. Cambridge, Massachusetts: Harvard Ukrainian Research Institute.
- Jeffers, Robert J. (1975). 'Remarks on Indo-European Infinitives'. *Language* 51 (1), 133–148.
- . (1977). 'Morphological reanalysis and analogy: two case histories from Latin and Greek'. *Lingua* 41 (1), 13–24.
- Jeffers, Robert J. and William J. Pepicello (1979). 'The Expression of Purpose in Indo-European'. *Indogermanische Forschungen* 84, 1–16.
- Jespersen, Otto (1924). *The philosophy of grammar*. London: Allen and Unwin.
- Johnston, Michael J. R. (2000). 'A Syntax and Semantics for Purposive Adjuncts in HPSG'. In *Studies in Contemporary Phrase Structure Grammar*. Ed. by Robert D. Levine. Cambridge: Cambridge University Press, 80–118.
- Jones, Charles (1984). 'Under Control. Where is the Controlled Element?' In *Papers from the 20th Regional Meeting of the Chicago Linguistics Society*. Ed. by J. Drogo, V. Mishra and D. Testen. Chicago: Chicago Linguistics Society, 218–227.
- . (1991). *Purpose Clauses: Syntax, Thematics and Semantics of English Purpose Constructions*. Dordrecht: Kluwer.
- Jörling, Franz (1879). *Über den Gebrauch des Gerundiums und Gerundivums bei Tacitus*. Gnesen: without publisher.
- Kameyama, Megumi (1984). 'Subjective/logophoric bound anaphor *zibun*'. *Chicago Linguistic Society* 20, 228–238.
- Kaplan, Ronald M. and Joan Bresnan (1982). 'Lexical-Functional Grammar: A formal system for grammatical representation'. In *The Mental Representation of Grammatical Relations*. Ed. by Joan Bresnan. Cambridge, Massachusetts: MIT Press, 173–281.
- Kayne, Richard S. (1984). *Connectedness and Binary Branching*. Dordrecht: Foris.
- Kemmer, Suzanne (1993). *The Middle Voice*. Amsterdam: Benjamins.
- Kibort, Anna (2001). 'The Polish passive and impersonal in Lexical Mapping Theory'. In *Proceedings of the LFG01 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications.
- . (2004). 'Passive and passive-like constructions in English and Polish'. PhD dissertation. University of Cambridge.

- Kibort, Anna (2006). 'On three different types of subjectlessness and how to model them in LFG'. In *Proceedings of the LFG06 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 289–309.
- . (2007). 'Extending the applicability of Lexical Mapping Theory'. In *Proceedings of the LFG07 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 250–270.
- . (2008a). 'Impersonals in Polish: an LFG perspective'. *Transactions of the Philological Society* 106 (2), 246–289.
- . (2008b). 'On the syntax of ditransitive constructions'. In *Proceedings of the LFG08 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 312–333.
- King, Tracy Holloway (1995). *Configuring Topic and Focus in Russian*. Stanford: CSLI Publications.
- Kiparsky, Paul and Carol Kiparsky (1970). 'Fact'. In *Progress in linguistics*. Ed. by M. Bierwisch and K. E. Heidolph. The Hague: Mouton, 143–173.
- Kirk, W. H. (1942). 'The Syntax of the Gerund and the Gerundive'. *Transactions and Proceedings of the American Philological Association* 73, 293–307.
- . (1945). 'The Syntax of the Gerund and the Gerundive, II'. *Transactions and Proceedings of the American Philological Association* 76, 166–176.
- Kiss, Katalin É (2002). *The Syntax of Hungarian*. Cambridge: Cambridge University Press.
- König, Ekkehard (2001). 'Intensifiers and reflexive pronouns'. In *Language Typology and Language Universals*. Ed. by Martin Haspelmath et al. Berlin: Walter de Gruyter, 1.747–760.
- König, Ekkehard and Volker Gast (2006). 'Focused assertion of identity: A typology of intensifiers'. *Linguistic Typology* 10 (2), 223–276.
- König, Ekkehard and Peter Siemund (2000). 'Intensifiers and Reflexives: A Typological Perspective'. In *Reflexives: Forms and Functions*. Ed. by Zygmunt Frajzyngier and Traci S. Curl. Amsterdam: Benjamins, 41–74.
- Koster, Jan (1987). *Domains and dynasties: the radical autonomy of syntax*. Dordrecht: Foris.
- Kroeger, Paul R. (1993). *Phrase Structure and Grammatical Relations in Tagalog*. Stanford: CSLI Publications.
- . (2004). *Analyzing Syntax: A Lexical-Functional Approach*. Cambridge: Cambridge University Press.
- Kühner, Raphael and Carl Stegmann (1912-1914). *Ausführliche Grammatik der lateinischen Sprache. Band II: Satzlehre*. 2nd ed. 2 vols. Hannover: Hahnsche Buchhandlung.
- Kuno, Susumu (1987). *Functional Syntax: Anaphora, Discourse and Emphaty*. Chicago: University of Chicago Press.
- Kuno, Susumu and Etsuko Kaburaki (1977). 'Empathy and Syntax'. *Linguistic Inquiry* 8 (4), 627–672.
- Ladusaw, William and David Dowty (1988). 'Toward a nongrammatical account of thematic roles'. In *Syntax and semantics 21: Thematic relations*. Ed. by Wendy Wilkins. New York: Academic Press, 62–74.
- Lakoff, Robin T. (1968). *Abstract syntax and Latin complementation*. Cambridge, Massachusetts: MIT Press.
- Landau, Idan (2000). *Elements of Control: Structure and Meaning in Infinitival Constructions*. Dordrecht: Kluwer.

- . (2008). 'Two Routes of Control: Evidence from Case Transmission in Russian'. *Natural Language and Linguistic Theory* 28 (4), 877–924.
- Larson, Richard K. (1991). 'Promise and the Theory of Control'. *Linguistic Inquiry* 22 (1), 103–139.
- Lease, Emory B. (1919). 'The Use and Range of the Future Participle'. *The American Journal of Philology* 40 (3), 262–285.
- Lebreton, Jules (1901). *Études sur la langue et la grammaire de Cicéron*. Paris: Hachette.
- Ledgeway, Adam (1998). 'Variation in the Romance infinitive: the case of the Southern Calabrian inflected infinitive'. *Transactions of the Philological Society* 96 (1), 1–61.
- Leo, Friedrich (1895-1896). *T. Maccii Plauti Comoediae*. 2 vols. Berlin: Weidmann.
- Letoublon, Françoise (1983). 'Les verbes de mouvement et l'auxiliarité en latin'. *Glotta* 61 (3-4), 218–228.
- Leumann, Manu (1972). *Lateinische Laut- und Formenlehre*. Munich: Beck.
- Linde, Paul (1923). 'Die Stellung des Verbs in der lateinischen Prosa'. *Glotta* 12, 153–178.
- Lindsay, Wallace M. (1907). *The Syntax of Plautus*. Oxford: Parker.
- Luraghi, Silvia (1997). 'Omission of the direct object in Latin'. *Indogermanische Forschungen* 102, 239–257.
- . (2004). 'Null Objects in Latin and Greek and the Relevance of Linguistic Typology for Language Reconstruction'. In *Proceedings of the Fifteenth Annual UCLA Indo-European Conference. Los Angeles, November 7-8, 2003*. Ed. by Karlene Jones-Bley et al. Washington, DC: Institute of the Study of Man, 234–256.
- . (2010). 'The rise (and possible downfall) of configurationality'. In *Continuum Companion to Historical Linguistics*. Ed. by Silvia Luraghi and Vit Bubenik. London: Continuum, 212–229.
- Lyons, John (1967). 'A Note on Possessive, Existential and Locative Sentences'. *Foundations of Language* 3 (4), 390–396.
- Magni, Elisabetta (2009). 'Mood and Modality'. In *New Perspectives on Historical Latin Syntax. Volume 2: Constituent Syntax: Adverbial Phrases, Adverbs, Mood, Tense*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 193–275.
- Maling, Joan (1984). 'Non-Clause-Bounded Reflexives in Modern Icelandic'. *Linguistics and Philosophy* 7, 211–241.
- Manzini, M. Rita (1983). 'On Control and Control Theory'. *Linguistic Inquiry* 14 (3), 421–446.
- Manzini, M. Rita and Anna Roussou (2000). 'A minimalist theory of A-movement and control'. *Lingua* 110 (6), 409–447.
- Manzini, M. Rita and Kenneth Wexler (1987). 'Parameters, binding, and learning theory'. *Linguistic Inquiry* 18 (3), 413–444.
- Maraldi, Mirka (1983). 'New approaches to accusative subjects: Case theory vs. raising'. In *Latin Linguistics and Linguistic Theory*. Ed. by Harm Pinkster. Amsterdam: Benjamins, 167–176.
- . (1986). 'The proleptic accusative: Problems of structural analysis'. In *Papers on Grammar II*. Ed. by Gualtiero Calboli. Bologna: University of Bologna, 87–105.
- Marouzeau, Jules (1949). *L'ordre des mots dans la phrase latine 3: les articulations de l'énoncé*. Paris: Belles Lettres.

- Martin, Roger (1996). 'A Minimalist Theory of PRO and Control'. PhD dissertation. University of Connecticut.
- . (2001). 'Null case and the distribution of PRO'. *Linguistic Inquiry* 32 (1), 141–166.
- May, Thor (1990). 'Purposive constructions in English'. *Australian Journal of Linguistics* 10 (1), 1–40.
- Melazzo, Lucio (2005). 'Latin object and subject infinitive clauses'. In *Universal Grammar in the Reconstruction of Ancient Languages*. Ed. by Katalin É. Kiss. Berlin: Mouton de Gruyter, 339–372.
- Metcalf, Vanessa (2004). 'Argument structure in HPSG as a lexical property: Evidence from English purpose infinitives'.
- Michaelis, Laura A. (1993). 'On Deviant Case-Marking in Latin'. In *Advances in Role and Reference Grammar*. Ed. by Robert D. Van Valin Jr. Amsterdam: Benjamins, 311–373.
- Miller, D. Gary (1974). 'On the history of infinitival complementation in Latin and Greek'. *Journal of Indo-European Studies* 2 (3), 223–246.
- . (2000). 'Gerund and gerundive in Latin'. *Diachronica* 17 (2), 293–349.
- . (2010). *Language Change and Linguistic Theory*. 2 vols. Oxford: Oxford University Press.
- Milner, Jean-Claude (1978). 'Le système du réfléchi en latin'. *Langages* 50, 73–86.
- Mohanan, K. P. (1982). 'Grammatical Relations and Clause Structure in Malayalam'. In *The Mental Representation of Grammatical Relations*. Ed. by Joan Bresnan. Cambridge, Massachusetts: MIT Press, 504–589.
- . (1983). 'Functional and Anaphoric Control'. *Linguistic Inquiry* 14 (4), 641–674.
- Mohanan, Tara (1994). *Argument Structure in Hindi*. Stanford: CSLI Publishing.
- Napoli, Maria (2009). 'Impersonal Passivization and Agentivity in Latin'. In *Proceedings of the 20th Annual UCLA Indo-European Conference. Los Angeles, October 31–November 01/2008*. Ed. by Stephanie W. Jamieson, H. Craig Melchert and Brent Vine. Bremen: Hempen, 163–178.
- . (2010). 'How Impersonal is the Latin Impersonal Passive?' In *Latin Linguistics Today: Akten des 15. Internationalen Kolloquiums zur Lateinischen Linguistik. Innsbruck, 4.-9. April 2009*. Ed. by Peter Anreiter and Manfred Kienpointner. Innsbruck: Meid, 171–182.
- Neidle, Carol (1982). 'Case Agreement in Russian'. In *The Mental Representation of Grammatical Relations*. Ed. by Joan Bresnan. Cambridge, Massachusetts: MIT Press, 391–426.
- Nichols, Johanna (1986). 'Head-Marking and Dependent-Marking Grammar'. *Language* 62, 56–119.
- Noonan, Michael (2007). 'Complementation'. In *Language typology and Syntactic Description. Volume II: Complex Constructions*. Ed. by Timothy Shopen. 2nd ed. Cambridge: Cambridge University Press, 52–150.
- Nordlinger, Rachel (1997). 'Morphology Building Syntax: Constructive Case in Australian Languages'. In *Proceedings of the LFG97 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications.
- . (1998). *Constructive Case: Evidence from Australian Languages*. Stanford: CSLI Publications.
- Nuti, Andrea (2005). 'Possessive sentences in Early Latin: dative vs. genitive constructions'. *Archivio glottologico italiano* 90 (2), 145–173.
- Odelstierna, Ingrid (1926). *De vi futurali ac finali gerundii et gerundivi latini observationes*. Uppsala: Almqvist & Wiksell.

- Oldsjö, Fredrik (2001). 'Tense and aspect in Caesar's narrative'. PhD dissertation. University of Uppsala.
- Ørsnes, Bjarne (2011). 'Passives and evidentiality: Danish reportive passives and their equivalents in German'. *Acta Linguistica Hafniensia* 43 (1), 21–59.
- Oshima, David Y. (2004). 'Zibun revisited: empathy, logophoricity, and binding'. *University of Washington Working Papers* 23, 175–190.
- . (2007). 'On empathic and logophoric binding'. *Research on Language and Computation* 5 (1), 19–35.
- Panhuis, Dirk G. J. (1982). *The Communicative Perspective in the Sentence: A Study of Latin Word Order*. Amsterdam: Benjamins.
- Parry, Edward St. John (1857). *P. Terentii Comoediae*. Whitaker: London.
- Pepicello, William J. (1977). 'Raising in Latin'. *Lingua* 42 (1-2), 209–218.
- . (1980). 'An integrated approach to diachronic syntax: A case study from Latin'. *General Linguistics* 20 (2), 71–94.
- Perlmutter, David M. (1978). 'Impersonal Passives and the Unaccusative Hypothesis'. *Proceedings of the Berkeley Linguistics Society* 4, 157–189.
- Perrochat, Paul (1932). *Recherches sur la valeur et l'emploi de l'infinitif subordonné en latin*. Paris: Belles Lettres.
- Peterson, Peter G. (2004). 'Coordination: Consequences of a Lexical-Functional Account'. *Natural Language and Linguistic Theory* 22 (3), 643–679.
- Pezzini, Giuseppe (2011). 'Contraction of *est* in Latin'. *Transactions of the Philological Society* 109 (3), 327–343.
- Pieroni, Silvia (2000). 'Agents in Latin Impersonal Passives'. *Mnemosyne* 53 (3), 288–301.
- . (2010). 'Deixis and anaphora'. In *New Perspectives on Historical Latin Syntax. Volume 3: Constituent Syntax: Quantification, Numerals, Possession, Anaphora*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 389–501.
- Pillinger, O. S. (1980). 'The Accusative and Infinitive in Latin: A Refractory Complement Clause'. *Journal of Linguistics* 16 (1), 55–83.
- Pinkster, Harm (1971). 'Review article: R. T. Lakoff, Abstract Syntax and Latin Complementation'. *Lingua* 26, 383–421.
- . (1983). 'Tempus, Aspect and Aktionsart in Latin'. In *Aufstieg und Niedergang der Römischen Welt. Volume II.29.1*. Ed. by H. Temporini and W. Haase. Berlin: Walter de Gruyter, 270–319.
- . (1985). 'The Development of Future Tense Auxiliaries in Latin'. *Glotta* 63 (3-4), 186–208.
- . (1990). *Latin Syntax and Semantics*. London: Routledge.
- . (1992). 'The Latin Impersonal Passive'. *Mnemosyne* 45 (2), 159–177.
- . (2010). 'The use of *quia* and *quoniam* in Cicero, Seneca, and Tertullian'. In *Studies in Classical Linguistics in Honor of Philip Baldi*. Ed. by B. Richard Page and Aaron D. Rubin. Leiden: Brill, 81–95.
- Polo, Chiara (2004). *Word order between morphology and syntax*. Padova: Unipress.
- Postal, Paul M. (1974). *On Raising: One Rule of English Grammar and Its Theoretical Implications*. Cambridge, Massachusetts: MIT Press.

- Postgate, J. P. (1891). 'The Latin future infinitive in *-turum*'. *The Classical Review* 5 (7), 301–301.
- . (1894). 'The Future Infinitive Active in Latin'. *Indogermanische Forschungen* 4, 252–258.
- . (1904). 'On the Neuter Nominative, Some Impersonal Verbs and Three Dramatic Quotations'. *The Classical Review* 18 (9), 450–456.
- Primus, Beatrice (1999). *Cases and Thematic Roles: Ergative, Accusative and Active*. Tübingen: Niemeyer.
- Purser, Louis Claude (1903). *M. Tulli Ciceronis Epistulae ad Atticum*. 2 vols. Oxford: Clarendon.
- Ransom, Evelyn N. (1986). *Complementation: Its meanings and forms*. Amsterdam: Benjamins.
- Raposo, Eduardo (1987). 'Case Theory and Infl-to-Comp: The Inflected Infinitive in European Portuguese'. *Linguistic Inquiry* 18 (1), 85–109.
- Reuland, Eric and Jan Koster (1991). 'Long-distance anaphora: an overview'. In *Long-distance anaphora*. Ed. by Jan Koster and Eric J. Reuland. Cambridge: Cambridge University Press, 1–25.
- Ricca, Davide (2009). 'Adverbs'. In *New Perspectives on Historical Latin Syntax. Volume 2: Constituent Syntax: Adverbial Phrases, Adverbs, Mood, Tense*. Ed. by Philip Baldi and Pierluigi Cuzzolin. Berlin: Mouton de Gruyter, 109–191.
- Richter, Ernst Ludwig (1856-1860). *De supinis Latinae linguae*. Dalkowski: Königsberg.
- Risch, Ernst (1984). *Gerundivum und Gerundium*. Berlin: Walter de Gruyter.
- Rizzi, Luigi (1986). 'Null objects in Italian and the theory of *pro*'. *Linguistic Inquiry* 17 (3), 501–557.
- Roberts, Ian G. (1987). *The Representation of Implicit and Dethematized Subjects*. Dordrecht: Foris.
- Rögnvaldsson, Eiríkur (1982). 'We Need (Some Kind of a) Rule of Conjunction Reduction'. *Linguistic Inquiry* 13, 557–561.
- Roncador, Manfred von (1992). 'Types of Logophoric Marking in African Languages'. *Journal of African Languages and Linguistics* 13 (2), 163–182.
- Ros, Hilke (2001). 'Binding Theory and Valency Grammar in Latin'. *Glotta* 77 (3-4), 244–261.
- Rosen, Carol G. (1984). 'The Interface between Semantic Roles and Initial Grammatical Relations'. In *Studies in Relational Grammar 2*. Ed. by David M. Perlmutter and Carol G. Rosen. Chicago: University of Chicago Press, 38–77.
- Rosén, Hannah (1989). 'General subordinators and sentence complements'. In *Subordination and other topics in Latin*. Ed. by Gualtiero Calboli. Amsterdam: Benjamins, 197–217.
- Rosenbaum, Peter S. (1967). *The grammar of English predicated complement constructions*. Cambridge, Massachusetts: MIT Press.
- Ross, John Robert (1967). 'Constraints on Variables in Syntax'. PhD dissertation. MIT.
- Ross, Sarah H. (2005). 'A Corpus-Based Approach to Infinitival Complements in Early Latin'. PhD dissertation. Louisiana State University.
- Sadler, Louisa and Andrew Spencer (1998). 'Morphology and Argument Structure'. In *The Handbook of Morphology*. Ed. by Andrew Spencer and Arnold Zwicky. Malden: Blackwell, 206–236.
- Saffold, William Berney (1902). *The construction with iubeo*. Baltimore: John Murphy.
- Sag, Ivan A. and Carl Pollard (1991). 'An Integrated Theory of Complement Control'. *Language* 67 (1), 63–113.

- Salvi, Giampaolo (2005). 'Some firm points on Latin word order: The left periphery'. In *Universal Grammar in the Reconstruction of Ancient Languages*. Ed. by Katalin É. Kiss. Berlin: Mouton de Gruyter, 429–456.
- Schmidtke-Bode, Karsten (2009). *A Typology of Purpose Clauses*. Amsterdam: Benjamins.
- Schoof, Susanne (2003). 'Impersonal and Personal Passivization Of Latin Infinitive Constructions: A Scrutiny Of The Structures Called AcI'. In *Proceedings of the 9th International Conference on HPSG*. Ed. by Jong-Bok Kim and Stephen Wechsler. Stanford: CSLI Publications, 293–312.
- . (2004). 'An HPSG Account of Nonfinite Verbal Complements in Latin'. PhD dissertation. University of Groningen.
- . (2005). 'The Reflexive NP in A+I- and AcI-constructions'. In *Papers on Grammar XI: Latina Lingua! Proceedings of the Twelfth International Colloquium on Latin Linguistics (Bologna, 9-14 June 2003)*. Ed. by Gualtiero Calboli. Roma: Herder, 709–717.
- Sells, Peter (1987). 'Aspects of Logophoricity'. *Linguistic Inquiry* 18 (3), 445–479.
- Sevdali, Christina (2006). 'Infinitival Clauses in Ancient Greek: Overt and null subjects, the role of Case and Focus'. PhD dissertation. University of Cambridge.
- Shackleton Bailey, D. R. (1965-1968). *Cicero's letters to Atticus*. 4 vols. Cambridge: Cambridge University Press.
- . (1999). *Cicero: Letters to Atticus*. 4 vols. Cambridge, Massachusetts: Harvard University Press.
- Siewierska, Anna (2008). 'Introduction: impersonalization from a subject-centred vs. agent-centred perspective'. *Transactions of the Philological Society* 106 (2), 115–137.
- Sigurðsson, Halldór Ármann (1986). 'Moods and (long distance) reflexives in Icelandic'. *Working Papers in Scandinavian Syntax* 25, 1–53.
- . (1990). 'Long distance reflexives and moods in Icelandic'. In *Syntax and Semantics 24: Modern Icelandic Syntax*. Ed. by Joan Maling and Annie Zaenen. San Diego: Academic Press, 309–346.
- . (2004). 'Icelandic non-nominative subjects: Facts and implications'. In *Non-nominative Subjects: Volume 2*. Ed. by Peri Bhaskararao and Karumuri Venkata Subbarao. Amsterdam: Benjamins, 137–159.
- Simpson, Jane (1991). *Warlpiri Morpho-Syntax*. Dordrecht: Kluwer.
- Solberg, Per Erik (2011). 'Long-distance anaphora in Latin'. Master's thesis. University of Tromsø.
- Somers, Maartje. H. (1994). 'Theme and Topic. The relation between discourse and constituent fronting in Latin'. In *Linguistic Studies on Latin*. Ed. by Jozsef Herman. Amsterdam: Benjamins, 151–163.
- Spevak, Olga (2008). 'The position of Focus constituents in Latin: A comparison between Latin and Czech'. *Journal of Pragmatics* 40, 114–126.
- . (2010). *Constituent Order in Classical Latin Prose*. Amsterdam: Benjamins.
- Spyropoulos, Vassilios (2005). 'The syntax of Classical Greek infinitive'. In *Universal Grammar in the Reconstruction of Ancient Languages*. Ed. by Katalin É. Kiss. Berlin: Mouton de Gruyter, 295–337.
- Stassen, Leon (2009). *Predicative Possession*. Oxford: Oxford University Press.
- Steele, R. B. (1913). 'The future periphrastic in Latin'. *Classical Philology* 8 (4), 457–476.

- Steinthal, Hermann (1967). 'Grammatische Begriffsbildung, dargestellt an der Lehre vom Gerundium und Gerundivum'. *Gymnasium* 74, 227–251.
- Stempel, Reinhard (1994). 'Das lateinische Gerundium und Gerundivum in historischer und typologischer Perspektive'. *Glotta* 72 (1-4), 235–251.
- Stiebels, Barbara (2007). 'Towards a typology of complement control'. In *Studies in complement control*. Ed. by Barbara Stiebels. Berlin: Zentrum für Allgemeine Sprachwissenschaft, 1–80.
- Stirling, Lesley (1993). *Switch-reference and discourse representation*. Cambridge: Cambridge University Press.
- Stowell, Tim (1981). 'The Origins of Phrase Structure'. PhD dissertation. MIT.
- Strahan, Tania E. (2009). 'Outside-in binding of reflexives in insular Scandinavian'. In *Proceedings of the LFG09 Conference*. Ed. by Miriam Butt and Tracy Holloway King. Stanford: CSLI Publications, 541–561.
- . (2011). 'A typology of non-local reflexives in the Scandinavian languages'. *Nordic Journal of Linguistics* 34 (2), 157–178.
- Strunk, Klaus (1962). 'Über Gerundium und Gerundivum'. *Gymnasium* 69, 445–460.
- Tantalou, Niki (2003). 'Infinitives with overt subject in Classical Greek'. *Studies in Greek Linguistics* 23, 358–365.
- Terrell, Tracy and Joan Hooper (1974). 'A Semantically Based Analysis of Mood in Spanish'. *Hispania* 57 (3), 484–494.
- Thráinsson, Höskuldur (1976). 'Reflexives and Subjunctives in Icelandic'. In *Papers from the Sixth Annual Meeting of the North Eastern Linguistic Society*. Ed. by A. Ford, J. Reighard and R. Singh. Montreal: McGill University, 225–240.
- Vincent, Nigel (1997). 'Complementation'. In *The dialects of Italy*. Ed. by Martin Maiden and Mair Parry. London: Routledge, 171–178.
- . (1998). 'On the grammar of inflected non-finite forms (with special reference to Old Neapolitan)'. *Copenhagen Studies in Language* 22, 135–158.
- . (2011). 'Non-finite forms, periphrases, and autonomous morphology in Latin and Romance'. In *Morphological Autonomy. Perspectives from Romance Inflectional Morphology*. Ed. by Maria Goldbach et al. Oxford: Oxford University Press, 421–439.
- Vincent, Nigel and Delia Bentley (2001). 'The demise of the Latin future periphrasis'. In *De lingua latina novae quaestiones. Actes du Xème Colloque International de Linguistique Latine (Paris-Sèvres, 19-23 avril 1999)*. Ed. by Claude Moussy. Paris: Peeters, 143–155.
- Viti, Carlotta (2009). 'Anaphorische und reflexive Strukturen'. *Indogermanische Forschungen* 114, 145–172.
- . (2010). 'On long-distance reflexivity in Latin'. In *Latin Linguistics Today: Akten des 15. Internationalen Kolloquiums zur Lateinischen Linguistik. Innsbruck, 4.-9. April 2009*. Ed. by Peter Anreiter and Manfred Kienpointner. Innsbruck: Meid, 359–370.
- Weisweiler, Joseph (1890). *Das lateinische participium futuri passivi in seiner Bedeutung und syntaktischen Verwendung*. Paderborn, Germany: Ferdinand Schöningh.
- Whelpton, Matthew (2002). 'Locality and control with infinitives of result'. *Natural Language Semantics* 10, 167–210.

- Willett, Thomas (1988). 'A cross-linguistic survey of the grammaticization of evidentiality'. *Studies in Language* 12 (1), 51–97.
- Williams, Edwin S. (1980). 'Predication'. *Linguistic Inquiry* 11 (1), 203–238.
- . (1981). 'Argument structure and morphology'. *The Linguistic Review* 1, 81–114.
- Woodcock, E. C. (1959). *A New Latin Syntax*. London: Methuen.
- Wurmbrand, Susanne (2003). *Infinitives: Restructuring and Clause Structure*. Berlin: Mouton de Gruyter.
- Xu, Liejiong (1993). 'The Long-Distance Binding of *Ziji*'. *Journal of Chinese Linguistics* 21, 123–141.
- Yang, Dong-Whee (1983). 'The Extended Binding Theory of Anaphors'. *Language Research* 19, 169–192.
- Yu, X.-F. William (1992). 'Challenging Chinese Reflexive Data'. *The Linguistic Review* 9, 285–294.
- . (1996). 'A Study of Chinese Reflexives'. PhD dissertation. University of London.
- Zaenen, Annie (1993). 'Unaccusativity in Dutch: integrating syntax and lexical semantics'. In *Semantics and the Lexicon*. Ed. by J. Pustejovsky. Dordrecht: Kluwer, 129–161.
- Zaenen, Annie and E. Engdahl (1994). 'Descriptive and Theoretical Syntax in the Lexicon'. In *Computational Approaches to the Lexicon*. Ed. by B. T. S. Atkins and A. Zambolli. Oxford: Oxford University Press, 181–212.
- Zaenen, Annie, Joan Maling and Höskuldur Thráinsson (1985). 'Case and grammatical functions: The Icelandic passive'. *Natural Language and Linguistic Theory* 3 (4), 441–483.