

Masteroppgave

# The Ancient Greek Binding Domain

An Investigation of ἐαυτοῦ in Herodotus's *Histories*

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Høsten 2023





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### **Abstract**

I investigate the binding domain of the Ancient Greek pronoun ἑαυτοῦ using lexical-functional grammar. I conclude that this pronoun is found to have two uses, one reflexive and one logophoric, though some examples are not explained by this approach. The unexplained uses are genitive possessives in correlative clauses.

### **Sammendrag**

Jeg undersøker bindingsdomenet til det gammelgreske pronomenet ἑαυτοῦ ved hjelp av leksikalsk-funksjonell grammatikk. Jeg kommer frem til at dette pronomenet har to bruksmåter, én refleksiv og én logoforisk, selv om det også finnes eksempler som en slik fremgangsmåte ikke beskriver. Disse eksemplene er possessive genitiver i korrelativsetninger.



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# Preface

Any work that tries to grapple with binding theory appears to find some inexplicable exceptions, and this work is no different. What is good in this text, I owe to my two supervisors, Dag and Eirik, whose guidance have helped me through this semester. Without their insights, assistance and good mood, I would not have been able to bring this thesis to a close. Whatever ill may be found in the pages that follow are entirely my responsibility.

I would also like to extend my gratitude to my partner, my parents and my friends, though they often found all the talk about pronouns and binding rather boring. That also goes for the fine folks at the “lesesal”, who I am sure could have found no better refreshment during our breaks than my attenuated attempts at describing this obscure matter.

Translations are my own where I do not specify otherwise.

## Preface

# Chapter 1

## Introduction

Ancient Greek has a rich pronominal system that has often caused translators a lot of trouble. An interesting part of this system is the reflexive pronouns that come in various shapes and forms. They come in synthetic, compound forms like ἑαυτοῦ -ῆς -οῦ,<sup>1</sup> and analytic forms like ἑμῶν αὐτῶν and σφῶν αὐτῶν. What separates reflexive pronouns from other kinds of pronouns is that they generally require a syntactic antecedent within some definable domain.

This thesis will examine within what domain the third person reflexive pronoun ἑαυτοῦ -ῆς -οῦ is bound to an antecedent. The question is phrased in this way to narrow the scope of the thesis: first, I do not investigate reflexivity in general. This is meant to exclude things like the reflexive meaning of medium verb forms such as λύομαι and how there may be an overlapping distribution of such forms and transitive verbs with reflexive pronouns. Second, I will not investigate how the “normal” pronouns like αὐτός can have the same reference as a subject in a higher clause (compare the ambiguity of “him” an English sentence like “he thinks the guard saw him”, where “him” can refer either to “he” or to somebody not mentioned in the sentence). Third, the agreement of the reflexive pronoun with the antecedent is not a focus; grammars of Ancient Greek show us that feature agreement is not always straightforward, such as this example cited by Kühner and Gerth 1898–1904 (henceforth referred to as K-G) on p. 562, in § 455, 3, where the plural reflexive has a singular antecedent:

- (1) ἕκαστον ἐκέλευσε τοῖς καινοῖς ἑαυτῶν θεράπουσιν εἰπεῖν, ὅτι κτλ.  
(Cyrus) told each to tell his (ἑαυτῶν, lit. “their own”) new attendants that . . .<sup>2</sup>  
(Xenophon, *Cyropaedia* 5.2.1, quoted from K-G)

Finally, I specify the third person reflexive pronoun ἑαυτοῦ. This choice is motivated by two factors: the first is that the binding domains for the first and second persons are different from that of the third person;<sup>3</sup> within LFG, this variation is easily explained

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<sup>1</sup>In general, I will only write, *e.g.*, ἑαυτοῦ even when referring to the lemma, which of course includes all genders and all available cases.

<sup>2</sup>When spaced script is used for emphasis in text quoted from K-G, I will use italics.

<sup>3</sup>Kiparsky 2012 discusses the differences and also writes on the interplay between various kinds of pronouns. He writes that the first and second persons reflexives are obligatory when the antecedent is a coargument, and optional when the antecedent is within the same clause. Further, he writes that binding into infinitival clauses is not permitted for the first and second persons, but allowed for the third (Kiparsky 2012, p. 90: “first and second person reflexives are more restricted: they cannot have a long-distance antecedent at all”. But going through the first person reflexives, the following example showed up:

- (i) τοςάδε μέντοι δικαίῳ γέρεα ἑμεωυτῶ γενέσθαι, . . .

by the way binding constraints are thought to be lexically specified. But this also means that, at least in principle, any pronoun can function independently of others, even if there are clear “family” relations between the first, second and third person reflexives and variants like *σφέτερος αὐτῶν*. Additionally, and importantly, the exclusion of the first and second person pronouns is also motivated by the scarcity of evidence. Herodotus’s *Histories* contain only 16 occurrences of the first person singular, and only 37 second person singular reflexive pronouns. Of the third person, on the other hand, we have 524 instances, not counting other lexical forms like *σφῶν αὐτῶν*.<sup>4</sup>

Ideally, I will be able to explain conundrums like why the reflexive pronoun in (2) refers not to Jason, but to Triton, and, conversely, why we can have *ἑωυτῷ* rather than something like *οἱ*, which would more or less unambiguously refer to Triton in the given context.

- (2) *καὶ οἱ ἀπορέοντι τὴν ἐξαγωγὴν λόγος ἐστὶ φανῆναι Τρίτωνα καὶ κελεύειν τὸν Ἰήσονα ἑωυτῷ δοῦναι τὸν τρίποδα, ...*

And legend has it that Triton appeared to Jason (*οἱ*), who struggled to find the way out, and bade Jason give him (*ἑαυτῷ*) the tripod, ...

(Herodotus, *Histories* 4.179.2)

Explaining the full pronominal system would of course have been ideal, but would have required a much broader investigation than the one I conduct here. Even so, it turns out that we can in fact say something about when a reflexive seems to ignore a locally available antecedent.

The rest of this introduction will take a look at how some “traditional” grammars have represented binding (“traditional” is here used quite freely to mean grammars that stick to the style and organization of earlier grammars); traditional grammars have had a very descriptive approach and are frequently very valuable in finding and understanding various phenomena, precisely since the approach has been so focussed on what actually occurs in the language rather than to stipulate normative rules.<sup>5</sup> This is meant to set the stage for the subsequent discussions of the material in LFG terms. The binding domains will be investigated by looking for lexically stated constraints, and these will hopefully capture the distribution of *ἑαυτοῦ* in Ancient Greek. As such, the next chapter will set out methodological limitations and similar issues that are necessary for the subsequent analysis.

After this methodological chapter, I will proceed to analyze “local” binding, which, broadly speaking, will turn out to be syntactic binding. In the fourth chapter, I will discuss long-distance reflexives, and they will be analyzed as binding to a perspective

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this, however, is the amount of gifts I think it just for myself to get ...  
(Herodotus, *Histories* 3.142.4)

While it might be possible to take *ἑμεωυτῷ* as a complement or an adjunct of the main verb, *δικαιῶ* does not elsewhere appear to take a benefactive with dative case, whereas *γέρεα* does. The position of the word also suggests that seeing *ἑμεωυτῷ* as a complement of *γέρεα* is the most natural reading, and in that case, it appears that it is in fact possible for the first person reflexive to have an antecedent across an infinitival border. This appears to be the only example of binding into an infinitival clause for both the first and second persons, though.

<sup>4</sup>This distribution is somewhat skewed by the fact that the first and second person reflexives lack a compound plural form. Searching for the analytic plural forms is complicated by the fact that they do not show up in a lemma search on TLG, but using a text search for the various cases (such as searching for the strings *ἡμέων αὐτῶν* and *ἡμέων αὐτέων* and so on), produces five hits for plural first person reflexive pronouns and seven for the second person, so it does not provide a lot of additional material.

<sup>5</sup>Grammars that were consulted but not summarized include Cooper 2002 and Dosuna 2022.

holder – something we can call logophoric binding – before finally drawing some conclusions in the fifth and final chapter.

## 1.1 Reflexive Pronouns as Explained by Earlier Grammars

This section will give brief summaries of how some important traditional grammars of Ancient Greek have explained the syntax of reflexive pronouns. Throughout this section, the main emphasis will be placed on the lemma *ἑαυτοῦ* and on how its binding domain is explained, *i.e.*, things that concern the first and second persons will for the most part be omitted. When dealing with the various phenomena that we can call reflexive, all the grammars here, except Humbert, have used the concepts direct and indirect reflexivity to distinguish between them. What these terms generally include will be summarized at the end of the section.

### 1.1.1 Kühner-Gerth

The Ancient Greek syntax by Kühner and Gerth 1898–1904 (K-G) is still the most comprehensive when it comes to detail and examples. Raphael Kühner’s grammar is a four-volume work where the first two volumes were revised by Friedrich Blass, and the second two by Bernhard Gerth. The syntax of reflexive pronouns is dealt with in §455, which spans pp. 560–575 in the first volume of the two syntax volumes. Their account does not make use of the terms “direct” and “indirect reflexivity” as organising terms, but the former concept is dealt with in the first section of §455, and the latter is dealt with in the third.<sup>6</sup> There is also no clear attempt at defining reflexivity, but in “Anmerkung 5” on p. 565, the authors appear to define any construction that involves co-reference as reflexive: they write that in the Homeric language, there are four ways of expressing the “reflexive relation” (“die *reflexive* Beziehung”, emphasis in original). Examples such as those found under *littera c* indicate that *αὐτοῦ* referring to a subject higher up in the clause is seen as a sort of reflexive construction, e.g. *ἔφασκεν | Λαέρτην . . . πατέρ’ ἔμμεναι αὐτῷ*, “he claimed that Laertes was his (*αὐτῷ*) father” (*Od.*24.270, quoted from K-G).

The first section of §455 plainly states that the reflexive pronoun always refers back to something that has been named, either a subject or an object. There is no further discussion, but there are some interesting examples, such as this one:

- (3) τί δ’ ἔστιν, ὦ βέλτιστε τῶν σαυτοῦ φίλων.  
 What is it, O best of your own friends?  
 (Aristophanes, *Plutus* l. 631; quoted from K-G)

which they explain by equating it to *σύ, ὃς βέλτιστος εἶ τῶν σαυτοῦ φίλων*, “you who are the best among your friends”.<sup>7</sup> This account of “direct” reflexivity is complemented by remarks in section four, on p. 563, where they write that either the oblique cases of *αὐτός*

<sup>6</sup>The terms do occur, however, as in, *e.g.*, “Anmerkung 9” on page 567: “In der Regel aber hat in der *attischen Prosa* das Pronomen *οὗ* u.s.w. *reflexive* Bedeutung. Es wird jedoch gemeniglich nur dann angewendet, wenn die reflexive Beziehung eine *indirekte* ist, d. h. wenn sie nicht auf das zunächst stehende Subjekt (wie in: *ὁ τύραννος χαρίζεται ἑαυτῷ*), sondern auf das *entferntere* Subjekt (wie in: *ὁ τύραννος νομίζει τοὺς πολίτας ὑπηρετεῖν οἱ*) stattfindet”.

<sup>7</sup>I think the easiest way to explain this in terms closer to what I will be doing in this thesis is to view the superlative as something predicated of someone; the person that something is predicated of would then be a subject of sorts. This would be quite similar to how copula sentences are analyzed, where the predicate is an XCOMP.

or a demonstrative pronoun is used when the pronoun is not co-referent with the subject: “... , wenn ein Gegenstand nicht sich selbst, sondern einem *anderen* entgegengesetzt wird.”

In the third section, on p. 561f., K-G deal with the so-called long-distance reflexives. They point out that the reflexive pronouns can be used in this way when the sub-clause, whether participial, infinitival or relative, is a reflection of the “soul of the subject in the main clause, *i.e.*, when it is stated as something thought by this person”.<sup>8</sup>

Interestingly, in “Anmerkung 2” on p. 562f., they point out that the reflexive sometimes shows up without an antecedent. The second example that they cite shows two different grammatical functions for the reflexive pronoun, though both are contained in a noun phrase:

- (4) ΑΘΗΝΑΙΟΣ. Ἀκούοι δὴ πᾶς ὅσπερ νυνδὴ τὰ περὶ θεῶν τε ἤκουε καὶ τῶν φίλων προπατόρων· πάντων γὰρ τῶν αὐτοῦ κτημάτων μετὰ θεοῦς ψυχὴ θειότατον, οἰκειότατον ὄν. τὰ δ’ αὐτοῦ διττὰ πάντ’ ἐστὶ πᾶσιν.

ATHENIAN. Now listen, all you who heard what was just said about both the gods and our dear forefathers: for of all one’s own things, after the gods, the soul is the most divine, seeing as it is closest. And for everyone, what one has is twofold.

(Plato *Leges*, 726a. Burnet’s text, quoted from TLG)

K-G explain this as binding to an imagined person (“...eine Person gedacht wird, auf die dasselbe zu beziehen ist.”), but it might as well be to πᾶσιν, since we have already seen that agreement does not have to be “exact”, as in (1).<sup>9</sup>

As for the pronoun οὗ, which in Homeric Greek could function both as a normal and a reflexive pronoun (“Anmerkung 5”, p. 565), K-G remark that in the Ionic dialect, its usage is not strictly reflexive (“Anmerkung 6”, p. 565f.). The lemma οὗ can also refer to somebody who has been mentioned earlier in the discourse; this usage, K-G calls anaphoric (“anaphorish”) (so we have to be mindful of confusing this with the Chomskyan terminology where an anaphor is a locally bound pronoun). It is interesting that K-G comment that the relationship between the reflexive usage of this pronoun to its “anaphoric” usage (in K-G’s sense) is insufficiently clear (footnote 1, p. 566); in “Anmerkung 9”, K-G point out that the meaning of this pronoun is usually reflexive in Attic, and that this only obtains when dealing with indirect reflexivity. Thucydides’s usage is apparently deviant: they write that only in his texts and in those of his late imitators, such as Polybius and Appian, do we find examples like in (5):

- (5) (οἱ Ἀθηναῖοι) οὐ πρότερον ἐνέδοσαν (τοῖς πολεμίοις) ἢ αὐτοὶ ἐν σφίσι κατὰ τὰς ἰδίας διαφορὰς περιπεσόντες ἐσφάλησαν.

(The Athenians) did not give in (to their enemies) before they themselves (αὐτοὶ) had been tripped up by themselves (σφίσι) by way of coming into private conflicts. (Thucydides, *Histories* 2.65.12, text quoted from K-G)

<sup>8</sup>“... aus der Seele des Subjektes im Hauptsatze, also als Gedanken desselben, ausgesagt werden.”

<sup>9</sup>If the antecedent is a “general” one, then similar phenomena can be found in Norwegian, see Lødrup 2007, who gives examples like

- (i) Et helt hus for seg selv er et slit.  
A whole house for SELF is a toil  
It’s a hassle to have a whole house all by oneself.  
(based on (20-a) in Lødrup 2007)

It is interesting that we get local binding with  $\sigma\phi\acute{\iota}\sigma\iota$  here, as we would have expected  $\sigma\phi\acute{\iota}\sigma\iota \alpha\acute{\upsilon}\tau\omicron\upsilon\zeta$  (which is one suggested emendation).

To sum up, K-G identify that it seems like there are at least two different types of binding: local, within the same clause, and non-local, especially when there is a mental state involved (“Seeleszustande”). A possible third, whose exact nature they did not consider quite determined, is the role of  $\omicron\upsilon$  (and its plural form).

### 1.1.2 Schwyzer

Schwyzers grammar is published in two volumes. The first deals with phonology, morphology, word formation and so on. It was originally published in two separate volumes, but was later republished in one volume as Schwyzer 1953. The second deals with syntax and was completed by Albert Debrunner, which I will cite as Schwyzer and Debrunner 1950. The syntax volume has a focus on diachronic developments, and I try to give some of the relevant points below, such as the fact that the compound plural third person reflexive  $\acute{\epsilon}\alpha\upsilon\tau\omega\acute{\nu}$  was adopted earlier in Ionic by Herodotus than in Attic, where the analytic form  $\sigma\phi\omega\acute{\nu} \alpha\acute{\upsilon}\tau\omega\acute{\nu}$  was preferred for a longer time (p. 195).

On the morphological side, Schwyzer 1953, p. 606 notes that the Ancient Greek reflexive come from the Indo-European stem  $*s(e)we$  which originally was used to refer to antecedents of any person, but that later developments led to a reflexive pronoun for each person (still later developments would again see the third person reflexive  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  used to refer to any person, which we can see in Attic; Schwyzer and Debrunner 1950, p. 197 write that this occasionally happens in Herodotus as well, though I have not come across any examples in my corpus). In the syntax volume, it is said that the Greek usage of the reflexive pronoun was restricted to the third person at an early stage (Schwyzer and Debrunner 1950, p. 192).<sup>10</sup>

In Schwyzer and Debrunner 1950, direct and indirect reflexivity are taken as organizing principles to a larger degree than was the case for K-G, but not to the extent that we find for the *Cambridge Grammar of Ancient Greek* below. They give an account of the development of pronouns like  $\omicron\acute{\iota}$  and the oblique cases of  $\alpha\acute{\upsilon}\tau\omicron\upsilon$  as becoming used to signify indirect reflexivity (p. 193): this was a new usage, they write, developing from a felt opposition with  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$ . This new, indirect usage, led to the innovation of nominative  $\sigma\phi\epsilon\acute{\iota}\zeta$  as the subject in sub-clauses to indicate co-reference with the subject of the main clause; Herodotus is apparently the first author where we find this usage (p. 199). For Attic, Schwyzer and Debrunner 1950, p. 194 write that we regularly find reflexives that refer to an antecedent outside of the participial phrase when the participle is “small” (“Partizipialkonstruktionen geringeren Umfangs”). For Herodotus, this is a point that I will discuss in section 3.3.

### 1.1.3 Smyth

Perhaps the most important Greek grammar in English, Herbert Weir Smyth’s grammar was updated in 1956 by Gordon M. Messing (Smyth and Messing 1984). They deal with the syntax reflexive pronouns in two subsections, namely direct and indirect reflexivity.

Direct reflexivity is defined as when the antecedent of the subject is “the chief word (usually the subject)” of the clause. As an example of binding to a non-subject, they cite Xenophon:

<sup>10</sup>An interesting point is the non-pronominal expression of reflexivity in Homer through nouns like  $\theta\upsilon\mu\acute{\omicron}\varsigma$  and  $\psi\upsilon\chi\eta$  (p. 192, note 1). I suppose these will have been inalienables in Homeric Greek.

- (6) τοὺς δὲ περιοίκους ἀφῆκεν ἐπὶ τὰς ἑαυτῶν πόλεις.  
 the but dependents<sub>i</sub> he-released to the SELF<sub>i</sub> cities  
 “and the dependents he sent away to their respective cities.”  
 (*Hellenica*, 6.5.21)

They also point out that in poetry, the usage of reflexives appears to be more relaxed:

- (7) στένω σὲ μᾶλλον ἢ ἑμέ  
 “I mourn you rather than me.”  
 (Euripides, *Hippolytus*, v. 1409)

Smyth and Messing are content simply stating this, but we might recall the Homeric usage of the first person pronouns, such as *Il.*10.378: αὐτὰρ ἐγὼν ἐμὲ λύσομαι, “I shall ransom myself”, which is also cited by Smyth and Messing on p. 304. Presumably, the language in Greek tragedy might be more archaic than what we find in prose genres.

Indirect reflexivity is dealt with in a similar manner to direct reflexivity, with the caveat that two kinds of indirect reflexivity is distinguished, though the distinction is implicit rather than explicit. That means that we have indirect reflexivity whenever the reflexive in a sub-clause refers to the subject in the main clause. In the first kind of indirect reflexivity, the sub-clause is part of the thought of the subject of the main clause, and in the second kind, it is not. That there is a distinction is made clear by section 1229: “οὖ, σοῖσι, etc., and the oblique cases of αὐτός are used when the subordinate clause does not form a part of the thought of the principal subject.” Overall, then, the approach here is fairly similar to what we found in K-G, though it appears that Smyth and Messing do not think of constructions with the oblique cases of αὐτός as reflexive (see p. 305, section 1228a).

#### 1.1.4 Humbert

In Jean Humbert’s *Syntaxe grecque* (Humbert 1960, 3rd edition), we meet a different approach. He appears to take perspective to be the main operator involved in reflexive constructions, and writes that “le pronom réfléchi renvoie à la personne qui, *aux yeux de celui qui parle, domine la phrase ou la proposition*. Cette personne en est souvent le *sujet grammatical*; mais elle peut aussi y remplir les fonctions de *complément*, direct ou indirect” (Humbert 1960, p. 62).<sup>11</sup> As support for this, Humbert cites examples like the following:

- (8) ἀπὸ σαυτοῦ ἴγώ σε διδάξω.  
 from SELF<sub>i</sub> I you<sub>i</sub> will-teach  
 I will show you based on yourself.  
 (Aristophanes, *Clouds*, v. 385)

This is an interesting approach; since the person whom the speaker will teach is the focal point of the clause, so to speak, the reflexive is used to refer back to this focal point. A possible difficulty is that the second person pronoun σε is unemphatic here, and that it is in fact the reflexive which is in an emphatic position in the beginning of the clause, but we might understand Humbert’s approach to say that what is being emphasized is that the source of what will be taught is the same as the person that will be taught.

<sup>11</sup>“The reflexive pronoun refers to the person who, in the eyes of the person that is talking, dominates the phrase or the proposition. This person is often the grammatical subject, but they can also be found as a complement, either direct or indirect.”



A further difficulty might be that it seems somewhat arbitrary whether we have a reflexive or not; in section 95 on page 62, Humbert writes that even though the pronoun refers to the subject of the clause, it cannot be used if the author considers the matter from his own point of view rather than that of the subject of the sentence (“... si *l’auteur* juge les choses à *son point de vue*, et non *au point de vue du sujet*”, emphasis in original). As an example, Humbert provides the following sentence from Xenophon’s *Memorabilia*:

- (9) τήν ἑαυτοῦ γνώμην ἀπεφαίνετο Σωκράτης πρὸς τοὺς  
 the SELF<sub>i</sub>.GEN opinion.ACC reveal.PAST Socrates<sub>i</sub>.NOM to the.ACC.PL  
 ὀμιλοῦντας αὐτῷ  
 associating.ACC.PL him<sub>i</sub>  
 “Socrates revealed his opinion to those who associated with him.”  
 (Xenophon, *Memorabilia*, 4.7.1. Quoted from Humbert)

While a complete discussion of this interesting point of view would go beyond the scope of the current review, a weak point of Humbert’s argument appears to be the close correspondence between syntactic structures and reflexives; what I mean is that we can generally explain the behaviour of locally bound reflexive pronouns syntactically. Even if there are edge cases where syntactic explanations either fail or are insufficient, the syntactic account makes quite precise generalizations about where and when we would expect a reflexive pronoun. The reflexive pronouns, for instance, are obligatory when they are a co-argument of the verb and have the same antecedent as the reflexive. It is not obvious to me how we would restrict the perspectival approach to predict that when we have a complement of a verb that is co-referent with the subject, this always has to be a reflexive pronoun. My impression is that the argumentation of Humbert in section 95 on page 62 fails to predict this kind of behaviour in an economical manner (presumably, we could say that the emphasis has to be on the pronoun when it is a coargument, or something to that effect).

### 1.1.5 Cambridge Grammar of Classical Greek

The *Cambridge Grammar of Classical Greek* (CGCG for short) is a recent grammar from four Dutch authors. The book owes much to syntactic work that has been done by the authors over the past decades, such as Rijksbaron 2006, and draws on functional grammar (S. C. Dik 1981, 1997). The authors note that although the grammar builds on advancements within “various areas of general linguistics” (Boas et al. 2019, p. xxxi), the syntax follows “a traditional pattern” (p. xxxiii). In general the CGCG has improved explanations of many phenomena, both syntactic and morphological.

As for reflexive pronouns, the authors follow the traditional division between direct and indirect reflexivity, stating that the reflexive pronoun generally takes the subject as its antecedent, though not always. Their example (on p. 345, note 1) of a non-subject antecedent is the same as Smyth’s, cited in (6). In contrast to K-G and Smyth and Messing, the CGCG provides definitions of both direct and indirect reflexivity: Direct reflexivity is defined on p. 345 in section 29.15 as “pronouns which refer back to an element within the same clause/construction. Indirect reflexivity is defined as “pronouns in a subordinate construction ... which refer back to an element in the main/matrix clause”. In other words, reflexivity is defined quite broadly: constructions like in (10) are considered reflexive; on p. 348, they write that “oblique cases of αὐτός are frequently used as third-person reflexives.”

- (10) οἱ δ' . . . εὐθὺς ἀφήσουσι τὴν λείαν, ἐπειδὴν ἴδωσί τινας ἐπ' αὐτοὺς ἐλαύνοντας.  
“They will let go of the booty immediately if they should see somebody pressing on against them.  
(Xenophon, *Cyropaedia*, 1.4.19, quoted from TLG)

The authors do comment, in note 1 on p. 348, that “it is difficult to account fully for the difference between the use of these pronouns in the third-person indirect reflexive.” This kind of construction, which may be said to be about whether we can have binding through a participle, will be discussed in section 3.3.

### 1.1.6 Summary

In this section, we have seen that all grammars but Humbert divide reflexivity into two categories, direct and indirect; Humbert opts something of an opposite approach, where emphasis or focus is the mechanism that is used to explain the distribution of the different pronouns.

Direct reflexivity is defined as when we have a reflexive pronoun referring to a constituent in the same clause; this constituent is usually the subject, but can also be an object and possibly others, if we take πᾶσιν as the binder in (4). Indirect reflexivity generally appears to mean that we have “logophoric interpretation”, if we by this understand any pronoun in a sub-clause that refers back to the subject of the matrix clause, such as when oblique cases of αὐτός are used to refer back to the subject of the matrix verb. For my purposes, this use will not be considered reflexive, and the oblique cases of αὐτός will not be considered as a logophor as defined in section 2.6.

## Chapter 2

# Methodology &c.

In this chapter, I will deal with various methodological questions that arise from the fact that we are studying a corpus language. In the case of Ancient Greek, we have a fixed amount of material that has survived. On the one hand, we have to deal with the fact that we only have a limited amount of material and that we are making judgments based on the language material that we have. Additionally, we have to deal with whether the text that has been transmitted is correct. On the other hand, I will try to present the necessary theoretical framework, lexical-functional grammar, in a concise way. Then, the section concludes with a discussion of perspective and binding to a perspective holder.

### 2.1 Ancient Greek: A Corpus Language

As a dead language, Ancient Greek is what is also known as a corpus language. This means that we only have a given amount of material; there are no native speakers. When we work with a fixed corpus, there are some limitations. In my case, the corpus is Herodotus's *Histories*. More specifically, I have made selections from the *Histories* by going through books 2 and 7 in full and by searching for examples in the annotated treebank PROIEL. The examples that are found in this selection will then be analyzed qualitatively rather than quantitatively, but nonetheless I offer some numbers below in order to give a sense of what is found in the corpus.

#### The Corpus

To find examples in the PROIEL treebank, I have used search strings to look for specific structures in the annotated sentence trees in INESS.<sup>1</sup> To look for examples of non-local binding, the search string `#x >comp #z >* #y: [pos="Pk"]` was used. To look for reflexives dominated by a participle, `#x: [morph="...p....."] >* #y: [pos="Pk"]` was used. The first search string captures all situations where a node dominates a COMP (in PROIEL's annotation) that, at any depth, dominates a reflexive (indicated by "Pk"). This let me search for complex examples like the one discussed in section 4.1.1, and also returned hits for "simple" examples like a verb of speaking with an infinitival complement. The second string was used to look for any situation where we might have a participle (represented by the "p"; the full stops indicate that the string accepts any value for that field) that dominates, at any depth, a reflexive. This string was employed to look for the quite specific situation where the subject of the main verb is referred back to by a reflexive that is dominated by a participle with another subject,

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<sup>1</sup>See Haug and Jøhndal 2008 for PROIEL. For INESS, see Rosén et al. 2008. PROIEL in INESS can be reached through the following URL: <http://hdl.handle.net/11495/DA68-56C8-439C-0>.

which is the subject of section 3.3. Most of the hits returned by this string were false positive in the sense that the reflexive referred to the subject of the participle.

Books 2 and 7 were chosen for the same reasons as those cited by Bakker 2009, p. 146: in book 2, there is a lot of description, and in book 7, there is a lot of speech, both direct and indirect, as well as narrative passages. In other words, these two books offer a look at the variety of examples found in Herodotus's *Histories*, and complements the more focussed searches in PROIEL.

In all, I have analyzed 177 examples of ἐαυτοῦ (out of a total of 524 in all of Herodotus), and 102 of these come from books 2 and 7. 65 examples have been analyzed as long-distance reflexives, and the rest are local. Most of the LDRs are binding of a reflexive into an infinitive which is the complement of the matrix verb rather than further down, so to speak; there are 6 LDRs with a syntactically present antecedent that have binding across a finite clause. 6 of the LDRs have no antecedent present in the sentence at all. So local binding is, in other words, the most common – and by a bigger margin than the numbers here would indicate, since my searches in the PROIEL corpus have skewed the distribution towards a greater share of LDRs.<sup>2</sup>

### Limitations

This subsection will discuss the limitations of what we can say about a language when we draw examples from a corpus. In particular, some of the techniques we would normally take advantage of are not possible, since we cannot ask a native speaker to give judgments of grammaticality. This means that it's not so easy to swap one kind of pronoun for another and ask if the new sentence is grammatical, and so on, but this problem can usually be emended by looking through the corpus to see if the desired construction is found, even if that is a laborious process. While this difficulty is not always resolvable, it is still a smaller challenge than the absence of negative grammaticality judgments – which is to say that it is very hard to produce positive evidence that something is ungrammatical. The core problem is one of inference, since it is not logically possible to infer something with absolute certainty – but in the case of highly frequent phenomena, we can be quite certain. The problem is for the rare and infrequent phenomena, though they have a tendency to be very interesting, perhaps because of their rarity. In other words, the fact that something does not occur in the corpus is not in and of itself enough, and even the fact that something does occur in the corpus is not necessarily the final word.

To illustrate further, Noam Chomsky has been a noted skeptic of corpus linguistic investigations given its limitations. In an interview, he memorably said that “a corpus never tells you what is impossible. In fact, it doesn't even tell you what is possible” (quoted from Aarts 2000, p. 6). But in return, a corpus comes with many benefits. On the one hand, the “armchair linguist” who invents examples and tries to decide if they are grammatical or not based on his or her own intuition is liable to err, see for instance Asudeh and Keller 2001, who discuss how faulty evidence gathering has led to mistaken judgments about binding for picture noun phrases. In other words, working from a corpus means that we have better verifiability and higher quality examples than we would get from introspection (not that introspection has ever been particularly dominant in Greek grammar – which is one of the reasons why older grammars of Ancient Greek continue to be extremely useful). Other advantages mentioned by Svartvik 1992 include that corpus linguistics are a very interesting resource for the linguist working with a theory, since we

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<sup>2</sup>For the COMP search, I included all results in my analysis; for the participle search, almost all results were “false positives” (*i.e.*, bound to the subject of the participle), so I only included the true positives that the participle search string produced, which was 11 of the in total 101 hits.

can make predictions and test them. If the corpus contains things that our theory does not predict, we need to change or abandon our theory. What I will be doing, is basically to develop a theory based on the examples that I am able to find. This theory will then make certain predictions that we can test; though the absence of disallowed examples in the corpus does not in and of itself mean that something actually is impossible, it can give us a pretty good indication given a large enough corpus – and if it is Ancient Greek we want to work with, then it is in any case the best we can do.

Another point that might be worth addressing is that reducing our corpus to one author reduces the amount of unknowns we are dealing with (compare Bakker 2009, 2f.). For my purposes, one such unknown is differences in binding between dialects and time periods. When dealing with reflexive pronouns in Ancient Greek, Herodotus has the added benefit of a clearer difference between the reflexive pronoun and the oblique cases of αὐτός. We can take the accusative as an example: in Attic, the accusative of the reflexive could look like αὐτόν or αὐτήν, and the oblique cases of αὐτός would look like αὐτόν or αὐτήν. For Herodotus’s Ionic Greek, αὐτός would have the same accusative forms, but the reflexive would have the forms ἐωυτόν or ἐωυτήν. Since aspirations were not in use until Alexandrian scholars introduced them in the Hellenistic period, corruption could have happened more easily in Attic Greek than in Herodotus’s Ionic.

## 2.2 Textual Questions

The corpus of Ancient Greek is in general somewhat different from corpora based on a living language like English. There are many things that we need to be mindful of, including errors of transmission (though they can of course occur at any point in a language’s life); an Ancient Greek text will generally contain “corrupt” passages, and Herodotus’s *Histories* is no exception.<sup>3</sup> While the manuscripts generally appear to agree with respect to the reflexives, I will comment on three passages, each illustrating a different case. For the examples that I use elsewhere, I have checked Wilson’s apparatus to confirm if there are textual issues.

The first is a so-called *locus desperatus*. I provide a tentative translation, assuming a meaning along the lines of that suggested by Wilson 2015a, p. 41, who suggests the emendation παῖδα <παρὰ> πατρός ἐωυτῶν ἕκαστον <διάδοχον> ἐόντα (but below I give the text as it is in the printed edition of Wilson 2015b):

(11) ἀριθμέοντες ὧν καὶ δεικνύντες οἱ ἱερεῖς ἐμοὶ ἀπεδείκνυσαν παῖδα †πατρός ἐωυτῶν ἕκαστον‡ ἐόντα, . . .

And so, by counting and illustrating, the priests showed me how each of them (ἐωυτῶν) as a child followed his father (and became a priest)  
(Herodotus, *Histories* 2.143.3)

The question of how the reflexive is bound does not really appear to be changed by the differences in reading, since the antecedent is presumably the priests in either case, but of course it is difficult in this situation to be sure about how the details are to be construed.

Another situation is the editorial deletion in 2.152.5, where I have written the relevant PPs in boldface:

(12) ὁ δὲ μαθὼν τὸ χρηστήριον ἐπιτελούμενον φίλα τε τοῖσι Ἰωσι καὶ Καρσί ποιέεται καὶ σφραγας μεγάλα ὑπισχνεύμενος πείθει **μετ’ ἐωυτοῦ** γενέσθαι· ὡς δὲ ἔπεισε,

<sup>3</sup>I use Wilson’s 2015 OCT edition of Herodotus’s *Histories*.

οὕτω ἄμα τοῖσι {μετ' ἑωυτοῦ} βουλομένοισι Αἰγυπτίων καὶ τοῖσι ἐπικούροισι καταρῆει τοὺς βασιλέας.

And after he had learned that the prophecy was being fulfilled, he made friendly favours to the Ionians and the Carians, and tried to persuade them to join him (μετ' ἑωυτοῦ) by promising great things. And when he had persuaded them, he destroyed the kings together with the Egyptians who wanted to come with him (uncertain translation of {μετ' ἑωυτοῦ}) and his allies (*i.e.*, Ionians and Carians).

(Herodotus, *Histories* 2.152.5)

The reason for the deletion is a “careless repetition” (Wilson 2015a, p. 43); Wilson follows Hude who followed Krüger in deleting it. So what is the difficulty? Wilson appears to think that it is the absence of an infinitival complement for βουλομένοισι, so that the PP does not fit anywhere; hence, he suggests to emend by adding an infinitive like γενέσθαι or μάχεσθαι, though the suggestion is relegated to the *apparatus* rather than adopted in the text. If we can have βουλομένοισι modified by μετ' ἑωυτοῦ, then we could, on the basis of what I will argue in section 3.3, say that we can have binding through a participle and that the example is grammatical. It is not clear if this is allowed, however. In that case Krüger’s emendation might offer the easiest way out. The alternative is to add an infinitive. In that case, the reflexive, as I will argue in chapter 4, would probably not be available, since antecedents outside of an infinitival clause are available only if we have logophoric binding, which we in this case do not have: binding would be from the reflexive in the adverbial PP introduced by ἄμα to the subject of the main verb, *i.e.*, καταρῆει, which is not a perspectival verb. Even if the easiest option in this case is to see it as a mistaken repetition rather than a missing infinitive, it does illustrate how binding facts can help us in textual questions.

The third case is emendation, as illustrated by 2.122.3. Here, the MSS have αὐτῶν which Stein corrected to ἑαυτῶν, albeit without any explanation.<sup>4</sup>

(13) φᾶρος δὲ αὐτημερὸν ἐξυφῆναντες οἱ ἱερεὺς κατ' ὧν ἔδησαν ἑνὸς ἑωυτῶν μίτρη τοὺς ὀφθαλμούς, ...

And on that day, after the priests had woven a robe, they bound the eyes of one of them (ἑωυτῶν) with a mitre, ...

(Herodotus, *Histories* 2.122.3)

In this case, Stein’s emendation agrees with Kiparsky 2012’s claim that the third person reflexive ἑαυτοῦ is obligatory when the antecedent is in the same clause as the antecedent. I have not been able to investigate the distribution of the oblique forms of αὐτός, though, which would be necessary be certain about what the correct reading is; if it turns out that this example is not an isolated one, then we would probably want to revise our ideas about when a reflexive pronoun is obligatory.

Hopefully, these examples also illustrate that there is practical value for philologists in developing a more rigid theory of binding in Ancient Greek than what we find in traditional grammars. With these things in hand, some questions can be resolved through reference to theoretical considerations that have been established by empirical research.

<sup>4</sup>His *apparatus* merely says “scripsi”, and I couldn’t find anything in the introduction, which was mainly concerned with word forms, endings and the like.

## 2.3 Lexical Functional Grammar

This section will contain a very brief outline of the fundamental formalisms of LFG aimed at making it possible to read the f-structures in the subsequent analyses.<sup>5</sup> LFG operates around several levels of representation, and of these, the two most important for syntax are f-structure, or functional structure, and c-structure, or constituent structure. The functional structure is built from the constituent structure along with the lexical entries of the words, and the constituent structure is in turn a result of parsing the string of words that make up the sentence in question.

An f-structure is an attribute-value matrix where each attribute may have a simple value (such as the pair DEF = +), a nested f-structure or a set of f-structures as its value. Crucially, though, each attribute can have one and only one value, and can either be a GRAMMATICAL FUNCTION (GF) or a simple like DEF. GFs are theoretical atoms in LFG, which is to say that they are assumed as primitives.<sup>6</sup> They are, in other words, not primarily associated with phrase structure configurations or the like. The GFs in LFG are: SUBJ(ECT), OBJ(ECT), OBJ(ECT)<sub>θ</sub>, OBL(IQUE)<sub>θ</sub>, POSS, COMP, XCOMP, ADJ, XADJ, TOP(IC), and FOC(US).<sup>7</sup> GFs have f-structures as their values, and they must contain what is known as a PRED value. A PRED can perhaps be seen as the attribute that denotes the semantic content of a word, and is in this sense different from the other attributes that we can have; its value must be semantic. In f-structures, this is marked by the use of single quotes to note that we are dealing with a semantic value and that this value has to be unique. This also goes for the “top” or outermost f-structure, where the PRED will have the semantic content of the main verb as its value.

A core feature in the way LFG approaches phrase structure is the idea that there is no movement or similar things happening, so that c-structure reflects the surface order of words in the sentence. However, it turns out that some things cannot be accounted for in a linear manner, and I will return to that at the end of this section. For an illustration of the mapping from c- to f-structure for Ancient Greek, see Dalrymple, Lowe, and Mycock 2019, p. 180.

The core intuition is that a sentence is a syntactic unit where the words belong together in some configuration or other. This configuration can be rather hierarchical, as is the case for English, or rather flat, which is the case for Ancient Greek, as we will see. A hierarchical structure generally corresponds to stricter configurationality, *i.e.*, stricter conditions on which order words and phrases can appear in, and conversely, less hierarchy generally corresponds to fewer constraints on the possible sequences of a language. For English, this is visible in such things as Spec,IP being the position of the subject, and the I node being the position of the finite verb. In Ancient Greek, grammatical functions are not associated with structural positions.

I will mainly discuss parts of LFG that are relevant for binding. For Ancient Greek, the relevant representation for discussing syntactical binding is f-structure.<sup>8</sup> That this

<sup>5</sup>This section draws on Bresnan et al. 2016 and Dalrymple, Lowe, and Mycock 2019.

<sup>6</sup>This is not entirely true, as they are in a sense created by argument structure, but I make this simplification since I do not touch on argument structure.

<sup>7</sup>SUBJECT, OBJECT, OBJECT<sub>θ</sub>, OBL<sub>θ</sub>, COMP, XCOMP are the governable functions; ADJ, XADJ, TOPIC and FOCUS are ungovernable. SUBJ, TOPIC and FOCUS are also grammaticalized discourse functions. Governable functions must be an argument of a PRED.

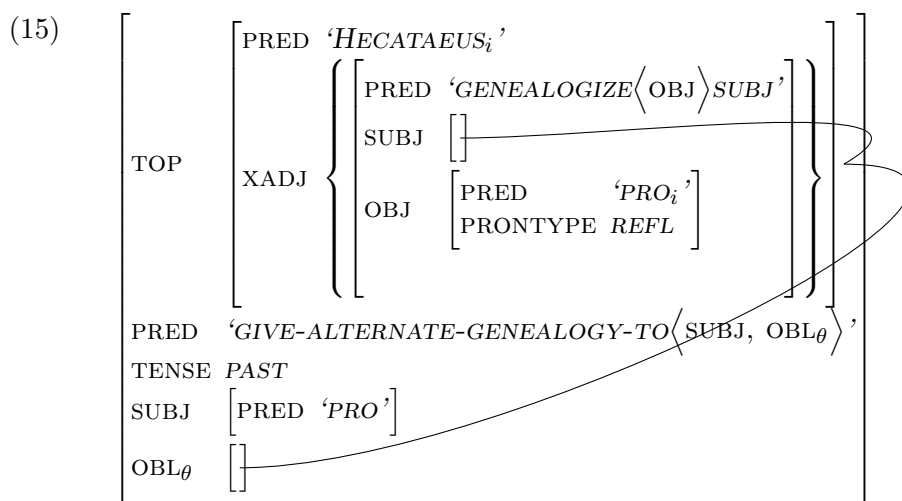
For POSS in Ancient Greek, see below in section 2.5.

<sup>8</sup>Which is not to say that c-structure is not important or without challenges; to account for the position of clitics and post-positives in Ancient Greek, however, some modifications of the basic LFG c-structure machinery are necessary: Goldstein and Haug 2016 employ a multiple context free grammar to accommodate the positioning of second-position clitics.

is the case is also clearly visible from such things as Ancient Greek reflexives generally being subject-oriented (in fact, all the reflexives in my corpus have a subject as their antecedent). When we look at sentences through f-structures, we can explicitly see that what is an oblique argument on the surface, namely Ἑκαταίω in (14) with the f-structure in (15), is the subject of the participle (γενεηλογήσαντι).

- (14) Ἑκαταίω δὲ γενεηλογήσαντι ἑωυτὸν ... ἀντεγενεηλόγησαν ...  
 (The Egyptian priests) gave Hecataeus a different genealogy than he had given himself (ἑωυτὸν) ...  
 (Herodotus, *Histories* 2.143.4)

Here we see the TOPIC, Hecataeus, be an oblique argument of the main verb, and the subject of an XADJ. As an open function, XADJ requires an outside subject, and this subject position is available for control by the TOPIC, Hecataeus. This can be represented in the following f-structure: In (15), the lines are meant to illustrate that the  $OBL_{\theta}$  is identical to TOP, and that they in turn are identical to the SUBJ of the XADJ. This is called structure sharing in LFG, and is a way of visualizing identity relations.



We can read this f-structure as the sentence where 'GIVE-ALTERNATE-GENEALOGY-TO' is the main verb. The antecedent is the subject not of this main verb, however, but of the XADJ of the TOP, namely Hecataeus. The f-structure of the reflexive pronoun is the value of the OBJ in the only f-structure contained in the XADJ (since we can in principle have any number of adjuncts, the value of the XADJ is a set, marked with curly brackets. This lets us have any number of f-structures in one value). The antecedent, Hecataeus, is also the SUBJ in this f-structure – as indicated by the lines, the value of this SUBJ feature is identical to the  $OBL_{\theta}$  and the TOP of the outermost f-structure.

Hopefully, this illustrates that f-structure is the relevant level of representation for understanding binding. In the next section, I will show how we can state the relationship between the reflexive and the antecedent in more formal terms: this is done with what is known as a path; Paths through f-structures and functional uncertainty – a key mechanism for discussing binding domains – are the subjects of the next section.

### 2.3.1 F-Structure Paths and Inside-Out Functional Uncertainty

FOR a given sentence, like (14) above, we can specify the path from the reflexive to the antecedent. Functional uncertainty is a way of specifying a path where we do not know



exactly what we might find. In other words, functional uncertainty is an extension to the basic function specifications that we find in LFG.

When we want to specify the path from the reflexive to the antecedent, we do so by way of inside-out functionality, though it is possible to state paths starting from the outside and moving inwards. In fact, that is what we would do for most things, but for reflexives, where we can imagine the reflexive as looking for an antecedent, we start there and move outwards. So when we want to specify the path from the reflexive in the above f-structure, we do so by starting with an up-arrow, which is a meta-variable that stands for the “current location”. The current location will be the value of an attribute, and this is the GF of the reflexive. If the antecedent is found in the same f-structure as the GF of the reflexive, then we stop looking and write (REFLEXIVE-GF  $\uparrow$ ) ANTECEDENT-GF. Here, we can see that the path from the reflexive pronoun and out to the antecedent is given by (OBJ  $\uparrow$ ) SUBJ.<sup>9</sup> The expression in the parentheses evaluates to the f-structure that contains the OBJ, *i.e.* the XADJ contained in the OBL $_{\theta}$ . Since the SUBJ value is identical to TOP and OBL $_{\theta}$  in the outermost f-structure, which is the f-structure of the full clause, we have a recursive effect that creates an infinite loop. This is not problematic, however: see (14) in Haug and Nikitina 2012 for a Latin example.

Since the Ancient Greek pronoun *by* and *large* is subject-oriented, and since all the examples in my corpus have subjects as their antecedents when looked at in f-structure, ANTECEDENT-GF will always be SUBJ. As such, we might say that we are looking for an f-structure with a SUBJ that is semantically identical to the reflexive pronoun. Formally, this f-structure is identified by the expression inside the parentheses. So in the above f-structure, we wind up in the f-structure that is the value of the attribute XADJ.

For a given sentence, it is possible to specify a definite path like (OBJ  $\uparrow$ ) SUBJ. But when we want to specify the domain of a reflexive pronoun, we want to say something about all the possible paths that we can get, and this is where functional uncertainty comes in. Functional uncertainty utilizes the fact that we can treat f-structure as a regular language, which in turn means that we can use regular expressions to describe them. In the case of reflexive pronouns, we want a general expression for the path, such as (GF\*  $\uparrow$ ) SUBJ. This can capture any possible path – but we do not want a theory that predicts that reflexives can have antecedents anywhere, since that is not what we find in natural languages. In other words, we want to constrain them. How that is done and what domains these constraints usually end up being is dealt with in section 2.4 below.

## 2.4 Binding in LFG

Here we pick up where we left off above in section 2.3.1. The question here will be how we will describe binding in LFG terms. In other words, we want an idea about the kinds of things that are relevant for the binding of the reflexive. As mentioned earlier, LFG mainly relies on f-structure when seeking to explain binding phenomena. The subsequent discussion will therefore revolve around f-structure, which does not ordinarily take account of linear sequence.<sup>10</sup> Broadly speaking, the mechanisms that LFG employs to explain binding can be divided into two. The first component comprises

<sup>9</sup>Strictly speaking, what we want is semantic identity between the two, *i.e.*, between the reflexive pronoun and the antecedent (more on paths in the next section). Since I am interested in the binding domain rather than identity questions, I will simply give the path and take for granted that the two are semantically identical.

<sup>10</sup>Although this does not mean that c-structure is irrelevant: linear phenomena make a difference in some cases, see Rákosi forthcoming, pp. xi–xii, but I have not been able to find similar phenomena for Ancient Greek.

the mechanisms that connect an anaphor with its antecedent, and the second ensures that we restrict these mechanisms in order to ensure that they predict behaviour that we actually find in natural languages.

The main mechanisms for “connecting” an anaphor with an antecedent are f-command and the functional hierarchy. (16) gives the functional hierarchy as defined by Bresnan et al. 2016, p. 229:

- (16) **Functional hierarchy:**  
 SUBJ > OBJ > OBJ<sub>θ</sub> > OBL<sub>θ</sub> > COMPL > ADJUNCT

Since the Ancient Greek reflexive for the most part is subject-oriented and all of my examples have a subject antecedent, the functional hierarchy will not feature in the subsequent discussions, since the hierarchy requirement in any case is satisfied. In the cases where the reflexive pronoun is itself a subject (such as in 1.34.1, where we have ... ὅτι ἐνόμισε ἑωυτὸν εἶναι ἀνθρώπων ἀπάντων ὀλβιώτατον, “...that he thought himself to be most fortunate of all men”), the antecedent is higher in the f-structure, meaning that the subject of the matrix clause f-commands the subject in the sub-clause.

The other mechanism for deciding what binds what is f-command. F-command follows the same logic as “c-command”.<sup>11</sup> In (17), I give the f-command definition of Dalrymple, Lowe, and Mycock 2019, p. 238, which is based on the one found in Bresnan 1982, p. 386:

- (17) *f* f-commands *g* if and only if *f* does not contain *g*, and all f-structures that contain *f* also contain *g*.

The notion of f-command does a few things that it might be useful to make more explicit. In the first place, *f* cannot contain *g*. This means that we cannot have binding *from within an f-structure*. In other words, there has to be some form of predication: something has to be said about something else. This is complicated a bit by what happens in the XADJ example above, but in general is quite intuitive: the subject of a verb will not contain a reflexive pointing to the subject of that verb. What makes the XADJ example in (15) different, is that though the XADJ is contained in the f-structure of the SUBJ, the SUBJ in the XADJ f-commands the OBJ. Hence, the “relevant” SUBJ does not contain the OBJ.

I will illustrate this with the example found in (18), an f-structure for the sentence ... ἑωυτὸν ἐσέβαλε ἐς τὸ πῦρ, “he threw himself in the fire” (Hdt. 7.102.2), where what is traditionally known as the direct object has the unexpressed subject as its antecedent.

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<sup>11</sup>Compare Reinhart 1976 for c-command, who investigated the relevance of “precedence” and found that another mechanism is necessary.

$$(18) \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'THROW-IN}\langle \text{SUBJ,OBJ,OBLLOC} \rangle\text{'}, \\ \text{TENSE} \quad \text{PAST} \\ \text{ASPECT} \quad \text{AORIST} \\ \text{SUBJ} \quad \boxed{2} \left[ \text{PRED} \quad \text{'PRO'} \right] \\ \boxed{1} \text{OBJ} \quad \boxed{3} \left[ \begin{array}{l} \text{PRED} \quad \text{'PRO'} \\ \text{PRONTYPE} \quad \text{REFL} \end{array} \right] \\ \text{OBL}_{\theta} \quad \boxed{4} \left[ \begin{array}{l} \text{PRED} \quad \text{'IN}\langle \text{OBJ} \rangle\text{'}, \\ \text{PCASE} \quad \text{OBLLOC} \\ \text{OBJ} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'FIRE'} \\ \text{DEF} \quad + \end{array} \right] \end{array} \right] \end{array} \right]$$

In the above f-structure, we are interested in two substructures, SUBJ and OBJ, marked as nos. 2 and 3. They are contained in the f-structure labelled 1, which is the whole clause. Structurally, we might say that they are on the same level, but since syntactic rank is defined with reference to the functional hierarchy, the SUBJ is higher than the OBJ, as seen in (16). We want to find the domain that  $\acute{\epsilon}\alpha\lambda\upsilon\tau\omicron\upsilon$  can maximally be bound within. But let us first take a look at the overview of the various binding domains that are found, provided by (14) in Dalrymple, Lowe, and Mycock 2019, p. 507:

$$(19) \quad \begin{array}{c|c|c|c} \text{Coargument domain} & \text{Minimal complete} & \text{Minimal finite} & \text{Root domain} \\ & \text{nucleus} & \text{domain} & \\ \hline & \text{seg selv} & \text{sin} & \text{seg} & \text{ziji} \end{array}$$

where *ziji* is a Chinese reflexive pronoun (see, e.g., Tang 1989 and Lam 2021), and *seg selv*, *sin* and *seg* are Norwegian pronouns. The definitions of these four domains can be given as follows (after (30) in Rákosi forthcoming):

- (20) a. Coargument Domain: minimal domain defined by a PRED and the grammatical functions it governs  
 $(\quad \text{GF}^* \quad \text{GF}_{\text{PRO}} \uparrow)$   
 $\neg(\rightarrow \text{PRED})$
- b. Minimal Complete Nucleus: minimal domain with a SUBJ function  
 $(\quad \text{GF}^* \quad \text{GF}_{\text{PRO}} \uparrow)$   
 $\neg(\rightarrow \text{SUBJ})$
- c. Minimal Finite Domain: minimal domain with a TENSE attribute  
 $(\quad \text{GF}^* \quad \text{GF}_{\text{PRO}} \uparrow)$   
 $\neg(\rightarrow \text{TENSE})$
- d. Root Domain: f-structure of the entire sentence with all sub-clauses and adjuncts  
 $(\text{GF}^* \text{GF}_{\text{PRO}} \uparrow)$

The formal definitions in (20) make use of the inside-out functional uncertainty formalism that was discussed in section 2.3.1. The sideways arrow  $\rightarrow$  refers to f-structures that the function is passing through, so to speak. When we put a negative constraint on the path, such as  $\neg(\rightarrow \text{PRED})$ , we state that the path cannot go through an f-structure with a PRED value. If it does, then we are outside of the Coargument Domain.

As we will see in chapters 3 and 4, this overview turns out to be somewhat problematic for Ancient Greek. We see that  $\acute{\epsilon}\alpha\lambda\upsilon\tau\omicron\upsilon$  frequently does refer to a local antecedent, and

in fact obligatorily does so in at least some cases. But if we look at (2) again, we see that Jason – while formally eligible as an antecedent, since it is a subject which f-precedes the anaphor and has the same features as Triton and the reflexive – is not what the reflexive pronoun refers back to. In other words, we have a potential local antecedent that is “rejected” by the reflexive pronoun in favour of what I in the next section will term the perspective holder. In chapter 4, we will also see ἐαυτοῦ in unembedded indirect discourse referring to an antecedent that is completely absent from the sentence, even though there are potential antecedents locally. This means that we need a solution for the non-local cases as well, and in the final section of this chapter, I will set out an approach that can allow us to explain these cases.

## 2.5 Greek Syntax in LFG

The question now is how to analyze Ancient Greek in LFG. In part, this will be taking the insights of traditional grammars and looking for ways to express them in LFG terms, but it will also include having to address some points that are non-issues seen with a traditional view. One such question is whether Ancient Greek noun phrases are NPs or DPs, and whether they are endo- or exocentric. Similarly at the clause level, we want to know if a sentence is endocentrically headed by a verb, or if it is exocentric. This section will, in other words, briefly deal with some basic questions of Ancient Greek syntax to prepare the subsequent analyses of binding. It has not been feasible to look for definite answers or to give exhaustive explanations, but I will try to give some reasons for some fundamental choices; more detailed analyses of specific phenomena will be done together with the examples where it is needed.

### Sentence Structure

At the sentence level, Ancient Greek shows a lot of flexibility: the word order is “free”. Languages with “free” word order are often called discourse-configurational, which can somewhat simplistically be said to mean that the word order is determined by the information that is expressed and how it relates to the discourse context – so in a sense, the word order is not “free”, even if there are few syntactic restrictions (see H. Dik 1995 for an early approach to explaining word order in Herodotus). Even though we see a large degree of syntactic freedom in Ancient Greek, phrases are for the most part fairly continuous, though *hyperbaton* is fairly common too. Discourse-configurational languages are generally assumed to be exocentric and to have a flat structure, see Dalrymple, Lowe, and Mycock 2019, 179f. for a simple example structure and Goldstein and Haug 2016 for a more complex and complete approach, which also accounts for the discontinuities that arise from second-position clitics.

### Noun Phrase Structure

The Ancient Greek noun phrase demonstrates a remarkable flexibility. Bakker 2009 is a discussion of Ancient Greek NPs from the point of view of functional grammar. She discusses some remarkable examples in Herodotus, such as (4) on p. 216, repeated here as (21):

- (21) οὗτος δὲ ὁ Ἰολίην καὶ τοὺς ἄλλους τοὺς παλαιούς ὕμνους ἐποίησε ἐκ Λυκίας ἐλθὼν τοὺς ἀειδομένους ἐν Δήλῳ  
This Olen, after coming from Lykia, also made **the other ancient hymns that are sung at Delos (lit. the other the old hymns the sung at Delos).**  
(Herodotus, *Histories* 4.35.3; Bakker’s emphasis and translation)

Trying to give a definite answer as to how Ancient Greek NPs should be analyzed in LFG terms would carry me too far afield, but I will try to set down the necessary groundwork, seeing as reflexives are frequently used within NPs to mark possession as well as other things. One such question, for instance, is what to do with the extensive variation in phrase structure and the frequent discontinuities, but since f-structure is the relevant level of representation for binding, most of this variation will not be visible in analyses: parts of a noun phrase that are non-contiguous will contribute towards the same f-structure, though analysing Ancient Greek NPs as “nominal strings” might also be an option (see Börjars and Lowe forthcoming, p. vi).

Questions about the phrase structure and status of NPs are generally orthogonal to binding, though one thing that might depend on phrase structure is binding in the case of what is known as “picture noun phrases”, often abbreviated to PNPs. This includes examples like “Robin’s picture of herself/himself” (compare Asudeh and Keller 2001). In these cases, the antecedent has the grammatical function POSS. When it comes to Ancient Greek, genitive noun phrases are commonly used to mark possession, and reflexive pronouns can be used here as well. But the grammatical function POSS is generally associated with some subject-like qualities. In English, we have examples like (22), which is taken from (68) in Dalrymple, Lowe, and Mycock 2019, p. 35. (a) illustrates the normal, clausal subject role, whereas (b) and (c) illustrate the subject-like properties of POSS, and I added (d) to illustrate binding in these situations, similar to the picture noun phrase above:

- (22) a. John criticized the book.  
 b. John’s criticizing the book.  
 c. John’s criticism of the book.  
 d. John’s criticism of himself.

The question then becomes if we can find similar subject-like possessors in Ancient Greek – because if we can, then we should probably expect to find that POSS is a possible antecedent for the reflexive pronoun, like in picture noun phrases.

As a matter of fact, traditional Greek grammars have a use for the genitive that is called the “subject genitive”. CGCG 30.28 cites two examples of subject genitives, though the second is ambiguous. They are given here, along with the translations offered in CGCG:

- (23) a. ἡ μάχη ἡ τῶν στρατιωτῶν  
 the soldiers’ battle/the battle fought by the soldiers  
 b. ὁ τῶν πολεμίων φόβος  
 the enemies’ fear/the fear felt by the enemies (*of the subject*) or the fear for/inspired by the enemies (*of the object*)

The first of the two is quite clear in that the soldiers are the ones doing battle, but that this is what it means is not the same as saying that the genitive noun phrase has the grammatical function POSS. In the second example, the sentence can be either a “subject genitive” or an “object genitive”. But based on these two examples alone, it’s hardly possible to say if we really are dealing with a POSS.

Here, I will only offer three very abbreviated arguments against Ancient Greek having a POSS akin to what we found for English in (22) above. The first argument is that the Ancient Greek genitive appears to have a quite adjectival distribution. For instance, it can be coordinated with an adjective, as we will see in (46), where the genitive reflexive is coordinated with the adjective ἰδιωτικός, though it should be noted that ἰδιωτικός

probably is a somewhat special adjective in the sense that it might denote some sort of possession or at least indicate who owns something. With that said, though, the distribution of genitive possessors is somewhat freer than that of adjectives, so that there are differences. For instance, genitive modifiers can be pre- or postnominal in a definite noun phrase without being marked by an article. Adjectives need to be “contained” by an article if they are to modify a definite noun phrase.

The second argument is that we do not find phrases like (22-b) and (22-c) in Ancient Greek, although, as discussed above, we have to be careful in arguing from the absence of something in a corpus language. This means that even though all the examples that I have analyzed have subject antecedents, we know from grammars of Ancient Greek that GFS other than SUBJ can be the antecedent of a reflexive. As for the examples in (22), the gerund construction has no clear parallel in Ancient Greek (verbal adjectives with dative agents are perhaps the closest), but genitives used to mark possession are similar to (22-c) on the surface. On its own, the corpus that I have looked at is too small to say something like this with any reasonable degree of confidence, but coupled with the fact that grammars of Ancient Greek make no mention of POSS antecedents, it seems like a reasonable guess that Ancient Greek should not have a subject-like POSS.

The third argument is cross-linguistic. Reuland 2011, 166ff. has argued that we do not find “POSS anaphora” in languages that have prenominal determiners, though he does note that more data would be desirable. Since Ancient Greek clearly appears to have prenominal determiners, it would make sense if binding to a POSS does not occur.<sup>12</sup>

A problem that remains is how to analyze possessive reflexives. While it is not a completely satisfactory solution, I will mark possessive reflexives as POSS; even if they have a rather adjectival distribution, there are also some relevant differences between the distribution of genitive possessors and adjectives.

The former can be a modifier of the noun phrase in a noun phrase like τῶν ἐρήμων τῆς Λιβύης (“the deserts of Libya”), whereas an adjective would have to be “encased” by an article, whether it came before or after the noun. As a consequence of this, it is not quite correct to mark possessive genitives with the grammatical function POSS. When I use POSS, it will be as a convenient short-hand absent an exact analysis, since I want to differentiate it from “normal” ADJs.

### **Tense and Infinitives**

Infinitives will feature quite prominently in chapter 4. As such, I provide a brief account of them here. The trickiest point is what kind of TENSE feature infinitives may have. They are commonly considered tenseless, but things are not necessarily so straightforward.

In the first place, infinitival complements in Ancient Greek can be divided into declarative and dynamic, see CGCG p. 580ff. They define declarative infinitives to be the complements of speech, thought and opinion verbs. These infinitival clauses will generally be COMPS in LFG terms, which is to say that they have “their own” subject, and do not require an outside subject, so to speak. Declarative infinitives can occur in any tense stem, including the future, which only has a relative tense interpretation and no aspectual interpretation. A lot of the time, these verbs can also accept clauses

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<sup>12</sup>A caveat is that it is not entirely clear what the function of the Ancient Greek definite article is. Rijksbaron 2019 [1993] emphasizes pragmatics (we might perhaps say something like “topicality”); Bakker 2009, p. 152 finds “identifiability” to be the key to the function of the definite article. But in LFG terms, there can be little doubt that the definite article does contribute something like DEF = + to the f-structure of the noun phrase, even if nouns do not have to be indefinite in the absence of a prenominal determiner.

introduced by complementizers like ὅτι, “that”, as an argument. Dynamic infinitives, on the other hand, are the complements of verbs that are modal or volitional, such as ἐπίσταμαι, “know how to”. The dynamic infinitives mostly appear in either the present or aorist tense stems, sometimes perfect – when used aspectually – but not future. These complements will generally be XCOMPs in LFG terms, meaning that they are open complements that require a subject from outside, generally the subject or the object of the matrix verb. At least in principle, there could be a difference between the two, and this difference might be of importance in the situations discussed in section 2.6 below. For now, though, I will be agnostic about any possible TENSE differences between them.

It has been argued that Ancient Greek infinitives have a form of deficient tense feature, seeing as they can mark future tense, among other things; Spyropoulos 2005 argues against earlier suggestions that the Classical Greek infinitive has a tense feature (such as Sevdali 2003), and suggests a tripartite division between “free”, “dependent” and “anaphoric infinitives” (p. 311) where the infinitive cannot be said to have a “full” tense feature. The “free infinitives” are probably meant to include infinitives occurring in unembedded indirect discourse, though Spyropoulos does not explicitly say so or include any examples that do not have an explicit matrix verb. The reason behind this is not quite clear to me, but might be explained by an assumption that a verb of speaking has to be understood, which might perhaps be called the traditional approach within Chomskyan grammar. Spyropoulos’s argumentation by and large appears to be motivated by how to explain case and agreement, and so we might reasonably expect quite different analyses within LFG where we have mechanisms like constructed case rather than, *e.g.*, a null *for* (see Spyropoulos 2005, p. 321). Sevdali 2013, p. 332 cites some examples that Spyropoulos’s approach does not explain. At any rate, Spyropoulos points out that it is only with “*verba dicendi/sentiendi*” (so generally the verbs that take declarative infinitives) that we can have the full range of infinitives, including the future. He concludes that infinitives carry an incomplete tense feature, and it is my impression that this incomplete tense feature is meant to extend to all infinitives, not just declarative infinitives.<sup>13</sup>

### Indirect Discourse

Somewhat related to the notion of tensed infinitives is how we describe indirect discourse. As I intimated above, the standard approach within Chomskyan grammar has typically be to understand an implicit verb of speaking with what is known as unembedded indirect discourse. But the view that there is an implicit verb of speaking is not tenable, and this suggests that we need a different approach.

Bary 2018, building on work by Haug, Jøhndal and Solberg 2019 for Latin, points to such things as the possibility of having unembedded indirect discourse even in the absence of a verb of speaking: this is shown by the fact that connective particles like γάρ, “for”, would otherwise be modifying the fact of speaking, since the particle always has scope over the entire sentence (Bary 2018, p. 10). Bary’s example is given in (24):

- (24) ὁ δὲ αὐτοὺς εἰς Λακεδαίμονα ἐκέλευεν ἰέναι. οὐ γὰρ εἶναι κύριος αὐτός.  
 He **recommended** them to **to** go to Lacedaemon; for (he said that) he **was** not himself empowered to act.  
 (Xenophon, *Hellenica* 2.2.12; adapted from (9) in Bary 2018. The underlining, emphasis and translation are hers)

<sup>13</sup>The approach of Sevdali 2013 is to conclude that all Ancient Greek infinitives are CPs, some “weak” and some “strong”. It is difficult to translate her approach into LFG terms, but I think the differentiation of “weak” and “strong” CPs would be difficult to maintain in an LFG approach.

She then points out that if there were an implicit verb of speaking in this sentence, then γάρ would indicate that the act of saying would be the cause or reason for what happened. Hence, the second sentence in the above example is an example of *unembedded indirect discourse* – an *AcI* with no matrix verb.

What appears to be happening here is that the infinitive functions as a presupposition trigger, or basically as a marker of indirect speech, see Bary and Maier 2021. The same goes for the so-called oblique optative, which Bary and Maier 2021 call a “reportative mood” (see p. 39). This means that the source of the utterance is more or less prominent in the context of the clause marked as reportative, and this semantic prominence will prove to be useful in explaining the behaviour of long-distance reflexives in chapter 4, and has bearing on the discussion of perspective in the next section.

For the purposes of the analyses in the next chapters, I will provide f-structures with a TENSE feature, so that an infinitive, for instance, has TENSE = INF, thus leaving aside exactly what kind of tense we might be dealing with.

## 2.6 Perspective and Perspective Holders: Logophoric Binding

So far, we have only been looking at syntax. Now, we not only require something to explain the fact that a reflexive pronoun can “reject” its closest possible antecedent, as in(2), but also that ἑαυτοῦ can be bound to an antecedent that is not found in the clause at all. One way out could be to define a logophoric ἑαυτοῦ, which is bound not syntactically to an antecedent, but to what I here will call a perspective holder. Dalrymple 1993, p. 4 wrote that “there are no anaphors which *require* an antecedent in a non-local domain but also *permit* an antecedent in a local domain”. But as we saw above, ἑαυτοῦ is obligatory in local binding except when there is binding through a participle. In light of this, defining two homophonous words would make sense, one local, syntactically bound version, and one logophoric version; otherwise, ἑαυτοῦ would display “contradictory” behaviour.

Logophoric binding in Ancient Greek is traditionally referred to as “indirect reflexivity”, but since this expression generally refers to a wider range of phenomena than what I will investigate here, it is necessary to provide a closer definition of logophoric binding.<sup>14</sup> Hagége 1974 coined the term “logophor” to describe words with a specific kind of distribution. In the words of Clements 1975, p. 141, these pronouns are specifically employed in order to “distinguish reference to the individual whose speech, thoughts, or feelings are reported or reflected in a given linguistic context, from reference to other individuals.”<sup>15</sup> Clements specifically discussed the African language Ewe, where he found morphologically distinct pronouns that fell under this definition of logophor. This is illustrated in (25):

- (25) Kofi be yè-dro  
say LOG-leave

<sup>14</sup>To give an example, CGCG includes the co-reference of αὐτόν with a subject in the matrix clause in their definition of indirect reflexivity, see (53) on p. 348. In the definition that will be discussed here, the oblique cases of αὐτός do not function as a logophor, even if it can receive a logophoric interpretation, similar to “her” or “him” in English.

<sup>15</sup>This comes close to traditional definitions of indirect reflexivity. On p. 143, Clements cites a definition for Latin (Ernout and Thomas 1964, p. 182): “Le réflexive est dit *indirect*, lorsque, dans une proposition subordonnée représentant la pensée ou l’intention du sujet du *verbe principal*, il renvoie à ce dernier.” (“The reflexive is called *indirect* when, in a subordinated clause that represents the thought or the intention of the subject of the main verb, it refers to this latter” (*i.e.*, the subject of the main verb)). He discusses indirect reflexivity and finds that there are some similarities and some differences.



“Kofi said that he (Kofi) left”  
 ((1) in Clements 1975)

Here, *yè* is a logophor. Comparing the usage of this kind of pronoun to the traditional definition of indirect reflexivity, Clements 1975, p. 145 concludes that we “have no a priori reason . . . to expect the ‘indirect reflexive’ pronouns of Latin and Greek to share any important grammatical functions or other characteristics with the ‘direct reflexive’ forms”

For Ancient Greek, the situation is of course a bit different from that of Ewe in that the logophor  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  is identical to the reflexive pronoun  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$ , whereas the Ewe logophor is unrelated to the reflexive (Clements 1975, p. 145). In this sense, Icelandic might offer a better clearer parallel to  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$ : the pronoun *sig* can have both a local and a logophoric interpretation, similar to  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$ . Maling 1984, p. 222 offers two illuminating examples:

- (26) a. skoðun Siggu fær mig til að halda að hana/\*sig vanta  
 opinion Sigga’s leads.IND me to think that she/\*REFL lacks.SUBJ  
 hæfileika.  
 talent
- b. skoðun Siggu er að sig vanta hæfileika.  
 opinion Sigga’s is that REFL lacks.SUBJ talent  
 ((20a-b) in Maling 1984, slightly adapted)

Maling comments that whereas (b) is widely accepted, nobody accepts (a). The difference between the two is that while (b) relates the view of Sigga, (a) instead refers the view of the first person speaker. Maling’s conclusion is that Icelandic *sig* appears to have “two distinct roles” (Maling 1984, p. 235): one that is “clause-bounded” and “obligatorily bound”, and one that is that of a “logophoric pronoun” available “in the subjunctive mood where governed by certain nonfactive verbs of saying, etc., or propositional attitude.”

Reuland 2017 confirms this:<sup>16</sup> “*Sig* in subjunctives is constrained by discourse factors; in particular, the antecedent of *sig* has to be the person (other than the speaker-narrator) whose perspective or point of view is presented in the sentence, . . .” (pp. 7f.)

This sort of interpretation is even allowed when there are no linguistically expressed antecedents. (27) is from a novel; *sig* refers to a person who is not present in the sentence, but whose thoughts are being related (and is the person referred to by the indices).

- (27) María var alltaf svo andstyggeleg. Þegar Ólafur kæmi  
 Mary was (ind) always so nasty when Olaf came (subj)  
 segði hún sér áreiðanlega að fara. Hún var alltaf svo góð við  
 told (subj) she SELF certainly to leave she was (ind) always so nice with  
 Ólaf og þegar Ólafur kom vildi hún aldrei tala við hann. Já,  
 Olaf and when Olaf came (ind) wanted (ind) she never talk with HIM yes  
 hún segði sér áreiðanlega að fara.  
 she told (subj) SELF certainly to leave.  
 “Mary was always so nasty. When Olaf would come she would certainly tell  
 him(self)<sub>i</sub> to leave. She was always so nice to Olaf, and when Olaf came she

<sup>16</sup>But compare Gärtner 2015 who offers counterexamples to Reuland’s distinction between infinitival and subjunctival complements, where Reuland held that logophoric binding was possible in the latter case, but not the former.

never wanted to talk with him<sub>i</sub>. Yes, she would certainly tell him(self)<sub>i</sub> to leave.  
 ((23) in Sigurðsson 1990)

This example is similar to the kind of behaviour that we see in (55), where the perspective holder is not present in the clause. Sigurðsson 1990, p. 316 writes of the alternation between subjunctive (as what Bary and Maier 2021 called a reportative mood) and indicative, noting that “it is possible to shift rather freely from one of these modes into the other. Now, once an author has created a SELF or ‘center of consciousness,’ it is present overall in the story.” In Herodotus, the possibility for logophoric reference appears more limited, but that would presumably be expected due to the style of the text; Herodotus does not write a contemporary novel involving stream of consciousness, but is in the business of collecting reports about from various people and places.

The examples from Ewe and Icelandic suggest that we want to describe the logophoric usage of ἐαυτοῦ separately. In terms of economy, it is usually seen as undesirable to have two identical lexical entries, but it seems impossible to unify the behaviour we see in only one lexical entry. A similar conclusion was reached by Solberg 2017 (see p. 24, etc.), and arguments along the same lines can be made here: the corpus has not produced LDRs with inanimate antecedents and LDRs are not in complementary distribution with other pronouns.<sup>17</sup>

Before moving on to the analysis of local reflexives, I will say a few things about the logophoric behaviour of ἐαυτοῦ and discuss some situations that might delineate the borders of logophoric usage.

On the “lower” bound of what might be logophoric, we have the simplest kind of examples that we find, namely a verb of speaking with an infinitival complement that contains the thought of the verb. In this situation, we could perhaps explain the reflexive as syntactically bound, as Reuland 2017 says is the case for Icelandic infinitives. One obvious counter-argument would be that binding in this case only happens to an animate antecedent: if binding in these cases was syntactic rather than logophoric, we would expect inanimate antecedents to be able to bind in such contexts.

To explore the lower bound of logophoric binding further, Ancient Greek has at least two kinds of infinitival complements, which have been referred to as “dynamic” and “declarative” (see Rijksbaron 2006 and CGCG). This corresponds, at least by and large, to functional control with “open” complements (XCOMPs) on the one hand, and “closed” complements (COMPs) on the other. In the latter case, the infinitive can occur in all “tenses” (*i.e.*, the infinitive form of each tense stem), but in the case of the dynamic infinitive, we can only get the aspectual infinitives (which is to say not future, and perfect only when used to express stative aspect).

Among verbs that take a dynamic infinitive, we mainly find subject control verbs like δύναμαι, “be able to”. In these cases, the subject of the matrix clause would also be the subject of the infinitive, so binding would in any case be local. In order for there to be logophoric binding, then, we would require a verb with object control and a reflexive that points to the subject of the matrix clause. A verb that can take both constructions is πείθω, “persuade”. In the CGCG, they write that when it means to persuade somebody to do something, it is a dynamic infinitive (so object control), but when it is to persuade somebody of something, or that something is the case, then it is a declarative infinitive (and no control). In (28), we have an example where we appear to have object control

<sup>17</sup>While this does not quite obtain for syntactically bound version of ἐαυτοῦ either, see section 3.3 on binding through participles, the distribution for local reflexives is by and large complementary with other kinds of pronouns.

with a non-reflexive or logophoric pronoun in one case, and a result clause with *ἑαυτοῦ* in the other:

- (28) ἐνθεῦτεν δέ, οὐ γὰρ ἔπειθε τοὺς Χίους ὥστε ἑωυτῷ δοῦναι νέας, διέβη ἐς Μυτιλήνην καὶ ἔπεισε Λεσβίους δοῦναι οἱ νέας.  
 But there – for he had not been able to persuade the Chians to give him (*ἑωυτῷ*) ships – he disembarked at Mytilene and persuaded the Lesbians to give him (*οἱ*) ships.  
 (Herodotus, *Histories* 6.5.2)

Here we have two quite parallel examples, one in a parenthetical clause with a reflexive pronoun and one with a non-reflexive pronoun. In the first case, the CGCG notes that *ὥστε* with an infinitive can be used for result clauses of the intended result (p. 534, section 46.9), though they also write that “*ὥστε* is redundant” when it is used together with a verb that needs an infinitival complement, such as *πέιθω* (p. 590, section 51.17), but if *ὥστε* is necessary for logophoric binding to be possible, then it has a clear function.

That a logophoric reading should be available at least when we have something like *ὥστε* to underline the intended result seems natural, especially compared to (29) below: there, we have a final clause where the matrix verb cannot be perspectival. In the latter case though, we have a dynamic infinitive where the object of the main clause is the subject of the infinitive, and we find *οἱ* instead of *ἑαυτοῦ*. This variation is interesting, and might provide a hint that binding to the matrix subject is not available in such cases of object control. This one example is of course far from enough to draw any conclusions, but it would be an interesting point to pursue further.

As it stands, I have not found binding to the subject of the matrix clause in cases of object binding outside of this one example with *ὥστε*. It would be interesting to look for further examples in order to know if logophoric binding to a perspective holder is available in other cases of object control. Since logophoric binding is not obligatory in general (compare section 4.3 for examples), the fact that we find *οἱ* when we have an unmarked dynamic infinitive is not particularly suggestive of the possibilities for logophoric binding to the subject of a matrix clause.

Another factor that may be relevant for logophoric binding is whether there are “blocking effects”. Lam 2021, 207f. gives some examples of how Mandarin *ziji* may be blocked. The examples include things like a potential antecedent for the LDR blocking an antecedent that is further away, and deictic use of third person NPs blocking binding to an antecedent further away (examples (11) and (12) in Lam 2021)). This may be of interest, since Lam defines *ziji* as being able to be bound either locally or as a logophor, akin to what I argue for in the case of *ἑαυτοῦ* in Herodotus. Such potential blocking effects are something that I will discuss in chapter 4.

Another form of perspective is provided by final clauses, even without a perspectival verb. Kiparsky 2012, p. 114 cites 5.96.1, given in (29):

- (29) ... ποιέων ἅπαντα ὅπως αἱ Ἀθηναὶ γενοίαιτο ὑπ’ ἑωυτῷ τε καὶ Δαρείῳ.  
 ... doing all he could so that the Athenians would be subservient to him (*ἑωυτῷ*) and Darius.  
 (Herodotus, *Histories* 5.96.1)

This example is not part of the PROIEL corpus and is not something that turned up in the material I have examined, so I will not discuss it in any detail, but it is interesting to note that this exists, and at least intuitively, they look like they would fit into the line of reasoning that I outline here.



## Chapter 3

# Local Binding

The LFG literature on binding mostly does not explicitly separate “local” from “non-local” binding. But it is a practical dichotomy for the analysis for the reflexive pronouns of Ancient Greek, as I will try to show in this chapter and the next. Before looking at the examples that we have and analyzing them, we might tentatively define locally bound reflexives as reflexives where only syntactic relations are relevant, even if that is a simplification.

Kiparsky 2012, p. 90 writes that the reflexive pronoun  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  is obligatory when it finds its antecedent within the same clause, meaning that the reflexive is either a coargument or a “clause-internal non-coargument”. Kiparsky does not specify further what he means by this, but it would at least include things like adjuncts, possessors, the objects of prepositions and so on. What it is not clear if it includes, is the arguments of participles, and participles’ impact on binding is discussed in 3.3. Participles may be important in informing us about what, exactly, local binding involves.

This section will first look at reflexive pronouns that are co-arguments with the subject, *i.e.*, that are arguments of the same verb as the subject. Then we will consider reflexives that are not an argument of the verb, but are bound by a subject within the same clause. Finally, we will consider some edge cases and discuss what the binding domain for local binding is. The main conclusion is that local binding is syntactic and can take place within the Minimal Finite Domain; local binding appears to be allowed through a participle, thus ruling out the Minimal Complete Nucleus Domain. For reasons of language economy, explaining all of these examples with one lexical specification for  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  would be ideal. Since infinitives presumably have a deficient TENSE value of some sort (as discussed in section 2.5), I will argue that they are better analyzed as logophoric binding to a perspective holder. Hence, I have not included a discussion of them here, even if I, in doing so, anticipate arguments that have yet to be made.

### 3.1 Coarguments

When the subject and the reflexive pronoun are coarguments, we have the most local situation possible – there would be no way for them to be closer to each other. The reflexive pronoun is obligatory when the antecedent is a coargument. Since the examples that have turned up in the corpus that I have considered are straightforward, I will be brief.

A fairly minimal example is given in (30):

- (30) ... οἱ ἑωυτὸν ἐπιδέξα.
   
... he showed himself (ἑωυτὸν) to him.
   
(Herodotus, *Histories*, 2.42.4)

Here, the reflexive is the object of the verb. In (31) I provide a simplified f-structure. While this does obscure the fact that the sentence fragment is only a small part of a longer clause, what we are interested in is only the relationship between the subject and the object:

- (31) 
$$\left[ \begin{array}{l} \text{PRED } \langle \text{SHOW} \langle \text{SUBJ, OBJ, OBL}_\theta \rangle \rangle' \\ \text{TENSE } \textit{INF} \\ \text{SUBJ } \left[ \text{PRED } \langle \textit{PRO}_i \rangle' \right] \\ \text{OBJ } \left[ \begin{array}{l} \text{PRED } \langle \textit{PRO}_i \rangle' \\ \text{PRONTYPE } \textit{REFL} \end{array} \right] \\ \text{OBL}_\theta \left[ \text{PRED } \langle \textit{PRO}_k \rangle' \right] \end{array} \right]$$

In its context, the sentence is unambiguous: given the subject-orientation of the Ancient Greek reflexive pronoun, the subject is the only possible antecedent. *οἱ* can only refer to somebody outside of this small sentence, though who is meant of course has to be resolved in the wider context (and in this case, we have Zeus showing himself to Heracles while wearing a ram's fleece and holding forth its head). We see that the subject and object f-command each other, but since the subject is higher on the functional hierarchy, it is the subject that is the antecedent and the object that is the reflexive. This example is representative for binding of a coargument of the antecedent.

## 3.2 Same Clause, not Coarguments

As argued by Kiparsky 2012, the reflexive pronoun is obligatory in the third person whenever the antecedent is a clause-mate. In LFG terms, we would normally expect this to mean binding in the smallest structure that contains a subject or the smallest structure that contains a tense feature. This corresponds to either the Minimal Complete Nucleus Domain or the Minimal Finite Domain; we are interested in finding the smallest applicable domain. For some examples, as in section 3.4, we may also need recourse to the Root Domain – a matrix clause with all that it contains. Since the examples that I have found of that kind all involve possessives in correlative clauses, I will discuss whether this is something that we want to treat differently from the others or not.

A fairly minimal example is given in (32) below, where the reflexive is the object of a preposition:

- (32) ἔλκει γὰρ ἐπ' ἑωυτὸν τὸ ὕδωρ
   
for [the sun] draws the water to itself (ἐπ' ἑωυτὸν)
   
(Herodotus, *Histories* 2.25.2)

A simplified f-structure is given in (33):

$$(33) \left[ \begin{array}{l} \text{PRED } \langle \text{DRAW} \langle \text{SUBJ, OBJ, OBL}_\theta \rangle \rangle' \\ \text{TENSE } \textit{PRES} \\ \text{SUBJ } \left[ \text{PRED } \langle \textit{PRO}_i \rangle' \right] \\ \text{OBJ } \left[ \text{PRED } \langle \textit{WATER}_k \rangle' \right] \\ \text{OBL}_\theta \left[ \begin{array}{l} \text{PRED } \langle \textit{TO} \langle \text{OBJ} \rangle \rangle' \\ \text{OBJ } \left[ \text{PRED } \langle \textit{PRO}_i \rangle' \right] \\ \text{PRONTYPE } \textit{REFL} \end{array} \right] \end{array} \right]$$

This f-structure shows that we obtain the path  $((\text{OBL}_\theta \text{ OBJ } \uparrow) \text{ SUBJ})$ . This path does not pass through an f-structure that contains a SUBJ value, but since it does contain a PRED value (the preposition that is the head the PP), the reflexive and its antecedent are not coarguments. In this case, Kiparsky 2012 makes the argument that the reflexive is obligatory, and I have not come across any counterexamples.

Of the reflexives that are syntactically bound, the majority have paths that are similar to the one I gave for (33) above, though the constructions can be more complex:

- (34) ... , ἥτις παρὰ τὸν ἐωυτῆς ἄνδρα μοῦνον πεφοίτηχε  
 ... any woman who had slept only with her (ἐωυτῆς) own husband ...  
 (Herodotus, *Histories* 2.111.2)

There are, however, instances that do not fit this mould. They are the subject of the next two sections.

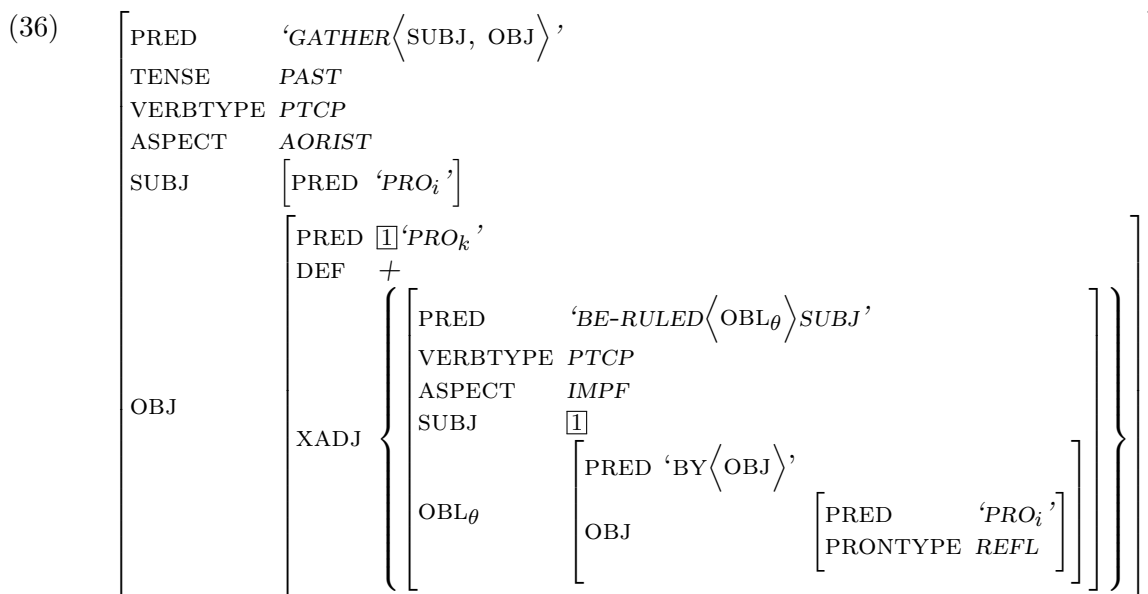
### 3.3 Binding Through Participles

In this section, we will be probing the limits of syntactically bound reflexives. Specifically, I have looked for reflexives where the antecedent is the subject of the main clause, and not the subject of the participle it is immediately dominated by. An example of such a sentence is given in (35), though note that the participle that we are binding “through” is ἀρχομένους, not συλλέξας:

- (35) συλλέξας δὲ τοὺς ὑπ' ἐωυτῶ ἀρχομένους πάντας ἐστρατεύετο ἐπὶ τὴν Νίνον, ...  
 Once he had gathered all the people that were under his (ἐωυτῶ) rule, he  
 marched against Ninus, ...  
 (Herodotus, *Histories* 1.103.2)

The verb συλλέγω is not perspectival, so we cannot explain examples like this by reference to perspectival binding like in the next chapter. This means that we want this to be explained as an example of syntactic – or local – binding. An f-structure of συλλέξας and its arguments is given in (36), ignoring πάντας. I have marked the verbs with VERBTYPE and ASPECT.<sup>1</sup>

<sup>1</sup>I have, here as elsewhere, used the simplifying AORIST as the value for ASPECT.



Since this participle is introduced by a definite article, one could argue that the participle is nominalized and is the head of the noun phrase.<sup>2</sup>

In that case, the above would not be binding through a participle. As my analysis in (36) shows, I have analyzed the participle as an XADJ rather than as a noun. Though this is not something that I have had the time to work out thoroughly, it appears to me that these participles retain too much of their “verbal nature” to really be considered nouns; while it is true that, *e.g.*, deverbal nouns often retain something of their “verbal nature” and can take some of the same arguments that the verb does, an example like (37) seems to me to be beyond what we would expect if the participle truly were nominalized:

(37) ὥς δὲ ἡμέρη τάχιστα ἐγεγόνεε, τῶν οἰκετέων τοὺς μάλιστα ὥρα πιστοὺς ἐόντας ἔωυτῆ, ἐτοίμους ποιησαμένη ἐκάλεε τὸν Γύγεα.

And as soon as day had dawned and she had prepared those of the house slaves who at that time were the most loyal to her (ἐωυτῆ), she summoned Gyges.  
(Herodotus, *Histories* 1.11.1)

Here, it appears that ἐόντας is functioning more or less exactly as it would without an article.

While the reading that I opted for in the translation seems like the most natural one to me, it is also possible to punctuate differently and understand τοὺς μάλιστα ὥρα πιστοὺς, ἐόντας ἔωυτῆ, . . . . This could then be translated as something like “the most faithful [among the house slaves] at that time, since they were hers”. In that case, the participle would definitely not be nominalized, and present a stronger case for binding

<sup>2</sup>This is the approach of CGCG in section 52.46ff. Since they also comment that the nominalized (“substantivized” is the word used in CGCG) participle has the same analysis with respect to “aspectual distinctions” (section 52.49), it would seem that the participle at any rate retains a lot of its verbal nature.

In general, Ancient Greek participles appear to be insufficiently understood. Genitive absolutes may be a good example: In CGCG, section 52.32, in the explanation to example (95), it says that the genitive absolute is “ungrammatical” because the subject of the genitive absolute is the object of the main clause: οὕτω δὲ δεξαμένου τοῦ Κύρου οἱ . . . γεραιτεροι αἰρουνται αὐτὸν ἄρχοντα (Xenophon, *Cyropaedia* 1.5.5, cited from CGCG). Given that this is not a unique passage, I think it makes little sense to say that it is ungrammatical. In Herodotus’s *Histories*, we do not have to read further than 1.3.3 to find an example where the pronoun we have a genitive absolute construction whose subject is also an argument of the verb.



being allowed through participles. A corollary from this line of reasoning would be that participles preceded by a definite article would not be the “core” of the noun phrase they take part in. In LFG, such an analysis is easily accounted for since the verbs in a pro-drop language like Ancient Greek always have to be able to “instantiate” its arguments; if the only visible part of a noun phrase is a definite article and a participle, then this would add information to the unexpressed argument that the verb creates (hence the XADJ analysis), thus coming close to a restrictive relative clause in meaning. This analysis is, however, not something I have been able to pursue in great depth, and finding good evidence has proved difficult. Either way, (38) shows binding into a participle that is not introduced by a definite article:

- (38) τοῦτον δὴ ὄν τὸν Ἀστυάγεα Κῦρος ἐόντα ἐωυτοῦ μητροπάτορα καταστρεψάμενος ἔσχε δι’ αἰτίην τὴν ἐγὼ ἐν τοῖσι ὀπίσω λόγοισι σημανέω . . .  
 This man, then, Astyages, his (ἐωυτοῦ) grandfather on the mother’s side, Cyrus had subdued for the reason that I will show in the following story.  
 (Herodotus, *Histories* 1.75.1)

The participle ἐόντα has no article, and we have to analyze it as a circumstantial participle. Since there is no article, I have analyzed it as an XADJ on the sentence level (in contrast to participles with an article, which I analyzed as XADJS on the NP level). I have translated it as simply adding information to the object of the main verb, but nothing hangs on that particular interpretation. Another possibility could be to see this phrase as some sort of apposition to Astyages along the lines of Sadler and Nordlinger 2010, but I think that is a less natural way of approaching this kind of participial construction.

With that said, the following f-structure gives the finite verb and its arguments as well as the relevant participial phrase (the XADJ).

- (39) 
$$\left[ \begin{array}{l} \text{PRED } \langle \text{SUBDUE} \langle \text{SUBJ}, \text{OBJ} \rangle \rangle \\ \text{SUBJ } \left[ \text{PRED } \langle \text{PRO}'_i \rangle \right] \\ \text{OBJ } \left[ \begin{array}{l} \text{PRED } \langle \text{ASTYAGES}'_k \rangle \\ \text{DEF } + \end{array} \right] \\ \text{XADJ } \left\{ \begin{array}{l} \left[ \begin{array}{l} \text{PRED } \langle \text{BE} \langle \text{SUBJ}, \text{XCOMP} \rangle \rangle \\ \text{SUBJ } \left[ \begin{array}{l} \text{PRED } \langle \text{MOTHER}'\text{-FATHER} \langle \text{SUBJ} \rangle \rangle \\ \text{SUBJ } \left[ \begin{array}{l} \text{PRED } \langle \text{PRO}'_i \rangle \\ \text{PRONTYPE } \text{REFL} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right\} \end{array} \right]$$

This example makes it clear that the path from the possessive reflexive goes through an f-structure that contains a SUBJ feature, *i.e.*, Astyages, thus ruling out the Minimal Complete Nucleus Domain, which has the off-path constraint  $\neg(\rightarrow \text{SUBJ})$ .

Another example that is worth commenting upon here, is (40):

- (40) ἀπ’ ἐωυτοῦ γὰρ ἐόντος ἰδιώτεω οὐκ ἐνώρα τιμωρίην ἐσομένην ἐς Ἀστυάγεα, . . .  
 For he could not see any revenge arising from himself (ἐωυτοῦ) as a private person that would hit Astyages, . . .

(Herodotus, *Histories* 1.123.1)

This example is set apart from the others in that the reflexive is part of an adjunct PP that modifies the participial complement of the main verb ἐνώρρα; this participle is then a COMP. Since the main verb is a sense verb, its subject can be a perspective holder, and this means that we in this case probably want to analyze this as an instance of logophoric binding, which I will discuss in the next chapter. This is the only example of its kind that I found, however, so it is difficult to generalize.

We might ask if binding is obligatory in these cases, but examples like (41) rule this out:

- (41) ...λέγεται Κῦρον ἐπειρέσθαι τοὺς παρεόντας οἱ Ἑλλήνων ...  
 ...it is said that Cyrus asked those of the Greeks that were around him (οἱ)  
 (Herodotus, *Histories* 1.153.1)

It would be interesting to see if we could have something like τούτῳ in place of οἱ. While my hunch would be that we could not and that we would need something more restricted, further investigation of these issues would add nuance to our understanding of the Ancient Greek pronominal distribution (compare Kiparsky 2012, who suggests that οἱ be classified as a discourse anaphor).

In any case, it does look like all the examples where we have binding through a participle are what Goldstein 2016 in chapter 7 analyzes as VPs: Goldstein distinguishes between participial clauses and participial phrases. The first have S category projections, and “forms an independent domain not only for clausal clitics, but also for negation, modality and tense semantics” (p. 224). Participial phrases, on the other hand, are not able to independently host clitics, and generally modifies “an element within the finite clause, as opposed to the finite clause itself.” Consequently, “they do not form independent domains for negation, modality and tense” (p. 225).

The occurrences in this corpus are attributive participles preceded by a determiner and circumstantial participles; Goldstein does not cite any examples where attributive participles host clitics. Since attributive participles modify NPs, we would perhaps not expect them to be able to do so in the first place. As for circumstantial participles, we have two examples, namely (38) above and 5.70.1 (γενόμενον). Neither of these feature any clitics, which makes it difficult to be sure if they are VP or S phrases. The fact that the participial phrase in this case comes in the middle of the main clause does, however, might be an indication that we are dealing with a VP in (38), but one of the examples cited by Goldstein features a similar participle that follows the object of the main verb, and precedes the main verb:

- (42) τούτων δὴ τὴν νεωτέραν [σ ἐπισπομένην οἱ ἐπ' Αἴγυπτον] κτείνει.  
 The younger of these, [who followed him (οἱ) to Egypt], he killed.  
 (Herodotus, *Histories* 3.31.6; adapted from (7.11-b) in Goldstein 2016. The translation is his, but I added οἱ)

A difference between this case and (38) is that here, the participle appears to be preceded only by the TOPIC, which is the object of the main verb. In that case, the two examples are different in that the above participle is not “sandwiched” inside the main clause, whereas the participle in (38) comes between the subject, Cyrus, and the main verb.<sup>3</sup>

<sup>3</sup>Compare the left periphery of the Ancient Greek clause suggested in figure 1 in Goldstein and Haug 2016, p. 300. An s participle would presumably adjoin somewhere below the XP<sub>TOP</sub> position.

For the other example I found of binding through a participle, in 5.70.1, the participle phrase is sentence final. It is possible to have both VP and S participles in that position, so in the absence of clitics, it is difficult to mount an argument one way or the other. Even if the examples are not quite clear, it is tempting to conclude that S participles could have a deficient tense feature similar to infinitives. In that case, the reflexive would not be possible in (42). But given that the data is not very extensive, this is necessarily a very tentative conclusion.<sup>4</sup>

The genitive absolute construction in (43), for instance, would be an S in Goldstein’s analysis. In that case, we would not expect to see a reflexive pronoun in such a position unless it is a case of logophoric binding.

- (43) ὃς καὶ ἐχιδίδους τὴν θυγατέρα Δαρείῳ τὸν οἶκον πάντα τὸν ἑωυτοῦ ἐπέδωκε, ὡς μόνου οἱ ἐούσης ταύτης τέκνου.  
Who, when he had given his daughter to Darius, had also given his (ἑωυτοῦ) entire house along with her, since this daughter was his (οἱ) only child.  
(Herodotus, *Histories* 2.224.2)

We might also investigate whether a demonstrative pronoun like οὗτω would be allowed in place of οἱ, and thereby learn something about the differences in constraints between the two types of pronouns as well as what kind of domain we are dealing with in the case of an genitive absolute like the above.

Either way, these participle examples show that we can, in fact, have syntactic binding through an f-structure that contains a subject, which means that the smallest applicable domain according to what we have seen so far is the Minimal Finite Domain. In the next section, I will discuss some examples that are troublesome for this analysis.

### 3.4 Possessive Relationships

When it comes to possessive reflexive pronouns, we have – at least in a sense – three distinct scenarios. The first is the simple case, illustrated in (44). The second is the logophoric case, will be discussed in the next chapter. And the third and final is the problematic one, where we do not have a perspective holder, and yet the reflexive is outside of the Minimal Finite Domain. So what do we do about this? Due to the scarcity of the evidence, no definite answers will be given, but I will provide some tentative suggestions.

First we can start with an illustration of a simple sentence with a possessive: Below is the f-structure for σκοπέειν τινὰ τὰ ἑωυτοῦ, “to mind one’s own [business]” (1.8.4):

- (44) 
$$\left[ \begin{array}{l} \text{PRED} \quad \text{'MIND'} \langle \text{SUBJ, OBJ} \rangle \\ \text{TENSE} \quad \text{INF} \\ \text{SUBJ} \quad \left[ \text{PRED} \quad \text{'PRO}_i \right] \\ \text{OBJ} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'BUSINESS'} \\ \text{DEF} \quad + \\ \text{POSS} \quad \left[ \text{PRED} \quad \text{'PRO}_i \right] \\ \text{PRONTYPE} \quad \text{REFL} \end{array} \right] \end{array} \right]$$

<sup>4</sup>In addition to the examples analyzed here, see 1.165.2, 5.39.2, 5.70.1, 7.164.2, 7.197.4. All but 5.70.1 are determiner + participle (*i.e.*, attributive participles).

This f-structure is perfectly normal and in line with what we have seen already: the path does not go through any f-structures that contain a TENSE feature (nor a SUBJ for that matter). In (45), the reflexive is within the perspectival scope or ambit of the verb ἐπειρώτα, which lets us explain this example as logophoric binding (which we will be looking at in the next chapter):

- (45) κάρτα τε δὴ Ξέρξη ἄπιστα ἐφάνετο τὰ λεγόμενα εἶναι, καὶ δεύτερα ἐπειρώτα ὄντινα τρόπον τοσοῦτοι ἐόντες τῇ ἑωυτοῦ στρατιῇ μαχήσονται.  
 And indeed, what had been said appeared completely incredible to Xerxes, and he then asked in what way they could fight against his own (ἑωυτοῦ) army, seeing as they were so few.  
 (Herodotus, *Histories* 7.209.5)

In other words, what separates this example from (46) is that in (46), there is no such perspective; to gather something together does not involve an attitude or a perspective in the same way that asking a question does.

- (46) ὅσος ἦν ἐν τῷ ἄστει σῖτος καὶ ἑωυτοῦ καὶ ἰδιωτικός, τοῦτον πάντα συγκομίσας ἐς τὴν ἀγορὴν προεῖπε Μιλησίοισι, ... πίνειν τε ...  
 After he had gathered all the food that was in the city, both his own (ἑωυτοῦ) and the private citizens' (ἰδιωτικός), into the agora, he instructed the Milesians ... to drink and ...<sup>5</sup>  
 (Herodotus, *Histories* 1.21.2)

This example is one of three in total. Since there are only three examples, I give both of the others in (47):

- (47) a. ὅσαι τῷ στρατῷ τῷ ἑωυτοῦ εἶποντο σιτοφόροι τε καὶ σκευοφόροι κάμηλοι, ταύτας πάσας ἀλίσας καὶ ἀπελών τὰ ἄχθεα ἀνδρας ἐπ' αὐτάς ἀνέβησε ἱππάδα στολὴν ἐνεσταλμένους, ...  
 All of the food- and arms-carrying camels that followed his (ἑωυτοῦ) army, he rounded up, and when he had removed their burdens, he put men atop them that were equipped as a cavalry unit, ...  
 (Herodotus, *Histories* 1.80.2)
- b. ὅσοι τοῦ στρατοῦ τοῦ ἑωυτοῦ ἦσαν νεκροὶ ἐν Θερμοπύλῃσι, ὑπολιπόμενος τούτων ὡς χιλίους, τοὺς λοιποὺς τάφρους ὀρυζάμενος ἔθαψε, ...  
 Of all the corpses that were at Thermopylae from his (ἑαυτοῦ) army, he left about a thousand, and the rest, once he had dug graves, he buried, ...  
 (Herodotus, *Histories* 8.24.1)

Strictly speaking, only the first two showed up in my corpus; the third example, from book 8, was cited by K-G, who also cited (46), as well as two examples in Thucydides that follow the same pattern (see §455, 3, p. 562; the passages cited passages cited from Thucydides are 2.7.1 and 2.92.4). The pattern is one of a correlative clause introduced by ὅσος, which is also the case for the two examples in Thucydides.

Now, the question is what do we do with these examples. The simplest option, in many ways, would have been to say that the binding domain quite simply is the Root

<sup>5</sup>The phrase “private citizen” is a bit awkward in that citizens were often quasi-public (though here probably less so than in Athens), but hopefully makes it clear that the food that the inhabitants own privately is meant; it's not meant to reflect the actual situation or status of inhabitants or citizens in this particular case.

Domain. That would accommodate all the examples we have looked at so far as well as the ones that we are looking at in this section. The problem with such an approach is the predictions such a binding domain would make: we would essentially be saying that we could have binding anywhere in a clause, but this is not borne out by the data; we have very few “anomalous” examples of binding through a tensed domain, and these follow a very specific pattern. As such, it might be better to find another solution.

At least two approaches appear to be possible. The first one would be something along the same line as the explanation of K-G, who write that the relative clause is treated as a simple clausal element (“die Adjektivsätze [werden] als einfaches Satzglied aufgefasst”). An explanation along these lines might be difficult to justify, though, and seems like something of an *ad hoc* solution.

Another solution that has some cross-linguistic parallels is to ask if it isn’t the case that POSS is somewhat freer than other explanations. There are at least two examples that might lend credibility to such a line of argumentation. The first is Latin, with *suus* and *se*: Kühner and Stegmann 1955, p. 600 write that the Latin possessive reflexive *suus* has a usage that in many ways is freer than that of *se*.<sup>6</sup> This is particularly as regards the choice of antecedent (compare also Roggen 2022, p. 340).

Swedish is the other language. Lundquist 2013 discussed variation in what he calls middle distance binding. Specifically, he found that there was individual variation in how speakers allowed binding of the different pronouns (*i.e.*, variation did not align with dialects). What I am interested in here, though, is the majority usage (called “grammar A” by Lundquist). Only a minority of respondents in the Scandinavian dialect syntax survey, 20.5%, accepted (a) in (48), where we have the reflexive pronoun *sig*. On the other hand, a majority of 71.5% accepted (b), where there is a reflexive possessive pronoun, *sin*:

- (48) a. Hon<sub>i</sub> bad mig hjälpa sig<sub>i</sub>.  
*she asked me help REFL*  
 ‘She asked me to help her’
- b. Hon<sub>i</sub> bad mig passa sin<sub>i</sub> katt.  
*she asked me watch REFL.POSS cat*  
 ‘She asked me to look after her cat.’  
 (Slightly adapted from (2) and (3) in Lundquist 2013)

This shows that the reflexive possessive *sin* has a wider domain than the “normal” reflexive *sig*.

The problem with both of these parallels is that we for both languages have different lexical items for the possessive and the “normal” usage, *sin* and *suus* respectively. We could then have specified different domains for each of the anaphors, similar to what, *e.g.*, Dalrymple 1993 does for the Marathi pronouns *swataah* and *aapan*. This is not an immediately desirable solution for Ancient Greek, since the possessive is one of the uses that the genitive case can have in general, and is not obviously affected by any lexical constraints of the reflexive. A possible way out could be to specify a rule that would somehow only affect the reflexive  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  when it had the grammatical function POSS, but this again begins to look like an *ad hoc* solution. It is “always” possible to have recourse to pragmatic resolution of the reflexive as well, but given that the examples we have follow a very specific mould, it would be interesting to see if there is a more stringent way of looking at them. In other words, these possessive reflexives pose an interesting problem that I have no quite satisfactory solution to.

<sup>6</sup>“... das Possessivum *suus* zeigt vielfach eine freiere Verwendung”.

### 3.5 Summary

The examples discussed in this chapter have been explained as syntactic binding to an antecedent within the Minimal Finite Domain. Though it was not made an explicit problem during the discussion here, we have seen both animate and inanimate antecedents ((32) being an example of an inanimate antecedent). As per Kiparsky 2012, the reflexive is obligatory unless the path passes through an f-structure that contains a SUBJ feature, as was the case for binding “through” participles. Getting the details here quite right would require some further analysis.

A small amount of reflexive pronouns are troublesome for this analysis, however: we find correlative clauses that contain a *ἐαυτοῦ* used to mark possession, and who have their antecedents in the matrix clause. These correlative clauses can even be finite, meaning that these reflexives find their antecedent in the Root Domain. It has not been possible to provide a principled explanation for them here, partly because of their rarity. The fact that they follow a very similar pattern, however, might motivate a particular explanation for their case, but it’s not clear what this explanation should be.

## Chapter 4

# Long-Distance Reflexives

We now proceed to reflexive pronouns that are commonly called long-distance reflexives (LDRs). Even before starting the analysis proper, we can clearly divide these examples into two syntactically different groups: LDRs that have an antecedent within the root clause, and LDRs that have no syntactic antecedent at all. The latter category only includes six examples, but the former case, seeing as it includes binding through an infinitive like we will see in (49), is quite common.

In this chapter, I will first analyse LDRs that do have a syntactic antecedent, and then look at those reflexives that have no syntactic antecedent at all. Finally, the analysis will show that most of the examples from these two categories actually behave in the same way even though there is a significant syntactic difference between them, namely the presence or absence of a syntactic antecedent.

### 4.1 LDRs With Antecedents

By root domain LDRs is meant LDRs who find their antecedent within the Minimal Finite Domain or within the Root Domain. Both of these have in common that there might be something interceding between the antecedent and the reflexive. This can make a purely syntactic analysis, such as for the local reflexives, difficult. To illustrate the point, we can start off with a fairly simple example of a reflexive pronoun with an antecedent within the Minimal Finite Domain:

- (49) . . . , ἐλπίσας πρὸς ἑωυτοῦ τὸν χρησμὸν εἶναι, [ἔστρατεύετο ἐς τὴν Περσέων μοῖραν].  
Since he supposed the prophecy to be in his own (ἑωυτοῦ) favour, [he invaded the Persian lands.]  
(Herodotus, *Histories* 1.75.2)

Here we have a participle, ἐλπίσας, that takes a subject and a sub-clause, *i.e.* a COMP, as its arguments. In the sub-clause, we find a copula sentence with “prophecy” as the subject and a prepositional phrase as the predicate (a reading where the PP modifies ἐλπίσας leaves the copula clause incomplete and fails to produce a clear sense). In LFG, this PP can be analyzed as an XCOMP, as shown by the f-structure in (50). Since the sub-clause contains a subject with the relevant agreement features (*i.e.*, masculine or neuter third person singular), we can try to read the reflexive as co-referent with the local subject, but this local reading is infelicitous: the prophecy can hardly be in its own favour, and even if it somehow were, that would hardly give Croesus a reason to invade Persia. In other words, there is little doubt that we instead want the reflexive to

be co-referent with the subject of the participle in the matrix clause, namely Croesus. The f-structure of the sentence is the following:

$$(50) \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'SUPPOSE} \langle \text{SUBJ, COMP} \rangle \\ \text{VERBFORM} \quad \text{PTCP} \\ \text{ASPECT} \quad \text{AORIST} \\ \text{SUBJ} \quad \left[ \text{PRED} \quad \text{PRO}_i \right] \\ \text{COMP} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'BE} \langle \text{SUBJ, XCOMP} \rangle \\ \text{TENSE} \quad \text{INF} \\ \text{SUBJ} \quad \boxed{1} \left[ \begin{array}{l} \text{PRED} \quad \text{'PROPHECY'} \\ \text{DEF} \quad \quad \quad \quad \quad \quad + \end{array} \right] \\ \text{XCOMP} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'TO-THE-BENEFIT-OF} \langle \text{OBJ} \rangle \text{SUBJ}' \\ \text{SUBJ} \quad \boxed{1} \square \\ \text{OBJ} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'PRO}_i \text{' } \\ \text{PRONTYPE} \quad \text{REFL} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right]$$

Here we can see that the path from the reflexive to the non-local antecedent is given by ((COMP XCOMP OBJ  $\uparrow$ ) SUBJ). What is new about this example compared to the others that we have seen so far is that we have binding into an infinitival clause, namely a COMP.

A second situation is like in (51), where we have indirect discourse with optative embedded under a speech verb.

- (51) ... εἰρωτᾶν ἐκάστην αὐτέων ὄκου εἶη ὁ ἐωυτῆς ἀνὴρ.  
 ... [while pricking the lone survivor of the battle with their pins,] each of them  
 asked where her own (ἐωυτῆς) husband was.  
 (Herodotus, *Histories* 5.87.2)

The sub-clause is in the optative mood to mark that it is indirect discourse, marking that the sub-clause is the content of the question. The reflexive pronoun is a possessive in the noun phrase that is the subject of the sub-clause, so there is no possibility for local agreement within the sub-clause. The sentence is, in other words, fairly similar to the first example we looked at, where the sub-clause is an *AcI*, though (ὄκου) marks the clause boundary more clearly.

But the above two examples are not the only kinds of non-local binding to an antecedent somewhere higher up in the same clause; we have a similar situation in (52), which is a bit more complex:

- (52) ταῦτα εἰπόντος τοῦ κήρυκος, λέγεται Κύρον ἐπειρέσθαι τοὺς παρεόντας οἱ  
 Ἑλλήνων τίνες ἐόντες ἄνθρωποι Λακεδαιμόνιοι καὶ κόσοι πλῆθος ταῦτα ἐωυτῷ  
 προαγορεύουσι  
 When the herald had said these things, it is said that Cyrus asked the Greeks  
 who were with him (οἱ) who and how many the Spartan men who were making  
 this declaration to him (ἐωυτῷ) were.  
 (Herodotus, *Histories* 1.153.1)

Here we have an interrogative clause, or in other words a COMP, with a finite verb, which is the complement of ἐπειρέσθαι. This verb also has another argument, namely the people Cyrus is asking, and there we also find Cyrus referred to with οἱ. This alternation



is interesting, and illustrates how binding to a perspective holder is allowed only within the scope of the perspective. In this case, the scope of the perspective would be the interrogative clause; who Cyrus posed his question to, is not part of his question. In other words: Cyrus asked a question that had a certain content, and his perspective or attitude concerns this content. We might perhaps think of “the Greeks who were with him” as something like an addition by Herodotus as the author, and thus outside of the scope of Cyrus’s perspective.

These three examples are more or less canonical for the situations where we find non-local binding within a full clause. The next section discusses an extensive example in detail, and includes a mix of the things we have seen so far.

#### 4.1.1 Analysis of 1.86.5

The full text of this section is as follows:

- (53) λιπαρέοντων δὲ αὐτῶν καὶ ὄχλον παρεχόντων ἔλεγε δὴ ὡς ἦλθε ἀρχὴν ὁ Σόλων ἐὼν Ἀθηναῖος, καὶ θεησάμενος πάντα τὸν ἐωυτοῦ ὄλβον ἀποφλαυρίσειε (οἷα δὴ εἶπας), ὡς τε αὐτῷ πάντα ἀποβεβήκοι τῇ περ ἐκεῖνος εἶπε, οὐδέν τι μᾶλλον ἐς ἐωυτὸν λέγων ἢ <οὐκ> ἐς ἅπαν τὸ ἀνθρώπινον καὶ μάλιστα τοὺς παρὰ σφίσι αὐτοῖσι ὀλβίους δοκέοντας εἶναι. τὸν μὲν Κροῖσον ταῦτα ἀπηγγέεσθαι, τῆς δὲ πυρῆς ἤδη ἀμμένης καίεσθαι τὰ περιέσχατα.

But since they kept nagging him and thronged around him, Croesus finally said that to begin with, Solon, who was an Athenian, had come, and after he had seen everything, he had disparaged Croesus’s (ἐαυτοῦ) happiness (as was said previously), and that everything had turned out for Croesus (αὐτῷ) in the way that Solon (ἐκεῖνος) had said it would, though he was not speaking about Croesus (ἐωυτὸν) so much as about all of mankind and in particular those who think by themselves (παρὰ σφίσι αὐτοῖσι, literally “at themselves”, *i.e.*, “at home”, cf. LSJ s.v. παρά, B.II.2) that they are fortunate. This is what Croesus said, and at the same time, seeing as the pyre had been kindled, the outer parts [of the pyre] were already burning.

(Herodotus, *Histories* 1.86.5)

The above example includes two sentences, and while it is only the first sentence that we are interested in, I included the second to show that there is a switch back to Herodotus’s narrative perspective, as he was already using *AcIs* to narrate at this point. This presumably means that a perspective can be interrupted and resumed; though no first person reflexives occur after the resumption of the perspective here, it seems like it would be possible.<sup>1</sup>

To get at the several notable things that are going on here, I will start by describing the sentence structure and then go on to discuss some details.

The matrix clause is Croesus saying that some things happened. Syntactically, the complement to ἔλεγε is two coordinated ὡς-clauses. The first of these, in turn, coordinates two verbs, one indicative and one optative. The second of these two coordinated sub-clauses uses ἀποφλαυρίσειε to indicate that Solon thinks little of Croesus’s wealth; Croesus is referred to with a reflexive pronoun that is the possessor of the noun ὄλβος, “happiness”. Solon would normally be an eligible antecedent for this

<sup>1</sup>In fact, following Bary 2018, as discussed in chapter 2, it appears that we can have a shift into a reportative mood (if we extend that description to the infinitive) anywhere, even if it is uncommon without an explicit verb of speaking.

reflexive, but the prominence of the perspective holder Croesus appears to suppress this reading, which would also make little sense in the context.

The second  $\acute{\omega}\varsigma$ -clause has a verb in the optative mood: Croesus says that things had turned out for him in the exact way which Solon had specified. The pronoun that refers to Croesus is  $\alpha\upsilon\tau\acute{\omega}$ , so reference is made to the perspective holder without using a reflexive pronoun. I analyzed this pronoun as an adjunct, though it is also possible to see it as an argument of  $\acute{\alpha}\pi\omicron\beta\epsilon\beta\eta\chi\omicron\iota$ , “had turned out”. Looking at occurrences of  $\acute{\alpha}\pi\omicron\beta\acute{\alpha}\iota\omega$ , however, it was not obvious if the verb generally selected a benefactive or malefactive, hence the analysis of the pronoun as an optional element. Either way, it is not of material import to the analysis whether the pronoun is properly an adjunct or a complement of the verb. As another adjunct to this verb is the way in which it happened, here expressed by means of a relative clause (LSJ, *s.v.*  $\acute{\alpha}\pi\omicron\beta\acute{\alpha}\iota\omega$ , II.2 says that the meaning “turn out” is frequently accompanied by an adverb). Within this relative clause, we find a finite verb,  $\epsilon\acute{\iota}\pi\epsilon$ , and a participle,  $\lambda\acute{\epsilon}\gamma\omega\nu$ . I analyzed this participle as an XADJ, though it could also be analyzed as an ADJ. The XADJ does not take a COMP as its complement, but OBL $\theta$ s that are the things that Solon was referring to, *viz.* not so much Croesus, who is again referred to with a reflexive pronoun, as all mankind and in particular those who think that theirs is a happy lot (though Croesus very much fell into this latter group as well). In this final part of the full sentence, a local reflexive ( $\sigma\phi\acute{\iota}\sigma\iota$   $\alpha\upsilon\tau\omicron\acute{\iota}\sigma\iota$ ) is used. That takes us through the skeleton of the sentence. Additional elements such as particles and adjuncts without relevance for binding have been omitted.

If we look back to the definitions of the domains in (20), we see that only the root domain is eligible (the minimal finite and root domains are repeated below).

- (20) c. Minimal Finite Domain: minimal domain with a TENSE attribute  
 ( GF\* GF<sub>PRO</sub>  $\uparrow$ )  
 $\neg(\rightarrow$  TENSE)  
 d. Root Domain: f-structure of the entire sentence  
 (GF\* GF<sub>PRO</sub>  $\uparrow$ )

It is not necessary to discuss in detail whether or to what extent a verb in optative is tensed, since there is a clear tense feature in  $\tau\tilde{\eta}$   $\pi\epsilon\rho$   $\acute{\epsilon}\kappa\epsilon\acute{\iota}\nu\omicron\varsigma$   $\epsilon\acute{\iota}\pi\epsilon$ ,  $\omicron\upsilon\delta\acute{\epsilon}\nu$   $\tau\iota$   $\mu\acute{\alpha}\lambda\lambda\omicron\nu$   $\acute{\epsilon}\varsigma$   $\acute{\epsilon}\omega\upsilon\tau\acute{\omicron}\nu$   $\lambda\acute{\epsilon}\gamma\omega\nu$ . In other words, the path from  $\acute{\epsilon}\omega\upsilon\tau\acute{\omicron}\nu$  and back to Croesus passes through a domain with a TENSE feature. This means that binding can only be said to take place in the root domain, but that does not resolve the fact that there are eligible antecedents that intercede between the reflexive pronoun and the person that it actually refers back to, namely Croesus. Recourse must then be had to something else, and it is natural to view this as logophoric binding to a prominent perspective holder. Such an analysis, though, comes with its own problems for this sentence, as Solon could also be a perspective holder, seeing as he is the closest subject whose speech is being referred. We might then perhaps talk of conflicting perspectives or of one perspective dominating another. In the wider context of the sentence, Herodotus is narrating the capture and attempted burning of Croesus. Part of this narration is what Croesus said to Cyrus, and Solon’s words are contained in this speech. Croesus’s speech is again encapsulated by Herodotus’s narrative, which uses *AcI* to signal that speech is being referred both before and after Croesus’s speech. A possible way to resolve this conflict between Herodotus’s and Croesus’s perspectives is probably to take the finite  $\acute{\epsilon}\lambda\epsilon\gamma\epsilon$  as a signal that we are leaving Herodotus’s perspective and that what follows has Croesus as the perspective holder, though this approach leaves open what happens when  $\epsilon\acute{\iota}\pi\epsilon$  is the verb that marks the final part of what Solon said – so allowing recursively “nested” perspectives might be

the better option, letting the reference of the reflexive be pragmatically resolved among the available antecedents.

In any case, this means that we want something to explain why Croesus is the antecedent and not Solon: both can be said to have a perspective and both have the right agreement features to be the antecedent of the reflexive that is dominated by λέγων. The simplest solution might well be to state that the logophoric reflexive has to be bound non-locally, which rules Solon (referred to by ἐκεῖνος) out as the antecedent, since he is the subject of the participle λέγων, though this is not necessarily quite satisfactory, as we can think of Solon the perspective holder, the subject of λέγων, as non-local as well. Presumably, then, we need the perspective holder to be different from the local subject, but I think it is difficult to formulate this in a way that avoids ruling out local binding to the local subject.

We could perhaps hypothesize that perspectival binding might suppress local binding, even if it is difficult to distinguish this from local binding simply being unlikely in the context. The idea would then be that in a segment of text that is dominated by a perspective holder, reflexives have to refer back to the perspective holder, at least if the possible antecedents have the same agreement features. Such an approach is complicated by the fact that this sentence features local binding, as the people that Solon apparently was referring to first and foremost are antecedents of a locally bound reflexive, though it is plural rather than singular. This example in isolation, then, does not rule out the possibility that perspectival binding might suppress local binding.

There are further interesting points here, though. If we think of the entire root clause as dominated by Croesus’s perspective, then we see that pronouns that refer back to the perspective holder are not obligatorily reflexive, since we also have αὐτῷ in a clause with a verb in the optative, even though we have reflexives further down the chain of sub-clauses. That Croesus is referenced here is made clear by the contrast with the pronoun ἐκεῖνος, which refers to Solon. It might be worthwhile to point out that this is the “top level” in the second of the two coordinated ὡς-clauses, so Solon is at this point not a possible perspective holder. The fact that a non-reflexive pronoun has been used to refer back to Croesus does not seem to “break” his perspective, since there is a more deeply embedded reflexive that has Croesus as its antecedent. It is difficult to draw clear conclusions from this. One idea was that the contrast with ἐκεῖνος is what motivated αὐτῷ, but intuitively, I think a reflexive referring back to Croesus would provide a similar contrast. What this change between a reflexive and a non-reflexive pronoun does suggest, though, is that perspective can be quite flexible. I would also say that this is further shown by the fact that Herodotus seamlessly switches back to his own narrative perspective once the narration of Croesus’s words to Cyrus is finished.

Evidence against something like absolute “perspective domination”, however, might be given by the text that follows what we have discussed in this section so far. The relevant text is given in (54):

- (54) καὶ τὸν Κῦρον . . . ἐννόσαντα ὅτι καὶ αὐτὸς ἄνθρωπος ἐὼν ἄλλον ἄνθρωπον, γεγόμενον ἐωυτοῦ εὐδαιμονίῃ οὐκ ἐλάσσω, ζῶντα πυρὶ διδοίῃ, . . .  
 And Cyrus . . . took to mind that he, who was himself a man, was offering up another man, who had been no lesser than himself in happiness, living to the flames, . . .  
 (Hdt. 1.86.6)

The example is a bit tricky, however. As far as perspective domination goes, this is an *AcI* that is part of Herodotus’s narrative perspective. This is unlike the above

situation, where Solon’s “third-person perspective” was contained in Croesus’s. But since Herodotus is a first-person perspective holder and Cyrus is a third person, there is no conflict, which might well be necessary for something like one perspective suppressing another to take place. That is not the only difficulty about this passage, though. On the one hand, we have a verb that offers perspective, namely ἐννόσαντα (and this is further underlined by the optative mood of the verb in the subclause), but the perspective holder is identical to the subject in the subclause. This means that the question rests on whether we can have local binding “through” a participle. Ordinarily, we would expect local binding to be within the Minimal Complete Nucleus Domain, or the smallest domain with a subject. A participle needs a subject, though, and the subject of this participle is Croesus. The question then boils down to which subject is the antecedent of the reflexive, the subject of ἐννόσαντα or the subject of διδοίη. This example in isolation does not give enough evidence, and I was not able to find examples that could resolve the issue.

## 4.2 LDRs Without Antecedents – Logophoric LDRs

For lack of a better term, I have called the reflexives analyzed in this section logophoric. What this means is that the sentence does not contain the antecedent of the reflexive, though it may contain other elements with the same agreement features. A rather minimal example is given in (55):

- (55) λέγειν δὲ αὐτὸν περὶ τοῦ πάθους ἦκουσα τοιόνδε τινὰ λόγον, ἄνδρα οἱ δοκέειν ὀπλίτην ἀντιστῆναι μέγαν, τοῦ τὸ γένειον τὴν ἀσπίδα πᾶσαν σκιαῖζειν· τὸ δὲ φάσμα τοῦτο ἑωυτὸν μὲν παρεξελθεῖν, τὸν δὲ ἑωυτοῦ παραστάτην ἀποκτεῖναι. ταῦτα μὲν δὴ Ἐπίζηλον ἐπυθόμην λέγειν.

About the experience [where Epizelos went blind with no physical trauma], I heard that he told a tale of such a kind: that a man seemed to stand before him (οἱ), a great hoplite whose beard cast a shade over the entirety of his (*i.e.*, the hoplite’s) shield. But this phantom passed him (ἑωυτόν) by and killed instead the person who was fighting by his (ἑωυτοῦ) side. This I ascertained that Epizelos really said.

(Herodotus, *Histories* 6.117.3)

The penultimate sentence in this example is an example of unembedded indirect discourse, and we find two infinitives in this clause, or more properly two infinitives coordinated with μέν and δέ, where the two objects (ἑωυτόν and τὸν ἑωυτοῦ παραστάτην) are emphasized. The reflexive pronouns both refer to the person who is relating the events in question. For the first instance, a local reading is ruled out by agreement, since the neuter subject would require a neuter reflexive form (*i.e.*, ἑωυτό). As for the second reflexive, a local reading is not syntactically ruled out (though the co-ordination makes it seem unlikely), but the local reading is clearly infelicitous: there is no mention of an ally or fellow-soldier of the phantom earlier in the context, and even if there were, it would make little sense that the person who is telling this tale should have been traumatized to the point of going blind by an enemy attacking another enemy. Since this is a new kind of construction, I show the f-structure in (56), simplifying it by ignoring the second half of the co-ordination:

- (56) 
$$\left[ \begin{array}{l} \text{PRED} \quad \text{'PASS-BY'} \langle \text{SUBJ, OBJ} \rangle \\ \text{TENSE} \quad \text{INF} \\ \text{ASPECT} \quad \text{AORIST} \\ \text{SUBJ} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'PHANTOM}_k \\ \text{DEF} \quad + \end{array} \right] \\ \text{OBJ} \quad \left[ \begin{array}{l} \text{PRED} \quad \text{'PRO}_i \\ \text{PRONTYPE} \quad \text{REFL} \end{array} \right] \end{array} \right]$$

### 4.3 Binding to a Perspective Holder Is Non-Obligatory

An interesting example like (57) further suggests that there is nothing obligatory about binding to a perspective holder:

- (57) ...· πλὴν Ἀργεῖοι μὲν λέγουσι αὐτῶν τὸ Ἀττικὸν στρατόπεδον διαφθειράντων τὸν ἕνα τοῦτον περιγενέσθαι, Ἀθηναῖοι δὲ τοῦ δαίμονιου.  
 ... but the Argives claim that it was they (αὐτῶν) who destroyed the Attic army when there was only this one survivor, whereas the Athenians claim that it was a god.  
 (Herodotus, *Histories* 5.87.2)

This example is remarkable also because the absolute genitive is contrasted with τοῦ δαίμονος,<sup>2</sup> so if emphasis were a deciding factor in when we have a reflexive pronoun binding to a discourse holder (as in Humbert's approach), then we would probably expect to have a reflexive pronoun here.<sup>3</sup> It is also interesting because the pronoun αὐτῶν is so close to the verb whose subject it refers to, but because of the clause boundary between the main clause and the sub-clause, there is no problem.

A more complex example in terms of perspectives is offered by 2.32.1–3:

- (58) ἀλλὰ τὰδε μὲν ἤκουσα ἀνδρῶν Κυρηναίων φαμένων ἐλθεῖν τε ἐπὶ τὸ Ἄμμωνος χρηστήριον καὶ ἀπικέσθαι ἐς λόγους Ἐτεάρχῳ τῷ Ἄμμωνίων βασιλεῖ, καὶ κως ἐκ λόγων ἄλλων ἀπικέσθαι ἐς λέσχην περὶ τοῦ Νείλου, ὡς οὐδεὶς αὐτοῦ οἶδε τὰς πηγὰς, καὶ τὸν Ἐτεάρχον φάναι ἐλθεῖν κοτε παρ' αὐτὸν Νασαμῶνας ἄνδρας. (2) τὸ δὲ ἔθνος τοῦτο ἐστὶ μὲν Λιβυκόν, νέμεται δὲ τὴν Σύρτιν τε καὶ τὴν πρὸς ἡῶ χώρην τῆς Σύρτιος οὐκ ἐπὶ πολλόν. (3) ἀπικομένους δὲ τοὺς Νασαμῶνας καὶ εἰρωτωμένους εἴ τι ἔχουσι πλέον λέγειν περὶ τῶν ἐρήμων τῆς Λιβύης, φάναι παρὰ σφίσι γενέσθαι ἀνδρῶν δυναστῶν παῖδας ὑβριστάς, τοὺς ἄλλα τε μηχανᾶσθαι ἀνδρωθέντας περισσὰ καὶ δὴ καὶ ἀποκληρῶσαι πέντε ἐωυτῶν ὀψομένους τὰ ἔρημα τῆς Λιβύης, ...

But this I heard from some Cyrenaic men who said that they had arrived at Ammon's oracle and wound up talking to Etearchus, the king of the Ammonians, and that they from talking about other things somehow had ended up chatting about the Nile, about how nobody knew its sources, and Etearchus said that some Nasamonian men had come to see him (αὐτὸν). (2) This is a Libyan people; they inhabit the Syrtis and the parts that lie a little east of Syrtis. (3) When

<sup>2</sup>For the sake of completeness, Wilson's OCT edition does not note any textual disagreement here.

<sup>3</sup>This might be a good place to remember K-G's remark that "in the compound reflexive, αὐτός either retains its distinguishing force or loses it" ("In den zusammengesetzten *Reflexivpronomen* behält das Pronomen αὐτός entweder seine *ausschliessende* Kraft bei oder *gibt* sie auf", § 455, 2, emphasis in original, although not as italics, but as spaced text)

the Nasamonians had arrived and they had been asked if they had something more to add about the Libyan desert, they said that some violent and excessive sons of high-standing men had visited them (παρὰ σφίσι), and that among other excesses that these children had planned when they had come of age, they had even drawn five among themselves (ἑωυτῶν) by lot to go see the Libyan desert, . . . .

This passage is a feast of perspective holders: Herodotus says that some Cyrenaeans said that Etearchus said that some Nasamonians said that some hybristic children had visited them. The only reflexive in this passage, though, is a local ἑωυτῶν;<sup>4</sup> the other pronouns are αὐτὸν and σφίσι. Both of these latter two refer to the subject of the immediate matrix clause. This passage lets us draw the further (unsurprising) conclusion that local binding is available in a sub-clause that is under the perspective of a perspective holder, but the example does not tell us much about the pragmatic interaction between various perspectives.

We might suppose that disambiguation is a key factor in explaining why we have αὐτὸν and σφίσι, but having ἑωυτῶν in lieu of αὐτὸν would not have been ambiguous: the two “higher up” perspective holders at that point are not available as antecedents because they have different agreement features. One is first person (Herodotus), and the other is plural (the Cyrenaic men). Either way, even if it the factors determining the choice of pronoun are not obvious, it is clear that reflexives are not obligatory in order to refer back to a perspective holder within the perspectival scope.

## 4.4 Analysis

The LDRs that we have looked at in this chapter come mainly in two shapes: with or without a syntactic antecedent. In section 4.1 we saw various kinds of construction where a reflexive was bound to an antecedent within a root clause, seemingly across any kind of distance and through f-structures with any kinds of features, and in section 4.2 we saw that we had unembedded indirect discourse where we found reflexives with no syntactic antecedents. Here, I will argue that analyzing both of these situations as binding to a perspective holder means that they are covered by the same lexical entry.

So then the question becomes how we can account for the variation seen in these LDRs. While their main difference is that one group of LDRs do not have an antecedent at all whereas the other group have an antecedent across a tensed f-structure, they have in common that they lack a *local* antecedent, given that we understand local antecedents as we defined them in the previous chapter, where binding had to take place within the Minimal Finite Domain. For local binding, there appears to be no constraints on what kind of beings can be antecedents, and we saw an inanimate antecedent for a locally bound reflexive in (32), for instance (this is what Solberg 2017, p. 24 found for Latin). When it comes to binding across a tensed domain, as I have imputed binding across infinitives to be, it appears that binding must be to an animate antecedent. At any rate, binding across an f-structure with a TENSE feature has not shown up in this corpus, even though I specifically searched PROIEL to look for examples with binding into COMPS (*i.e.*, sub-clauses such as *AcIs*).

Another argument in favour of a unified analysis of these two is that they both are confined to certain syntactic environments, namely indirect discourse in some shape or

<sup>4</sup>the UID continues after another parenthetical stretch like the one in 2.31.2, but this continuation does not feature any reflexives.

form. For the LDRs with an antecedent, this will be an embedded clause, and for the ones that lack any syntactic antecedent, we have unembedded indirect discourse. In the first case, it looks like a presupposition trigger such as the infinitive or optative is not strictly necessary, and we can have an indicative verb in the clause: that was the case for (52), and also for (53), where we had a non-local reflexive in a sub-clause with a verb with the indicative mood, although the most common situation is a COMP with infinitive. Since the indicative mood cannot be seen as a presupposition trigger, we would predict that we can have this kind of binding only where there is some other, overt form of signalling that somebody is saying this, which is present in both cases: in (52) we have a question verb with an indirect interrogative clause, and in (53) we have a verb of speaking with a clausal complement containing the referred speech. In the cases where we find reflexives completely without syntactic antecedents, on the other hand, we have unembedded indirect discourse. Here, we need a presupposition trigger like the infinitive to license binding of a reflexive to a perspective holder.

Further, the two kinds of reflexives are united in that syntactic constraints apparently do not play a role beyond what was discussed in the previous paragraph. To put it differently, so long as we have some form of indirect discourse, the distance between the reflexive and its antecedent can be arbitrary and contain an arbitrary amount of intervening possible antecedents. This might lead us to question why we do not see more extreme examples. One explanation is that while this kind of lengthy construction is possible, it is not very common; we might perhaps compare this to how natural languages can produce phrases and sentences of arbitrary length, and yet they tend to be short (compared to the theoretically possible infinite length).

To summarize, then, binding to a perspective holder appears to be able to give a unified analysis of these two syntactically different constructions. This gives us a parsimonious solution in the sense that these two situations are combined, but still leaves us with two lexical entries for ἐωυτοῦ, one that is syntactically bound and one that is bound to a perspective holder. In terms of economy, having identical entries is something that is often seen as bad, but it is difficult to see how one lexical entry should both be obligatorily bound to its syntactic antecedent, which can be both animate or inanimate, as well as a non-locally bound reflexive that ignores possible local antecedents in favour for binding to a perspective holder that does not even have to be syntactically present in the clause.





## Chapter 5

# Conclusions

I have found that for Herodotus, ἐαυτοῦ occurs in two versions, similar to, *e.g.*, *ziji* for Mandarin Chinese (see Lam 2021). One is as a reflexive pronoun that is bound within the Minimal Finite Domain, and the other is a logophor that is bound to a perspective holder, even when this perspective holder is not visible in the sentence. This two-fold analysis fails to account for the possessive reflexives discussed in section 3.4, however.

In the first case, the reflexive appears to be obligatory if the path from the reflexive to its antecedent does not pass through an f-structure containing a SUBJ (as per Kiparsky 2012), and optional if there is one. In other words, it looks like ἐαυτοῦ is obligatory within the Minimal Complete Nucleus Domain. The only situation where we have local binding across an f-structure that contains a SUBJ is when we have binding into a participle, as discussed in section 3.3. The exact nature of what is allowed and not has been difficult to establish in this case, but I hypothesized that only VP participles permit binding to an outside antecedent. This predicts that in the case of genitive absolutes as in (57), for instance, we cannot have syntactic binding of a reflexive to an antecedent outside of the participial clause. This lines up with what Schwyzer and Debrunner 1950, p. 194 wrote in the case of Attic, that we can have a reflexive with reference to an outside subject in “small participles”. Except for this case of binding through participles, the local ἐαυτοῦ appears to have a complementary distribution with other pronouns.

I have not found binding across infinitival clauses except to a perspective holder, which leads me to suggest that local binding is not allowed in this case. This conclusion is supported by the fact that binding into an infinitival clause only happens when the antecedent is animate and the subject of a perspective predicate – in other words, to an antecedent that is a perspective holder. Local binding can have any antecedent, whether animate or not, so if we could have syntactic binding in this case, we would expect to see inanimate antecedents for reflexives in infinitival sub-clauses.

For the logophor ἐαυτοῦ, I have found that ἐαυτοῦ can be bound to an animate antecedent who the logophor is interpreted relative to. This animate antecedent has to be the subject of a verb that offers some form of perspective, or the clause type must have some form of inherent perspective, such as final clauses (compare (29)). Binding to logical subjects or to AGENTS that do not also have the grammatical function SUBJ has not been found. The logophor ἐαυτοῦ has thus been found in at least three contexts. The most common is when we have indirect speech in a sub-clause. Less common is the situation when there is no antecedent in the sentence at all; in these cases, we have unembedded indirect discourse.

Unembedded indirect discourse functions as a presupposition trigger: the presupposition that is triggered, is that somebody said what is being referred, and

thus we can have binding to this somebody. Logophoric binding absent any kind of syntactic marker like a matrix verb of speaking or unembedded indirect discourse has not turned up in the corpus. It is not clear if there are blocking effects when we have a logophorically bound  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  like with *ziji*, or how “nested” perspectives might interact; in the examples I discuss,  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  has only been used to refer to one person, so I have not found concurrent examples with different antecedents, but it is not possible to deduce from the small number of examples that I have found if this means that there is any kind of blocking or domination going on when we have multiple perspectives. Further, it looks like this logophoric usage of  $\acute{\epsilon}\alpha\upsilon\tau\omicron\upsilon$  constitutes its own class of phenomenon, different from such phenomena as what Kiparsky 2012 calls “discourse anaphora” and similar to what has been described by Clements 1975 and others.

The semantics of clausal complements might be corroborated by the findings in this thesis: logophoric binding has not been found in a  $\acute{\omicron}\tau\iota$  clause, which might suggest that this complementizer blocks perspective. Logophoric binding with  $\acute{\omega}\varsigma$  as a complementizer, on the other hand, has been found, such as in (53).

Another question that would be interesting to pursue is whether we can have binding to the matrix subject in cases of object control in the absence of markers that might confer perspective, such as  $\acute{\omega}\sigma\tau\epsilon$  in (28). I briefly discussed this in section 2.6, but I was not able to find examples where it was possible to decide the question. Binding facts might be able to tell us if dynamic and declarative infinitives differ in their TENSE values.

It is possible that the findings here may be a challenge for some existing theories of binding. One such example could be the attempt of Reuland 2011 at dividing the labour, so to speak, between syntactic and logophoric interpretation. If I understand him correctly, then he wants to have one lexical entry for both interpretations, saying that the logophoric interpretation is licensed only when a local interpretation is unavailable (compare, *e.g.*, (45) in Reuland 2011, p. 170). It is not clear if such an approach is compatible with some of the sentences in this corpus, such as the example with Jason and Triton in (2), where Jason and Triton have the same agreement features, yet binding happens not to the local Jason, but to the perspective holder Triton.

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