

THE SPLIT NOUN PHRASE IN CLASSICAL LATIN

by

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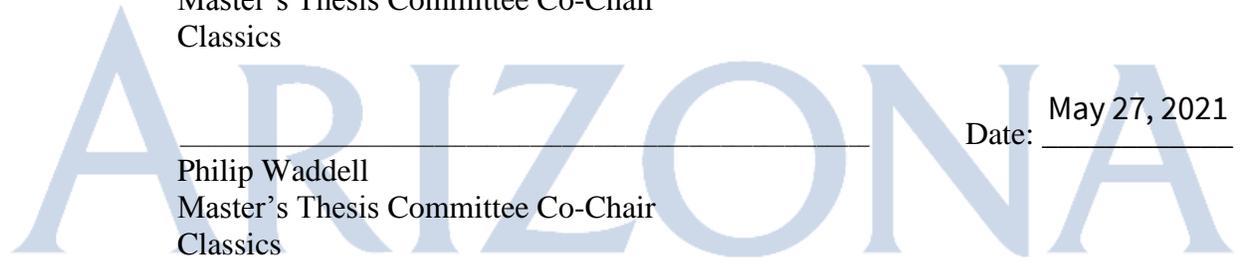
We hereby certify that we have read this thesis prepared under our direction and recommend that it be accepted as fulfilling the Master’s requirement.

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## Abbreviations

1	first person
2	second person
2P	second-position
3	third person
A	adjective
ABL	ablative
ACC	accusative
ACT	active
ANA	anaphor
AP	adjective phrase
C1	clause-initial
C2	clause-second
Cl	classifier
COMP	comparative
Comp	complement
Conj	conjunction
CP	complementizer phrase
DAT	dative
Deix	deixis
DeixP	deixis phrase
Dem	demonstrative
Det	determiner/determinative
DIM	diminutive
DIST	distal
F	feminine
FUT	future
GEN	genitive
GER	gerund
GRDV	gerundive
IMPERF	imperfect
IND	indicative
INF	infinitive
LF	logical form
LOC	locative
M	masculine
MED	medial
N	neuter
NEG	negation, negative
NOM	nominative
NP	noun phrase
NPI	negative polarity item
Num	numeral
NumP	numeral phrase
O	object

PASS	passive
PATR	patronymic
PERF	perfect
PF	phonological form
PL	plural
PLUPERF	pluperfect
POSS	possessor
PP	prepositional phrase
PRES	present
PrF	prosodic form
PROX	proximal
PTCP	participle
Q	quantifier
QP	quantifier phrase
REFL	reflexive
S	subject
SBJV	subjunctive
SG	singular
SLI	specific language impairment
SO	syntactic object
Spec	specifier
SUBJ	subject
SUP	supine
SUPL	superlative
TP	tense phrase
UG	universal grammar
V	verb
VOC	vocative
VP	verb phrase

## **Abstract**

In this thesis I investigate the syntax and prosody of discontinuous classical Latin noun phrases. I argue that they are the result of the interaction of Universal Grammar with syntactic and phonological parameters of language variation.

Chapter 1 introduces the problems of discontinuous noun phrases for theories of grammar and surveys the history of research on the topic. Chapter 2 presents new evidence based on the distribution of syntactic punctuation in epigraphic texts, of negative polarity items, and of quantifiers that any theory of Latin syntax must involve hierarchical structure, recursion, and syntactic movement, both in the noun phrase, and in the clause. Chapter 3 argues based on the distribution of interpuncts in epigraphic and papyrus texts that second-position effects are the consequence of prosodic movement and are widespread throughout the lexicon. Chapter 4 summarizes the results of this thesis.

# 1. The puzzle of the split noun phrase

## 1.1 Introduction

Ancient writers on rhetoric recognized that noun phrases (NPs) could be split into two noncontiguous fragments. The author of the *Rhetorica ad Herennium*, for instance, identifies (1) as a good example of *transiectio* (“transposition”), useful for achieving a certain poetic rhythm (Rhet. Her. 4.44).<sup>1,2</sup>

(1) *Instabilis* in istum plurimum *fortuna* *valuit* (Rhet. Her. 4.44)<sup>3</sup>

In-stabilis	in istum	plur-imum	fortuna
NEG-stable.FSG.NOM	in MED.MSG.ACC	much-SUPL	fortune.FSG.NOM
valuit			
strong.3SG.PERF.IND.ACT			

‘Unstable fortune has been most powerful against this one.’

Notice that the adjective *instabilis* is interpreted as a modifier of the noun *fortuna*, and that the two words exhibit nominal concord in gender, number, and case, suggesting that they form a syntactic unit. Interestingly, however, *instabilis* is linearly separated from *fortuna* by a prepositional phrase (PP) *in istum plurimum*, which apparently does not form a constituent with either *instabilis* or *fortuna*, being instead understood as a modifier of *valuit*.

The phenomenon illustrated in (1) resembles split NP constructions that have been documented for German, Warlpiri, Japanese, and many other languages (cf. Fanselow and Féry 2006).<sup>4</sup> In such constructions, a constituent of what appears to be a single noun phrase is separated from the remainder of the material of the phrase by words that are extraneous to the

<sup>1</sup> “Transposition of this sort, which doesn’t render the matter obscure, will be of great use for periods [= *continuationes*], about which we have spoken above. In these it is fitting to build up words to a certain, so to speak, poetic rhythm, so that they [i.e., the periods] can be perfectly and most polishedly complete” (Huiusmodi *transiectio*, quae rem non reddit obscuram, multum proderit ad continuationes, de quibus ante dictum est; in quibus oportet verba sicuti ad poeticum quendam extruere numerum, ut perfecte et perpolitissime possint esse absolutae).

<sup>2</sup> The term *transiectio* denotes a form of *transgressio*, in turn a calque of the ancient Greek *hyperbaton*, understood by writers of rhetorical and grammatical treatises as a metaphoric process of “transgression” or “boundary crossing,” with associations of violation and exceptionality. However, in this thesis I will consider prose authors, and cases in which split NPs are perfectly natural. For this reason, I will not use the term *hyperbaton*.

<sup>3</sup> A complete list of abbreviations is provided on page vi. Whenever possible, examples follow the Leipzig Glossing Rules (Department of Linguistics of the Max Planck Institute for Evolutionary Anthropology, and the Department of Linguistics of the University of Leipzig, 2015). For the sake of clarity, we will generally follow a policy of minimal morphological segmentation.

Parentetical citations in example sentences follow the convention specified in the *Oxford Classical Dictionary* (4th ed.).

<sup>4</sup> Many names have been used in the literature for related, but sometimes quite distinct constructions, including “discontinuous noun phrase,” “split topicalization,” “partial fronting,” “incomplete category fronting,” and “left branch extraction.” I will never use the term “split NP” in the sense of Giusti (1996; 2006) and Giusti and Iovino (2016) to mean “extended noun phrase.”

phrase. For convenience, let us call the split material on the left-hand side the “left fragment” and the remainder the “right fragment.” Thus, the left fragment of (1) is *instabilis* and the right fragment is *fortuna*.

Example (1) displays a modifier–head configuration, in which the left fragment may be construed as a modifier of the right fragment. The inverse is also possible, as shown in (2), where *bonam* modifies *navem*. We will underline the modifying element when convenient.

(2) *Navem spero nos valde bonam habere* (Cic. *Fam.* 14.7).

navem	spero	nos	valde	bonam
ship.FSG.ACC	hope.1SG.PRES.IND.ACT	1PL.ACC	quite	good.FSG.ACC
habere				
have.PRES.INF.ACT				

‘I hope we have a really good ship.’

The category of the modifier appears to be free, permitting demonstratives (3a), quantifiers (3b), and adnominal genitives (3c) in addition to canonically adjectival nominal elements such as *bonam* in (2). Descriptively speaking, in both (a) and (b), the modifying category exhibits nominal concord with the head noun; in (c), the NP *animorum* is a subjective genitive in construction with the head noun *assensionem*.

(3) (a) *Hunc tu vitae splendorem maculis aspergis istis?* (Cic. *Planc.* 30)

Hunc	tu	vitae	splendorem	maculis
PROX.MSG.ACC	2SG.NOM	life.FSG.GEN	brightness.MSG.ACC	stain.FPL.ABL
aspergis				
sully.2SG.PRES.IND.ACT				
		istis?		
		MED.FPL.ABL		

‘You sully this brilliance of a life with those insults?’

(b) *Omnes invidiose eripuit bene vivendi casus facultates* (Rhet. *Her.* 4.44)

Omnes	invidiose	e-ripuit	bene	vivendi
all.FPL.ACC	enviously	away-take.3SG.PERF.IND.ACT	well	live.GER.GEN
casus				
fate.MSG.NOM				
		facultates		
		ability.FPL.ACC		

‘Fate has enviously stolen all means of living well.’

(c) Ad haec [...] *assensionem* adiungit *animorum* (Cic. *Acad.* 1.40)

ad haec	assensionem	ad-iungit	animorum
to PROX.NPL.ACC	agreement.FSG.ACC	to-join.3S.PRES.IND.ACT	mind.MPL.GEN

‘To these things he adds the consent of the mind.’

Example (c) also shows that in split NPs the left fragment need not appear at either the left periphery of the sentence or of the clause.

Split NPs are frequent in poetry and in rhetorically elevated contexts but appear in apparently all registers and periods of Latin, some of which are illustrated in (4). This indicates that split noun phrases are a grammatical phenomenon of the language.

(4) (a) ea [...] *validam* habet *naturam* (Cato *Agr.* 157.1)

ea	validam	habet	naturam
DET.FSG.NOM	strong.FSG.ACC	have.3S.PRES.IND.ACT	nature.FSG.ACC

‘It (i.e., *brassica pythagorea*, a kind of cabbage) has a hardy nature.’

(b) Ideo autem *hunc* tenere *ordinem* malui ... (August. *Civ.* 21.1.1)

Ideo	autem	hunc	tenere
therefore	moreover	PROX.MSG.ACC	hold.PRES.INF.ACT
ordinem	malui		
order.MSG.ACC	prefer.1S.PERF.IND.ACT		

‘That’s why I’ve preferred to keep to this arrangement ...’

(c) *Plurimi* hoc signo *scholastici* nascuntur et arietilli (Petr. 39.5).

Plur-imi	hoc	signo	scholastici
many-SUPL.MPL.NOM	this.NSG.ABL	sign.NSG.ABL	rhetorician.MPL.NOM
nascuntur	et	ariet-illi	
born.3PL.PRES.IND.PASS	and	ram-DIM.MPL.NOM	

‘Very many rhetoricians and baby rams are born under this sign.’

(d) *His* ille *rebus* ita convaluit ut [...] (Cic. *Att.* 7.3.4)

His	ille	rebus	ita convaluit	ut
PROX.NPL.ABL	DIST.MSG.NOM	thing.NPL.ABL	so strong.3S.PERF.IND.ACT	that

‘By these things he has grown so strong that ...’

Cato the Elder's *On Agriculture* (234-149 BCE) (a) and Augustine's *City of God* (412-426 CE) (b) represent very early and very late periods of ancient Latin literature, respectively (Elvers and Kierdorf; Pollman and Zamminer). Petronius' *Dinner of Trimalchio* (c) represents the language of a Roman freedman (Bodel 1984). And split NPs are common throughout the extant writings of Cicero, including his private correspondence (d), published only posthumously (Bringmann and Leonhardt).

There are many questions that one might be interested in investigating regarding the split NP phenomenon. The aim of this thesis is to provide a syntactic account.

### 1.1.1 Chapter overview

It will be useful to consider at some length the history of investigation into split NPs and other discontinuous constituents. In Section 1.2, we will be able to see the problems that split NPs have posed since the earliest formal theories of syntax, and the advances that have resulted from their study. Thereafter, in Section 1.3, I will present my solution and the structure of this thesis.

## 1.2 History of research

Discontinuous constituents first became problematic when the first formal theories of syntactic structure were developed in the structuralist program outlined in Leonard Bloomfield's (1933) treatise. The development of a mechanical procedure of "immediate constituent analysis" which would segment a sentence into a nested hierarchy of significant strings, or "constituents" subsequently became a major objective of syntactic theory (Graffi 2001, 282ff.). For instance, (5) might be incompletely analyzed as (6), where  $\alpha$  is the subject and  $\beta$  the predicate (in traditional terms), which in turn consists of a copula and a noun phrase  $\gamma$ , which is further analyzable.

- (5) This is a very interesting topic  
 (6) [ $\alpha$  This] [ $\beta$  is [ $\gamma$  a [ $\delta$  very interesting] topic]]

Procedures of constituent analysis relied on methods of substitution, where a constituent would be labeled by the label of a single word with which it might be replaced. So, for instance,  $\delta$  would receive the label "adjective phrase," or AP, since it might be replaced by a single adjective with minimal change in meaning—"fascinating," for instance. But *is a very* could not be a constituent, since it fails the substitution test—there is no word with which it could be replaced to yield a minimally different meaning.

In this research program, sentences involving phrasal verbs as in (7) were clearly very problematic, where *send ... up* appears to form a single discontinuous constituent, equivalent to *send up* in (8), as noted by Pike (1943), who called them "noncontiguous" constituents.

- (7) Let's send all of the visitors up  
 (8) Let's send up all of the visitors

The constituency of *send ... up* cannot be formally described by a theory of segmentation or substitution, a problem that constituted a theoretical roadblock for the structuralist program throughout its duration.

Zellig Harris recognized that discontinuous constituents, and even discontinuous morphemes were prevalent in the world's languages. Harris offers the Latin example of *filius bonus* 'good son' as containing the discontinuous morpheme *us ... us* that constitutes "one broken morpheme, meaning male" (Harris 1951, 166).<sup>5</sup> Importantly, Harris developed a theory of "transformations," which map sentences onto other sentences, and which can thereby represent discontinuous constituents. For instance, in the framework of Harris (1957), sentence (7) might be derived from (8) by the transformation (9), inverting the order of particle (P) and noun phrase.

(9) *Particle shift*  
 V P NP → V NP P

Noam Chomsky, Harris's student, developed a theory of transformational, or generative, grammar in an early work (1956), central ideas of which were more widely disseminated by the end of the decade (Chomsky 1957; [1958] 1962). Throughout the explosion of research that followed, discontinuous constituents have remained central.

Among the most important insights in this framework is that a phrase can superficially appear at a certain position but be interpreted at another, distinct position, in an abstract underlying structure. For example, in (10), *the pie* is the semantic object (or *theme*), functioning as an obligatory argument of the predicate *drop*.<sup>6</sup> The requirement of a syntactic element to combine with phrases of a certain category is known as *selection*. In (10), *drop* selects a noun phrase theme, here, *the pie*.

Notice, however, that *the pie* is simultaneously the grammatical subject, as can be observed from its position preceding the auxiliary and from the auxiliary's obligatory agreement with it. To see that the latter is the case, consider that if *were* is substituted for *was*, the resulting sentence is ungrammatical, as indicated by (\*).

(10) The pie was/\*were dropped (by the children)

The semantic subject (or *agent*) *the children* is syntactically embedded in an adverbial prepositional phrase (PP), and as such its addition or omission has no effect on the grammaticality of the sentence. This optionality is indicated by the parentheses.

To formally represent this dual interpretation of *the pie*—as semantic object and syntactic subject—we say that *the pie* undergoes syntactic *movement* from a local position in which it satisfies the argument structure of *dropped* to the canonical subject position, as depicted in (11).

(11) [The pie] was dropped [~~the pie~~]

We now have an explanation for the fact that in (10) the verb phrase is "split" into *the pie ... dropped*. The discontinuity results from simultaneous requirements of *the pie* to satisfy the argument structure of *dropped* and the (English) constraint that subjects are obligatory. In Chapter 2, we will see that syntactic movement is operative in Latin split NPs as well.

The first transformational accounts of Latin word order may be found in John Ross's influential dissertation ([1967] 1986). He coined the term *scrambling* to describe the apparent rearrangement of constituents in languages such as Latin and Russian (Ross 1986, 51). The

<sup>5</sup> Of course, *-us* is the exponent not just of masculine gender, but singular number and nominative case.

<sup>6</sup> For an overview of the theory of the different semantic roles for the arguments of a predicate, see Baker (1997).

general form of Ross's scrambling rule is given in (12), where  $\beta$  and  $\gamma$  are clause-mates and subject to language-specific restrictions.

$$(12) \quad \textit{Scrambling} \\ \alpha \beta \gamma \delta \rightarrow \alpha \gamma \beta \delta$$

Repeated application of (12) can produce any permutation of elements in the same clause. Ross recognized its tremendous power, relegating it to a new stylistic component of universal grammar (UG), following Chomsky (1965, 126ff.), but did not develop restrictions on its application. In this thesis and in most of the literature, however, the term *scrambling* simply refers to the syntactic movement of constituents in free word-order languages, such as Latin, not necessarily referring to any specific rule.

In the early years of the generative research program few other accounts were given of Latin scrambling, let alone split NPs; both topics were ignored in the first monograph on transformational Latin syntax (Lakoff 1968). A decade later, in the monumental *Lectures on Government and Binding*, presenting the core properties of universal grammar, fewer than ten pages were spent on languages with free word order (Chomsky 1981: 127–135). In this theory, the theory Principles and Parameters, all language variation is the product of idiosyncratic properties of lexical items and of a finite set of *parameters*. An example of a parameter is head-complement order, determining, e.g., whether a verb precedes its object, as in English, or vice versa, as in Japanese.

Following Hale (1978), Chomsky (1981) partitioned languages into two types: “configurational,” in which grammatical functions such as “subject” and “object” correspond to structural positions, and “nonconfigurational,” in which no such correspondence exists. The work of Hale initiated a research program aimed at identifying properties shared by all nonconfigurational languages and at deriving these properties from, ideally, a single parameter of UG. In a highly influential article, Hale (1983) identified (i) free word-order, (ii) discontinuous constituency, and (iii) null anaphora (i.e., pronoun omission) as three diagnostic properties of nonconfigurational languages, on the model of Warlpiri, an indigenous language of Australia.<sup>7</sup> Hale proposed a “configurationality parameter,” the details of which we will not go into here (Hale 1983, 26).

It is evident that Latin is nonconfigurational, in Hale's sense, satisfying each of the above diagnostics (cf. Ledgeway 2012, 71ff.). Yet there were few attempts in this period to characterize and explain (ii), with which we are especially concerned. The work presented in the first major conference on Latin and theoretical linguistics, for instance, was silent on this matter (cf. Pinkster 1983).

The goal of much work over the subsequent 15 years aimed at improving on Hale's (1983) configurationality parameter. Such attempts, which aim to derive a large cluster of language-specific properties from a single parameter are known as “macroparametric” approaches. Let us review the two most prominent among them.

Following Hale (1983), several researchers have aimed at accounting for the structure of nonconfigurational languages by divorcing “lexical structure,” from “phrase structure” (cf. Speas 1990, Austin & Bresnan 1996, Nordlinger 1998). In such “dual structure” approaches, lexical structure represents the properties of lexical items, in particular, their semantic properties and

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<sup>7</sup> Note that (ii) includes split noun phrases as a special case.

selectional requirements, whereas phrase structure represents the hierarchical structure of the sentence (i.e., constituency), order, and *projection* (i.e., the labeling of constituents; see below).

A second important macroparametric approach argues that nonconfigurational languages differ from configurational ones in having solely pronominal arguments, possibly null (i.e., phonetically empty, and unpronounced), without positing a separate tier of lexical structure (Jelinek 1984). In this approach, *validam ... naturam* in (13) would not be analyzed as a single discontinuous object, but *validam* and *naturam* would be two distinct adverbials that modify a single null pronoun object.

(13) ea [...] *validam* habet *naturam* (Cato Agr. 157.1)

ea	validam	habet	naturam
DET.FSG.NOM	strong.FSG.ACC	have.3S.PRES.IND.ACT	nature.FSG.ACC

‘It (i.e., *brassica pythagorea*, a kind of cabbage) has a hardy nature.’

Like adverbs in English, the fact that overt full nominal expressions in nonconfigurational languages are structurally adverbials partially accounts for their free ordering. Alternatively, the person and number marking affixes themselves may be viewed as arguments (Baker 1991, 1996). In (13), then, *-t* on *habet* would be the subject, with an empty  $-\emptyset$  affix representing the object, not overtly realized in Latin, but in other languages.

In one of the most important studies of Latin syntax operating broadly within the framework of Chomsky (1981), Ostafin (1986) argues that Latin constituents have an underlying base-generated order, and that scrambling phenomena are the result of movement. Within this framework, there is an underlying level of representation of the sentence known as D-Structure, representing semantic relations before movement. D-structures are then mapped via movement to S-structures, which approximate the external form of sentences. Ostafin argues that, for instance, the form of Latin D-Structures is SOV, but that a set of movement rules (mappings to S-Structures) produce the order variations that are observable.

Without going into the details here, historically speaking, Ostafin’s account is “microparametric,” arguing that the superficial differences between classical Latin and, say, English, can be formally described by several independent parametric differences, namely, in allowing Adjective Phrase (AP) movement, and for the specifier positions of NP, PP, and the Verb Phrase (VP) to be “landing sites” for movement, in the sense of Baltin (1978; 1982). This makes Ostafin an early critic of the work of Hale (1983) and Jelinek (1984). Let us consider the content of Ostafin’s approach, which will also be a good opportunity to review important theoretical concepts for what follows.

Consider the derivation of the adjective phrase *suo dignam scelere* (14), in which *suo ... scelere* is a split NP.

(14) adhuc poenam nullam suo dignam scelere suscepit (Cic. Man. 7)

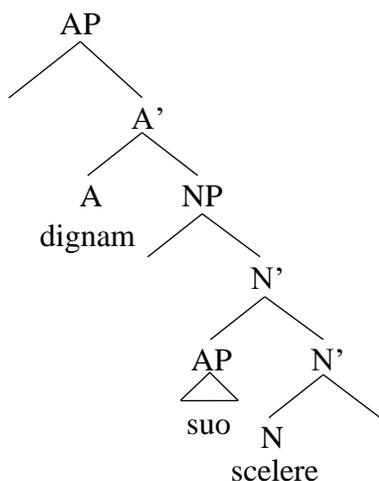
ad-huc	poenam	nullam	suo	dignam
to-here	punishment.FSG.ACC	no.FSG.ACC	3POSS.NSG.ABL	worthy.FSG.ACC
scelere	suscepit			
crime.NSG.ABL	receive.3S.PERF.IND.ACT			

‘To this point he’s received no punishment worthy of this crime.’

The D-structure is given in (15) in bracketed notation and in tree form in (16), in the “X-bar” schema of constituent structure well-developed and accepted by the time of Ostafin’s study (presented briefly below).

(15) [AP dignam [NP suo scelere]]

(16)



Briefly reviewing the notation, the labeled elements are *nodes* and the lines *branches*. Nodes on the same level are *sisters* and have the same *mother*. Thus [A dignam] and [NP suo scelere] in (16) are sisters and have the mother [A' dignam suo scelere]. Nodes hosting lexical items or function words are *heads*, e.g. [A dignam]; their sisters are their *complements*. Thus, [NP suo scelere] is the complement (informally, the “object”) of [A dignam]. The head [N scelere] has no complement.

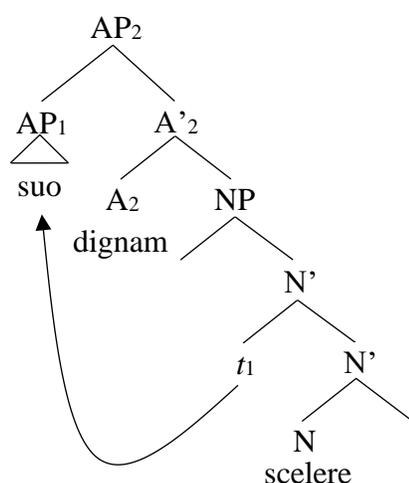
Heads label or *project* higher structures recursively. The highest or *maximal* projection of a head of any category X is labeled XP (“P” for “phrase”). For instance, [A dignam] maximally projects to [AP dignam suo scelere]. Intermediate projections are labeled X’ (pronounced as “X-bar”). The daughter of XP and sister of X’ is the subject or *specifier* of XP (notated Spec,XP), and a daughter of X’ and sister of X’ is an *adjunct* of XP. Thus, both specifiers of (16) are empty, and [AP suo] is an adjunct to [N scelere]. The structure of [AP suo] is abbreviated, as represented by the triangle.

Specifiers are often landing sites for movement and adjuncts typically host peripheral material such as adverbials. Trees are binary branching, meaning that a node can have at most one sister (or none at all).

There are two very important relations among structures. An element *XP* *dominates* an element *Y*, informally, if you can form a path of branches from *Y* to *XP*, going only up. Thus [<sub>N</sub> *scelere*] is dominated by [<sub>NP</sub> *suo scelere*] but is not dominated by [<sub>AP</sub> *suo*] or [<sub>A</sub> *dignam*]. Second, an element *X* *c-commands* an element *Y* precisely when every node dominating *X* also dominates *Y*. Thus [<sub>A</sub> *dignam*] *c-commands* [<sub>A</sub> *suo*], but not vice-versa. Carnie (2010) may be consulted for a far fuller exposition on X-bar theory and other theories of constituency.

Ostafin's theory, then, says that AP can move, and that the specifiers of NP, PP, and VP are possible landing sites. To these we may add the specifier of AP. Given only the standard condition that a moved element must *c-command* the position from which it has moved—it's "trace," marked by a *t*—it is then possible to derive (14) from (15)/(16), with movement of [<sub>AP1</sub> *suo*] to Spec, AP<sub>2</sub>, as shown in (17).

(17)



Ostafin's microparametric theory, then, makes concrete claims about what may move, and where elements may move to, and seems capable of accounting for many split NP phenomena, and scrambling more generally. Perhaps most importantly, it seems more restricted than the extremely powerful scrambling theory of Ross ([1968] 1986). However, without strong restrictions on movement, whether this impression is accurate is unclear (cf. Kornai and Pullum 1990). This criticism is even more applicable to less well-developed accounts of Latin scrambling such as Elerick (1992), which simply say that any word may move to either the left or right periphery of the clause. It is also left unspecified *why* constituents move in the first place, and in particular, what their semantic, pragmatic, or phonological effects may be.

Though the influence of Ostafin (1986) is likely indirect, by the time of Legate (2001; 2002), the microparametric view of nonconfigurationality became standard. Legate argues that the phenomena of nonconfigurational languages can be derived from the interaction of independent parameters, or what Bliss (2013) calls the "conspiracy" of microparameters interacting to create the "mask" of nonconfigurationality.

Among the virtues of Ostafin's dissertation is being the first explicit attempt to develop descriptive claims on what forms of Latin scrambling are ungrammatical, a project taken up by Bolkestein (2001). Both authors claim that (in our terminology), no preposition may be a fragment of a split, ruling out, e.g. (18) but not (19).

- (18) \*quem hominem et quod tempus est **in**? (construct)

quem	hominem	et	quod	tempus
which.MSG.ACC	person.MSG.ACC	and	which.NSG.ACC	time.NSG.ACC
est	in?			
be.3S.PRES.IND	in			

Intended: ‘What man and what time is it about?’

- (19) hoc si est in libris, **in** quem hominem et **in** quod tempus est? (Cic. *Div.* 2.1.10)

hoc	si	est	in	libris,	in	quem
this.NSG.NOM	if	be.3S.PRES.IND	in	book.MPL.ABL	in	which.MSG.ACC
hominem	et	in	quod	tempus	est?	
man.MSG.ACC	and	in	which.NSG.ACC	time.NSG.time	be.PRES.3S.IND	

‘If this is in the books, what man and what time is it about?’

In other words, P-stranding is disallowed: syntactic movement in Latin obligatorily carries along prepositions.<sup>8</sup> Bolkestein also claims (in our terms) that one adverbial modifier of VP cannot split another, ruling out (20) but not (21).

- (20) *ternis magna celeritate mensibus expeditionem confecit* (construct, Bolkestein 2001)

ternis	magna	celeritate	mensibus	expeditionem
three.FPL.ABL	big.FSG.ABL	speed.FSG.ABL	month.FPL.ABL	march.FSG.ACC
confecit				
complete.3S.PERF.IND.ACT				

‘He completed the march with great speed in three months.’

- (21) *ternis mensibus magna celeritate expeditionem confecit* (construct)

These are important attempts to develop general descriptive restrictions on observed orderings.<sup>9</sup>

Devine and Stephens’ (2006) monograph on Latin word-order has been very influential in Latin linguistics. Their central claim is that each lexical category X has *two* specifier positions (in our terms), the upper which they call TopXP, and the lower FocXP (Devine and Stephens, 2006: 25ff.). They argue:

<sup>8</sup> Movement of this sort is known as “pied-piping” (Ross 1986, 121ff.).

<sup>9</sup> Bolkestein’s constraints have proven problematic for Lexical Functional Grammar, a matter we will not investigate here (Snijders 2012).

The tree configuration is determined primarily by discourse properties like topic and focus rather than by grammatical properties like subject and object. Consequently Latin is called a discourse configurational language. (Devine and Stephens 2006: 26)

The claim that structural positions correspond to discourse properties is extremely strong, and is suspect given the apparently free variation in, say the order of N and its complement (cf. Bolkestein 2001: 256). Devine and Stephens' work has nonetheless provided an important analysis of Ostafin's landing-sites in terms of pragmatic functions. In recent work they describe their account of the syntax-semantics interface as descriptive, rather than predictive (Devine and Stephens 2019, 5).<sup>10</sup>

Agbayani and Golston (2016) have provided an analysis of split constituents in terms of "phonological movement." Their analysis assumes that split NPs never have empirically detectable syntactic effects. In the following chapter, we will see that this is not the case.

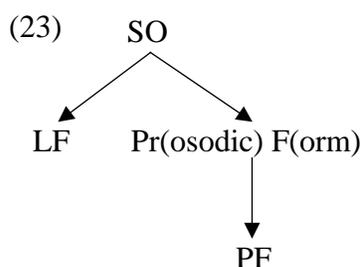
In recent years there has been renewed interest in the Latin noun phrase and split NP phenomena (Iovino 2012; Giusti and Iovino 2016; Vendel 2018; Giusti 2019). Vendel (2018) investigates split NPs in Cicero's *Pro Milone* and argues that the notions of topic and focus are insufficient to predict when split NPs occur, suggesting that contrastiveness instead may be the relevant property of the left fragment (Vendel 2018, 74). This is suggestive of recent proposals, Kratzer and Selkirk (2020) and López (2009), among others.

### 1.3 The proposal

This thesis investigates the syntax and prosody of the split noun phrase. The central claim is that split noun phrases are the consequence of the general architecture of grammar, as stated in (22) and schematically represented in (23), showing that a syntactic object SO is mapped to a logical form LF and a prosodic form PrF, the latter in turn mapped to a phonological form PF.

(22) *Structure-dependence of grammar*

The sentence is a recursive, hierarchical structure with displacement that is deterministically mapped to a semantic interpretation and a morphophonological realization.



As a fact of language variation, Latin permits more extensive displacement than in other languages. This displacement is not free, but subject to scope transparency, as will be argued in Chapter 2.

<sup>10</sup> It is a sometimes neglected fact of Romance that constituents receiving topic or focus may either move or apparently remain in situ, which López (2009) has argued to indicate that such pragmatic functions do not serve a purpose in a theory of syntax.

- (24) *Scope transparency*  
The scope of a generalized quantifier is the denotation of its c-command domain.

In Chapter 3, we will see that syntactic displacement interacts with prosodic movement according to the accumulation principle.

- (25) *Accumulation principle*  
Throughout the derivation of a sentence, prosodic words can only become larger, not smaller.

The interaction of these three principles with the intonational effects of syntactic structures yields split noun phrase phenomena, including instances where neither the left nor the right fragment appear to be constituents.

## 2. Structure-dependence

### 2.1 Introduction

The phenomenon of discontinuous constituents, such as that indicated in italics in (26), raises the question of whether syntactic structure exists above the level of the word.

(26) Ubi<sup>1</sup>cumque es, ut scripsi ad te ante, *in eadem es navi* (Cic. *Fam.* 2.5.1).

Ubi <sup>1</sup> cumque	es,	ut scripsi	ad te
wherever	be.2SG.PRES.IND	as write.1SG.PERF.IND.ACT	to 2SG.ACC
ante,	<i>in eadem</i>	es	navi
before in	same.FSG.ABL	be.2SG.PRES.IND	boat.FSG.ABL

‘Wherever you are, as I wrote to you before, you’re in the same boat.’

The italicized expression *in eadem ... navi* behaves as a unit with respect to semantics, denoting a place.<sup>11</sup> It also appears to be a syntactic unit: *eadem* and *navi* agree in gender, number, and case. With respect to gender, for instance, the noun *navi* is lexically-specified as feminine, but *eadem* may inflect for any gender. The fact that it is feminine indicates that it is in a syntactic relation of some sort with *navi*.

In this chapter I will argue that, despite appearances, the semantic and morphological relations between the various elements of a split noun phrase are best explained in a theory where the Latin sentence is hierarchically structured. In Sections 2.1.1–2 we will develop this idea on a conceptual level, and in Section 2.1.3 I will provide an overview of the rest of the chapter.

#### 2.1.1 The thesis of structure-dependence

Considering (26), notice that if the sentence doesn’t have any abstract structure, then more or less robust patterns in the arrangement of words are expected on the basis of cognitive principles such as domain integrity and iconicity (cf. Pinkster 2021, 954ff.), but there would be no surprise if these are violated.<sup>12</sup>

Undoubtedly, many factors enter into what words are spoken aloud or appear on the page. But few of these are exclusively linguistic, and we are not interested here in developing a general theory of perception, social interaction, or speech planning. The ambitious program of cognitive linguistics attempts to reduce linguistic theory to such broader human faculties (Winters and Nathan 2020). Within classics, there have been several major publications in recent years that develop such a framework (e.g., Meineck, Short, and Devereaux 2018).

<sup>11</sup> The “boat” (*navi*) here is a metaphor for the political party of the “best men” (*optimates*) (Shackleton Bailey 1977, ad loc.).

<sup>12</sup> Domain integrity is the principle that “what belongs together should be kept together” (Dik 1997, 402). Iconicity is the principle that the linear order of constituents corresponds to our perception of the world, say, in mirroring the order of events (Siewierska 1988, 79).

There are good reasons to maintain linguistics as an independent domain of inquiry, however. Most important among these are the evidence that language acquisition has the characteristics of biological maturation, following a fixed timeline, with minimal individual differences (Guasti 2017); the so-called “poverty of the stimulus,” in which the primary linguistic data to which the child is exposed vastly underdetermines the form of the target grammar (Berwick, Chomsky, and Piattelli-Palmarini 2013); the lack of any rudimentary constituent structure in the communication systems of our closest primate relatives, who do seem to rely on general intelligence when taught language (Terrace et al. 1979); the differential patterns of neuronal activation in Broca’s area for real languages and for languages violating universal principles of language (Musso et al. 2003); the existence of language-specific pathologies such as aphasia and Specific Language Impairment (SLI) (Curtiss 2013); and “mirror deficits,” where general cognition is impaired but language is spared (Smith and Tsimpli 1995).<sup>13</sup> Such robust and diverse evidence points towards a “nativist” view of language as a biologically-inherent module of human cognition that matures on the basis of experience, quite separate from general intelligence, and contrary to claims by those working in cognitive linguistics and related fields.

The view that language can be studied as an independent domain of inquiry is implicit in traditional grammars, which recognize, for example, that the formal structure of language is conceptually distinct from principles of sound or meaning. For instance, the grammarian Aelius Donatus defines deponent verbs as those which end in *-r* and are “not Latin” (*Latina non sunt*) without *-r* (27). For what Donatus terms “not Latin,” we will use the term *ungrammatical*.

- (27) Deponentia quae sunt? Quae in ‘r’ desinunt, ut passiva, sed ea dempta Latina non sunt, ut ‘luctor,’ ‘loquor’ (Donatus, *Ars Minor*).

‘What are deponent (verbs)? Those which end in “r,” like passives, but which are not Latin if you remove the “r,” such as “luctor” and “loquor.”

Donatus’ definition is morphosyntactic, involving the obligatory combination of certain verbal roots, e.g., *luct-*, with a functional suffix *-r*, not involving meaning or communication whatsoever.

The school of generative grammar assumes that traditional grammars are essentially correct but goes further in developing theories by using the formal tools of discrete mathematics and the empirical methods of the natural sciences (Chomsky 1965, 63ff.).

In the present study we are concerned with the syntactic component of grammar, which concerns the relation of form to meaning. A theory of syntax must provide a predictive account of this relation.<sup>14</sup> If this relation were transparent, we would require only a trivial theory, and speech would be a perfect mirror of thought. To see why this is not the case, consider the famous line of Ennius reporting the prophecy of the oracle at Delphi to Pyrrhus (28), well-discussed in antiquity for its ambiguity between readings (29)(a) and (b).

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<sup>13</sup> I thank Massimo Piattelli-Palmarini for his expertise in clarifying the biological evidence for a separate language faculty.

<sup>14</sup> Note that the investigation of this relation is conceptually distinct and prior to the study of *how* syntax is used.

(28) Aio te Aeacida Romanos vincere posse (Cic. *Div.* 2.116).

aio	te	Aeac-ida	Romanos
say.1SG.PRES.IND.ACT	2SG.ACC	Aeacus-PATR.MSG.ACC	Roman.MPL.ACC
vincere		posse	
defeat.PRES.INF.ACT		able.PRES.IND	

- (29) (a) I say that you, son of Aeacus, can defeat the Romans.  
 (b) I say that you, son of Aeacus, the Romans can defeat

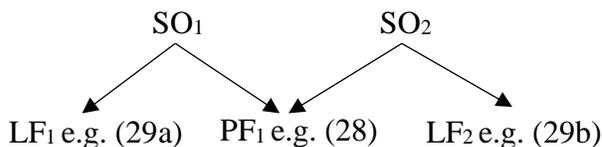
In the first reading, (29)(a), *te* is the subject of both embedded clauses, with *Romanos* the object of the clause with verb *vincere*. In the second reading, (b), the roles are reversed, with *Romanos* as subject and *te* as object.

The ambiguity here is obviously not lexical—that is, it is not a matter of homophony. Nor is it morphological, despite Quintilian’s remark that the ambiguity arises “through cases” (*per casus*; Quint. *Inst.* 7.9.6). If it were, then our declension paradigms would be required to list both *Romani* and *Romanos* as nominative plural forms, which lacks independent motivation. The alternative, which we shall pursue here, is that the ambiguity is syntactic. That is, readings (a) and (b) really correspond to two different sentences that sound exactly the same but have different meanings.

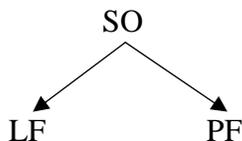
These sentences, of course, are not “out there” as abstract Platonic objects or as conventions of a speech community, but are grounded in human cognition. In such a theory, there must exist an abstract level of representation—syntactic structure—that exists separately from the phonological (sound) and the logical (meaning). In cases such as (28), we can say that there are two syntactic objects (SOs) corresponding to a single phonological form (PF) and two distinct logical forms (LFs).

We depict this situation in (30), and the general schema in (31).<sup>15</sup>

(30) *Syntactic ambiguity*



(31)



<sup>15</sup> The argument for structure based on the existence of syntactic ambiguities dates back to Chomsky (1956), in which such ambiguities are said to be instances of “structural homonymy.” For a recent discussion of the schema (31), see Chomsky, Gallego, and Ott (2019).

Diagram (31) depicts an organization of grammar in which syntactic structures are the input to semantic interpretation and to externalization (i.e., speech, sign, or some other mode). There is only indirect interaction between logical and phonological representations. This means (among other things) that phonological properties cannot affect semantic ones. Similarly, syntax maps onto phonology, but not vice versa, meaning that, say, a phonological operation such as elision could never affect a syntactic one. The organization of grammar in this fashion may be stated as in (32), whose terms we will discuss presently.

(32) *Structure-dependence of grammar*

The sentence is a recursive, hierarchical structure with displacement that is deterministically mapped to a semantic interpretation and a morphophonological realization.

As one consequence of (32), linear order is never directly relevant to semantic interpretation, being a product of the realization of an underlying syntactic structure. This does not rule out linear order being an important hint to structure, however, due to the algorithm which linearizes structures. Neither can it be the case that word-order is completely free with respect to meaning. Instead, (32) predicts that, given that both LF and PF have the same input, there are regular correlations between them.

Notice that PF and LF are obviously necessary, since every utterance has both sound and meaning. The level of syntactic structure is considerably more abstract. We have seen one argument for its existence above—the need to explain ambiguities—and in this chapter we will see many more.

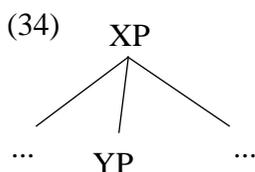
### 2.1.2 Chomsky's "basic property"

Characterizing language biologically gives us a quite concrete object of study. Here, though, we will consider an idealized, formal notion of language. In this light, its "basic property" is that of being a system of discrete infinity with hierarchical structure and displacement (N. Chomsky, personal communication; Berwick and Chomsky, 2016).

To see what this means, notice that both readings of (28) share the fact that *aio* is related to the rest of the sentence in a head-complement relation. That is, the indirect statement with main verb *posse* can be understood as a clausal complement of the verb *aio*. This means that there is one clause contained within another. An alternative way to phrase this is that one clause, with main verb *aio*, dominates the other, with main verb *posse*. Then the sentence has a hierarchical structure.

To formally represent containment and dominance, we may use a bracketed notation (33) or the equivalent, tree notation (34), which represent one syntactic object *XP dominating* another, *YP*; conversely, *YP is contained within XP*. Ellipses indicate any syntactic material.

(33) [XP ... YP ...]



In the case of (28), we have one clause dominating another. This means that a clause CP<sub>1</sub> can have the form (35), where CP<sub>2</sub> is another clause.

(35) [CP<sub>1</sub> ... CP<sub>2</sub> ...]

That fact that syntax can be self-embedding or recursive in such a way explains how it can be discrete and infinite—that is, out of a finite set of discrete elements (phonemes, letters, signs etc.), an infinity of possible thoughts can be expressed.

Ancient rhetorical theory recognizes that the clause is built out of syntactic units known as *cola*, a concept which has been somewhat developed by classical linguists (cf. Fraenkel 1965; Habinek 1986). Olga Spevak provides (36) as an example of a colon analysis, with colon boundaries marked with a slash (/) (Spevak 2010, 11).

(36) cuius adventu nuntiatio / L. Plancus / qui legionibus praeerat / necessaria re coactus /  
locum capit superiorem / (Caes. Civ. 1.40.5)

cuius	adventu	nuntiatio
who.SG.GEN	arrival.MSG.ABL	announce.PERF.PTCP.PASS.MSG.ABL

L. Plancus	qui	legionibus
Lucius Plancus.MSG.NOM	who.MSG.NOM	legion.FPL.ABL

prae-erat	necessaria	re
before-be.3SG.IMPERF.IND	necessary.FSG.ABL	thing.FSG.ABL

coactus	locum	capit
compel.PERF.PTCP.PASS.MSG.NOM	place.MSG.ACC	take.3SG.PRES.IND.ACT

super-iorem
high-COMP.MSG.ACC

‘When his arrival was announced, Lucius Plancus, who was in charge of the legions, compelled by necessity, occupies the higher ground.’

The first colon in (36) is an ablative absolute construction, the second a noun phrase subject, and so on.

The notion of colon may be generalized to that of *constituent*, namely, a group of words that behave as a syntactic unit (Carnie 2010). In our semi-formal theory, a constituent will be an entire bracketed structure. For instance, if WP, YP, and ZP are constituents, then (37) states that XP is a constituent consisting of WP, YP, and ZP, pronounced in that order. WP and YP do not form a constituent, nor do YP and ZP, nor WP and ZP.<sup>16</sup>

(37) [XP WP YP ZP]

<sup>16</sup> More often than not, our structural descriptions will be incomplete, but not necessarily incorrect. Thus (37) is a tertiary structure, but the actual structure may in fact be binary, with, say, WP and YP forming a constituent; but this is not formally represented by (37).

Analyzing the sentence into constituents to discover its *phrase structure* is a central objective of syntax. Recall, however, that no mechanical procedure of doing so appears feasible, for the reason that natural language has the ubiquitous property of displacement. Displacement, or *movement*, is the property that syntactic elements may establish non-local relations with one another. For instance, *locum ... superiorem* in (36) is a split noun phrase, seemingly impossible to characterize in a constituent analysis.

Assume, for the sake of the argument, that *superiorem* is an attributive modifier of *locum*. The semantic and morphological properties of the two words, in fact, suggest that they are directly related in the syntax, yielding gender, number, and case concord, and modification. At the same time, there are likely to be readings of (38)a not available for (b), involving, say, some notion of focus on *superiorem* in (a), to be discussed in Section 3.4.

- (38) (a) *locum capit superiorem*  
 (b) *locum superiorem capit*

These facts must be formally represented in the theory. In our structural descriptions, it is proposed that some constituents occupy *more than one* position. Suppose this to be the case for the element *locum*, as in (39), where (a) and (b) are equivalent notations.

- (39) (a) [*locum capit* [~~locum~~ *superiorem*]]  
 (b) [*locum*<sub>1</sub> *capit* [*t*<sub>1</sub> *superiorem*<sub>1</sub>]]

The fact that one copy of *locum* forms a constituent with *superiorem* and that another is preverbal formally represents the complex relation of its semantics, morphology, and pronounced position.<sup>17</sup> Movement is simply the term for such cases of a constituent occupying more than one structural position, not necessarily denoting any process, despite the name. Typically, only one copy—the structurally highest—will be pronounced. Specifying the conditions on movement is an important objective of syntactic theory.

Recognizing movement frees us from what Andrea Moro terms the structuralist thesis of the “passive transparency of nature” (Moro 2018, 82). As in physics, where a predictive theory requires the postulation of invisible entities, so too in linguistics. Which syntactic elements are pronounced and which are not appears to be an accident of history, as does the variation between languages. But Chomsky’s “basic property” is presumably universal, in the sense that it characterizes all human languages. Other properties, such as agreement, may be universal, but this is less clear.

As noted at the outset, this entire discussion is vacuous if there really is no significant structure to the Latin sentence. A major aim of this chapter is to show that the framework sketched above is, in fact, the correct one. A second is the development of a way to “do” Latin syntax. Unlike in historical linguistics, there have been few attempts to take this problem seriously.<sup>18</sup> Given that Latin has been used as a case study to argue against the idea that constituency is universal, this enterprise seems an urgent one, and one, I believe, in which little progress has been made (cf. Evans and Levinson 2009; Cecchetto and Oniga 2014). As a basic methodological principle, arguments must be based on evidence, and philosophical or aesthetic

<sup>17</sup> Of course, a theory must spell all this out, which we do not do here, for reasons of scope.

<sup>18</sup> Lieven Danckaert’s (2012; 2017) publications are a happy exception to this trend.

concerns really have no place in the scientific discussion, regardless of the role they play in the motives of the researcher.<sup>19</sup> We'll be interested, then, in developing robust and varied diagnostics for syntactic structure based on categorical distributions in a corpus, using all possible sources of evidence. The corpus used is described in Appendix A.

### 2.1.3 Chapter overview

In what follows, we will see extensive evidence that, despite initial appearances, the Latin sentence is hierarchically structured in both the nominal and verbal domains. In Section 2.2 we will see several arguments that the noun phrase has an internal hierarchical structure. Then in Section 2.3 we will turn to the clause. Among other results, I will show that negative polarity items, such as *ullus* 'any,' and quantifiers, such as *omnis* 'all,' have a very restricted distribution, one that is best captured in terms of the structural relation of c-command.

## 2.2 Structure in the noun phrase

In establishing that structure dependence (32) holds of Latin grammar, we are faced with a particularly hard situation when we consider the noun phrase. The extremely free order of elements within the noun phrase gives the initial impression of being arranged arbitrarily in a linear sequence, perhaps influenced by the salience of their referents in the discourse. In this section, we will see that this is not the case.

The issue of whether the Latin noun phrase has a hierarchical structure has only recently begun to receive attention within the generative literature (Iovino 2012; Giusti and Iovino 2016; Giusti 2019). The remaining literature concentrates on the semantics and pragmatics of the noun phrase, with perhaps greater recognition of its complexity (Spevak 2010; 2014).

### 2.2.1 Disambiguating punctuation

#### 2.2.1.1 Describing ambiguity

In Section 2.1.1 we considered the famously ambiguous response of the Delphic oracle to Pyrrhus and suggested that the ambiguity must be syntactic. Upon closer inspection, such ambiguities provide evidence for syntactic structure. Here we will consider one argument based on such ambiguities that there is structure internal to the noun phrase.

In general, let us propose that a given string of words is *syntactically ambiguous* when it has more than one semantic interpretation, or reading, that cannot be explained through the homophony of individual morphemes or lexical items. As an example, consider (40).

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<sup>19</sup> This is Michael Strevens' (2020) "iron rule:" scientific argumentation must be based solely on the facts. The problem with metaphysical or aesthetic argumentation is that they inhibit the collection of the evidence that is crucial for falsifying a hypothesis.

(40) terrae motu incendioque (*Mon. Anc. Ap.* 4.3)

terrae                    motu                    incendio=que  
 earth.FSG.GEN    movement.MSG.ABL    burning.NSG.ABL=and

‘By the earth’s movement and burning’

Under one reading, the genitive *terrae* modifies only *motu*; alternatively, it may modify both *motu* and *incendio*.

A basic job for any theory of syntax is to formally represent these two readings. One approach, as in Dependency Grammar, is to draw an arrow from a modifier to head (e.g., Hudson 2007). In our theory, modification is the consequence of the compositional nature of semantic interpretation, in which argument structure is satisfied by syntactic objects that form a constituent. The two readings of (40), for instance, correspond to the two structures (41)a and b.

(41) (a) [NP [NP terrae motu] incendioque]

(b) [NP terrae [NP motu incendioque]]

In (a), *terrae* and *motu* form a constituent, so that *terrae* is interpreted as modifying *motu*, but not *incendio*. In (b), *terrae* modifies the complex noun phrase *motu incendioque*.

As a preliminary defense of this analysis, consider the issue of explanatory power. In the dependency theory, modification arrows do not predict anything in addition to modification. In our theory, modification is but one epiphenomenon of the combinatory nature of syntax: agreement and nominal concord, word-order, case-licensing, and nearly all other syntactic phenomena appear to involve constituency.

One must be careful not to posit ambiguities that would not have occurred to the Roman. In the case of (40), there is epigraphic evidence that the two readings exist, and that the ambiguity should be analyzed in terms of constituency.

### 2.2.1.2 Epigraphic evidence for the constituency analysis

Epigraphic texts—those which have been inscribed on stone, metal, or another more or less durable material—constitute a far more direct source of evidence for Latin grammar than those preserved through the manuscript tradition. Unlike manuscripts, which have often been “corrupted” through transcription errors, whether intentional or not, epigraphic texts are most often subject only to decay. Moreover, classical epigraphic texts occasionally preserve punctuation, which had disappeared from the manuscript tradition with the increasing popularity of unpunctuated writing (*scriptura continua*) in the second century CE (Wingo 1972, 16).

One function of punctuation evident from the best-preserved inscriptions, was to indicate syntactic units. For instance, in the *Monumentum Ancyranum*, containing the best-preserved exemplar of Augustus’s account of his achievements, the *Res Gestae*, the diagonal bar (/) is regularly used to mark boundaries always above the level of the word (Wingo 1972, 29ff.). This is the case in (42), where lowercase letters represent the editor’s conjecture, and uppercase letters, spaces and interpuncts (·) are original.

- (42) oppidis terrAE·MOTV·/INCENDIOQVE CONSVMP·Tis (*Mon. Anc. Ap.* 4.3; Scheid 2007)

oppidis terrae motu incendioque consumptis

oppidis            terrae            motu            incendio=que  
town.NPL.ABL earth.FSG.GEN movement.MSG.ABL burning.NSG.ABL=and

consumptis  
waste.PERF.PTCP.PASS.NPL.ABL

‘towns wasted by movement of the earth and by fire’

The most plausible reading of (42) within its context is the disjunctive one: Augustus offered aid to every town that had been destroyed either by earthquakes or by fire (cf. Cooley 2009, ad loc.) Far less plausible is that Augustus offered aid solely to the towns that had been destroyed by the earth’s movement and fire, understood together as a single entity. The position of the diagonal bar, moreover, suggests that the author felt *motu* and *incendio* to be syntactically or prosodically separate, more abstractly than by virtue of being individual words—otherwise, presumably only the interpunct would be used.<sup>20</sup>

We may account for both of these facts by suggesting that the diagonal bar marks the right bracket of a constituent, as in (41)a. Then *terrae motu* forms a unit idiomatically interpretable as ‘earthquake,’ and *motu* does not form a constituent with *incendio*. If there were no constituent structure at all, then the placement of the diagonal bar would be mysterious.

### 2.2.2 Uneven statistical distributions and unavailable orders

Next, notice that whereas the word order of noun phrases is extremely free, the frequencies of each order are very different. For instance, each logically possible order of (Dem)onstrative, (A)djective, and (N)oun is attested, but their frequencies vary from nearly half of all cases (Dem A N) to only about 1% of cases (A N Dem). Below, examples of each order are given in (43), from Cicero’s correspondence with Atticus. The percentages listed indicate the frequency found in a random sample of 100 noun phrases from the *Perseus* corpus, each containing a demonstrative, a noun, and an adjective. The sample, together with a description of how it was collected, is given in Appendix B.

<sup>20</sup> We use the phrase “the author” vaguely here, due to the obscurity of the process by which the monuments came to be. It is known that for official inscriptions, “the very precise form of words would have been laid down by the authorities,” presumably Augustus himself, in this case (Edmonson 2015, 117). But it is unclear if this included punctuation. There is some evidence that it did, however. Otha Wingo has observed that the Greek translator of the *Res Gestae* misinterpreted *quōque* ‘each’ as *quōque* ‘indeed’ at 6.22–23, where the Latin inscriptions also mistakenly do not mark the medial vowel as long (Wingo 1972, 31 fn. 3). This suggests that the Greek and Latin texts were both prepared based on a master copy containing the mistake.

- (43) a) *Dem N A (10%)*  
in *illam orationem Metellinam* addidi quaedam (Cic. *Att.* 1.13.5)
- b) *Dem A N (43%)*  
qua re incumbamus, o noster Tite, ad *illa praeclara studia* et eo unde discedere non oportuit aliquando revertamur. (Cic. *Att.* 2.16.3)
- c) *N Dem A (14%)*  
credo, voluit *appellatione hac inani* nobis esse par (Cic. *Att.* 5.20.4)
- d) *N A Dem (1%)*  
cum eius *clementiam Corfiniensem illam* per litteras conlaudavimur (Cic. *Att.* 9.16.1)
- e) *A Dem N (31%)*  
*gravis illa opinio* [...] amissa est (Cic. *Att.* 3.24.2)
- f) *A N Dem (1%)*  
Scaurus qui erat *paucis diebus illis* absolutus (Cic. *Att.* 4.17.4)

This complexity has been somewhat ignored in the literature; the demonstrative-final orders, for instance, have been viewed as nonexistent, with consequences for accounts of the structure of the noun phrase (cf. Giusti and Iovino 2016). The syntactic complexity, however, is likely to be partially illusory, given that demonstratives and other functional categories freely undergo prosodic displacement, as discussed in Chapter 3.

What is important here is that if there were no hierarchical structure, say, if demonstratives did not occupy a high structural position within the noun phrase, then the fact that demonstrative-final orders optimistically account for 2% of cases, rather than the null hypothesis of 33%, is unexplained. However, given such an underlying structural position, then the very low frequency of these orders might be explicable in terms of the very particular forms of prosodic or syntactic movement needed to yield them.

This appears even more strongly when we consider the attested orders of Demonstrative, Numeral, Adjective, and Noun, a traditional diagnostic within language typology (cf. Dryer 2018). Below, in (44), each of the 4! (=24) logically possible orders are presented, with unattested orders marked with a hash (#).

(44)

- |     |      |     |     |   |
|-----|------|-----|-----|---|
| (a) | Dem  | Num | A   | N |
| (b) | Dem  | Num | N   | A |
| (c) | #Dem | N   | Num | A |
| (d) | #N   | Dem | Num | A |
| (e) | Num  | Dem | A   | N |
| (f) | Num  | Dem | N   | A |
| (g) | Num  | N   | Dem | A |

(h)	#N	Num	Dem	A
(i)	A	Dem	Num	N
(j)	#A	Dem	N	Num
(k)	#A	N	Dem	Num
(l)	#N	A	Dem	Num
(m)	Dem	A	Num	N
(n)	#Dem	A	N	Num
(o)	#Dem	N	A	Num
(p)	#N	Dem	A	Num
(q)	Num	A	Dem	N
(r)	#Num	A	N	Dem
(s)	#Num	N	A	Dem
(t)	#N	Num	A	Dem
(u)	#A	Num	Dem	N
(v)	#A	Num	N	Dem
(w)	#A	N	Num	Dem
(x)	#N	A	Num	Dem

Here we find that only eight of the possible orders are ever attested, and that no numeral- or demonstrative-final order occurs. One explanation for this fact is that numerals and demonstratives are structurally high in the noun phrase; either the movement required to yield numeral- or demonstrative-final orders has such specific pragmatic or semantic effects as to not appear in the corpus, or such movement is simply forbidden.

### 2.2.3 Interpretive differences

Not only are there apparently strict constraints on the order of elements within the noun phrase, but the readings available for each order are not the same. I claim that the order A Dem N (43)(e) stands out from the others in requiring a contrastive reading, evoking a set of alternative entities to the ones denoted by the noun phrase. For instance, consider (45), where Cicero is discussing the plot of Plato's *Republic*.

(45) *Context:*

quoad *primus ille sermo* haberetur, adest in disputando senex; deinde [...] dicit se velle discedere neque postea revertitur (Cic. *Att.* 4.16.3).

‘As long as the first part of that talk was held, the old man [i.e., Cephalus] is present in the debate; later, he says that he wants to leave and he doesn’t come back afterwards.’

*Sentence:*

quoad *primus ille sermo* haberetur, adest in disputando senex

quoad	primus	ille	sermo
as_long_as	first.MSG.NOM	DIST.MSG.NOM	talk.MSG.NOM

haberetur,	ad-est	in disputando
have.3SG.IMPERF.SBJV.PASS	at-be.3SG.PRES.IND	in debate.GRND.ABL

senex  
old.MSG.NOM

‘As long as the first part of that talk was held, the old man is present in the debate’

The position of *primus* signals a contrast between the referent of the noun phrase, namely, the beginning of the *Republic*, with the remainder of that work. Cicero is making this point in order to provide a literary precedent for his decision for the character Scaevola to be present in only the first book of his own dialogue, *On the Orator*. The contrastive interpretation is evident from the subsequent temporal adverb *deinde* ‘after that.’

Contrastivity is most easily detected when a speaker makes a claim about a proper subset of a set of items felt to be salient in the discourse context.<sup>21</sup> In (46), below, the noun phrase *breviores has litteras* is contrastive.

<sup>21</sup> Contrastivity is not restrictivity. Notice, for instance, that the entities contrasted in (45) are not individual *sermones* ‘discussions,’ but parts of a single discussion. This is a consequence of the partitive interpretation of adjectives that indicate relative position, such as *medius* ‘middle,’ and *summus* ‘highest’ (Pinkster 2015, 1048ff.). If *primus* were a restrictive modifier, however, the noun phrase *primus ille sermo* would have the very different reading: ‘that discussion which was first.’ This shows that contrastivity and restrictivity are distinct notions, the latter a property of noun phrases where the set of entities denoted by the noun phrase is a proper subset of the set denoted by the noun phrase without that adjective.

For instance, *primi* in (a) is restrictive, with the noun phrase understood as ‘those humans who were the first to exist.’ If *primi* were non-restrictive, it would be interpreted as a side-comment: ‘those humans, who, by the way, were the first to exist.’

- (a) [Graeci] sonis etiam quibusdam et adfectibus non dubitaverunt nomina aptare, non alia libertate quam qua *illi primi homines* rebus appellationes dederunt (Quint. 8.3.30).

‘The Greeks did not hesitate to fit words to certain sounds and feelings, with a freedom no different than that by which those first humans gave names to things.’

Although the noun phrase in (a) denotes a proper subset, it does not explicitly evoke alternative sets of entities, and is thereby not contrastive.

(46) *Context:*

*Breviores has litteras properanti publicanorum tabellario subito dedi. Tuo liberto pluribus verbis scriptas pridie dederam (Cic. Fam. 8.7.1).*

‘This shorter letter I quickly gave to the courier of the tax collectors, who was in a hurry. I had given one with more words to your freedman yesterday.’

*Sentence:*

*Breviores has litteras properanti publicanorum tabellario subito dedi.*

brev-iores                      has                      litteras                      properanti  
short-COMP.FPL.ACC    PROX.FPL.ACC    letter.FPL.ACC    hurry.MSG.PRES.ACT.PTCP

publicanorum                      tabellario                      subito                      dedi.  
tax\_collector.MPL.GEN    courier.MSG.DAT    suddenly    give.1SG.PERF.IND.ACT

‘This shorter letter I gave to the courier of the tax collectors, who was in a hurry.’

Here, the speaker Caelius Rufus is addressing Cicero in a letter. He is making different claims about two different letters that he has written: the present one (*has litteras*), which is brief (*breviores*), and which he had handed to a courier (*tabellario*), and the letter he had sent the day before (*pridie*), which was longer (*pluribus verbis scriptas*), and which he had handed to Cicero’s freedman (*liberto*). It is clear then, that the noun phrase *breviores has litteras* is contrastive in the sense that we have been discussing.

Thus far we have been uncritical about the delineation of the syntactic categories of “adjective,” “demonstrative,” and “noun.” Before considering this issue more carefully in Section 2.4.4, notice first, that, in addition to canonical adjectives such as *breviores*, cardinal numerals also participate in the same contrastive noun phrase construction, as shown by comparing (47) with (48).

(47) *haec tria frumentaria subsidia rei publicae [...] munivit (Cic. Man. 34)*

haec                      tria                      frumentaria                      subsidia                      rei  
PROX.NPL.ACC    three.NPL.ACC    grain.NPL.ACC    supply.NPL.ACC    thing.FSG.GEN

publicae                      munivit  
public.FSG.GEN    fortify.3SG.PERF.IND.ACT

‘He fortified these three sources of the state’s grain supply’



Stoic wise-guy of yours has spoken those things of yours one syllable at a time, there will come pouring forth a golden stream of speech Aristotle, who ...’

*Sentence:*

Cum enim tuus iste Stoicus syllabatim tibi ista dixerit [...]

cum	enim	tuus	iste	Stoicus
when	since	2SGPOSS.MSG.NOM	MED.MSG.NOM	Stoic.MSG.NOM

sapiens	syllabatim	tibi	ista
philosopher.MSG.NOM	syllable_by_syllable	2SG.DAT	MED.NPL.ACC

dixerit  
say.3SG.PERF.SBJV.ACT

‘Since when that Stoic wise-guy of yours has spoken those things of yours one syllable at a time...’

The *tua* of (49), in contrast, is not focused: it does not evoke alternatives.

So far, we have seen a variety of individual modifiers undergoing NP-internal scrambling above a demonstrative, which obligatorily receive focus. However, if more than one modifier is used contrastively, both of them will scramble. This is the case in (51), where the adjective *nota* and cardinal *quattuor* are both used contrastively.

(51) *Sentence in context:*

Aristoteles longe omnibus—Platonem semper excipio—praestans et ingenio et diligentia, cum *quattuor nota illa genera* principiorum esset complexus, e quibus omnia orerentur, quintam quandam naturam censet esse, e qua sit mens ... (Cic. *Tusc.* 1.22)

‘Aristotle excelling everyone—always with the exception of Plato—in both genius and hard work, after he had embraced those four known classes of elements, from which everything arises, proposed there to exist a certain fifth nature, out of which there is the mind.’

*Sentence:*

cum *quattuor nota illa genera* principiorum esset complexus

cum	quattuor	nota	illa	genera
when	four	known.NPL.ACC	DIST.NPL.ACC	class.NPL.ACC

principiorum	esset	complexus
element.NPL.GEN	be.3SG.IMPERF.SBJV	embrace.MSG.NOM.PTCP.DEP

‘After he had grasped those FOUR KNOWN classes of elements...’

Here, the speaker is preparing to discuss Aristotle’s discovery of a “fifth element,” which is contrasted with the elements that are both four in number (*quattuor*) and known (*nota*).

The contrastive construction provides evidence for constituency within the noun phrase. First, the fact that the adjective in A Dem N can be a coordination structure indicates that it is a constituent. See, for instance, (52), where A is of the form A Conj A.

(52) *Context:*

si hoc modo rem moderari possemus ut pro viribus copiarum tuarum belli quoque  
 existeret magnitudo et quantum gloriae triumphoque opus esset  
 adsequeremur, periculosam et gravem illam dimicationem evitarem, nihil tam esset  
 optandum. Nunc, si Parthus movet aliquid, scio non mediocrem fore contentionem  
 (Cic. *Fam.* 8.5.1).

‘If we can just control the situation in such a way that the size of the war be  
 proportional to the strength of your forces and that we achieve as much as is needed  
 for glory and a triumph, provided that we avoid that dangerous and serious fight,  
 nothing more can be wished for. But now, if the Parthians do anything, I know that  
 there will be a non-trivial conflict.’

*Sentence:*

[...] *periculosam et gravem illam dimicationem evitarem*

periculosam	et	gravem	illam	dimicationem
dangerous.FSG.ACC	and	heavy.FSG.ACC	DIST.FSG.ACC	fight.FSG.ACC

evitarem  
 avoid.1PL.IMPERF.SBJV.ACT

‘Provided that we avoid that dangerous and serious fight.’

The scrambled AP receives contrastive focus: the speaker Caelius Rufus subsequently tells us that another conflict is inevitable.

To see that A is internal to the noun phrase and that we are not really dealing with a covert instance of a split noun phrase, notice that A Dem N may occur as the complement of a preposition, as in (53).

(53) *redeo ad praeclaram illam contionem tuam* (Cic. *Pis.* 17).

red-eo	ad	praeclaram	illam
back-go.1SG.PRES.IND.ACT	to	brilliant.FSG.ACC	DIST.FSG.ACC

contionem	tuam
speech.FSG.ACC	2SGPOSS.FSG.ACC

‘I return to that outstanding speech of yours’

Recall next that the orders A N Dem and N A Dem are also grammatical. Crucially, they do not admit of a contrastive interpretation.

For N A Dem, consider (54), where Cicero is criticizing Gaius Aquilius' definition of *dolus malus* 'criminal fraud' (cf. Cic. *Off.* 3.60).

(54) *Context:*

sive et simulatio et dissimulatio dolus malus est, perpaucae res sunt in quibus non *dolus malus iste* versetur (Cic. *Off.* 3.64)

'If both insincerity and concealment are "criminal fraud," there are very few things in which that "criminal fraud" of yours will not be involved.'

*Sentence:*

[...] perpaucae res sunt in quibus non *dolus malus iste* versetur

per-paucae	res	sunt,	in quibus	
through-few.FPL.NOM	thing.FPL.NOM	be.3PL.PRES.IND	in which.FPL.ABL	
non	dolus	malus	iste	versetur
not	trick.MSG.NOM	bad.MSG.NOM	MED.MSG.NOM	turn.3S.FUT.IND.DEP

'There are very few things in which that "criminal fraud" of yours will not be involved.'

In this passage, *dolus malus iste* may be understood as the discourse topic, and so it would be infelicitous under a contrastive reading, and in fact, there is no evidence that it receives one.

For A N Dem, consider (55), part of a passage where Cicero is attempting to emphasize the importance of art to Greeks, giving a series of examples. One of those is Regium's marble statue of Venus, which Cicero is highlighting as an important cultural artifact.

(55) *Context:*

Quid arbitramini Reginos, qui iam cives Romani sunt, merere velle ut ab iis *marmorea Venus illa* auferatur? (Cic. *Ver.* 2.4.135)

'What do we think the Regini, who are now Roman citizens, would be willing to get in exchange for that marble Venus to be taken from them?'

*Sentence:*

[...] ut ab iis *marmorea Venus illa* auferatur?

ut	ab	iis	marmorea	Venus	illa
that	from	DET.MPL.ABL	marble.FSG.NOM	Venus.FSG.NOM	DIST.FSG.NOM
au-feratur?					
away-take.3SG.PRES.SBJV.PASS					

‘that marble Venus taken from them’

The statue is likely to have been well-known to the listeners, as would have been the rest of the art-works that Cicero is mentioning. They all share the property of being famous and have no other salient properties with which to evoke contrast. Here too the noun phrase is infelicitous under a contrastive reading. In fact, there appear to be no distinctive semantic properties of the two orders N A Dem and A N Dem.

The fact that A Dem N, but neither N A Dem nor A N Dem, receive contrastive interpretations shows that the relative order of individual words, A and Dem, for instance, is irrelevant. In a theory with no noun phrase-internal structure, this cannot be accounted for except by stipulation. What is important is that the noun phrase is contrastive precisely when A precedes the pair Dem N, in that order. Moreover, the contrastive reading only *adds* meaning: in addition to adjectival modification, there is contrastivity.

To represent these facts formally, I tentatively propose the structure (56) for noun phrases of the form A Dem N, where  $\bar{A}$  denotes an unpronounced copy of A.

(56) [FocP A [DeixP Dem [NumP  $\bar{A}$  [NP N  $\bar{A}$ ]]]]

The base-generated (right-most) copy of A establishes basic attributive modification, possibly idiomatic, as we will see in Section 2.4.5. The intermediate copy has an uncertain semantic status, but is necessary to represent A N orders, including non-contrastive ones. The highest (left-most) copy establishes contrastivity and is pronounced. Deix(is)P is the locus of demonstratives, such as *ille* ‘that;’ Num(eral)P of numerals, such as *quattuor* ‘four.’

A left-peripheral position associated with contrastive focus has been argued to exist in other languages. For instance, Rijkhoff (1998) argues that Turkish has such a position, based on alternations in the position of an adjective with the indefinite article. For Modern Greek, Ntelitheos (2004) claims that genitive possessors occurring before the definite article mark contrastive focus; for Bangla, Syed (2015) argues that predemonstrative adjectives have moved to the specifier of a left-peripheral focus position within the noun phrase.<sup>22</sup>

(57) LAL ei boi Ta amar pochondo (Syed 2015, 335)  
red this book Cl my liking

‘This red book is of my liking.’

In (57), *lal* has moved to the specifier of a focus projection, as in (56).

#### 2.2.4 Nominal categories

A potential problem for the preceding account is that quantificational nominals such as *multi* ‘many,’ *totus* ‘entire,’ *omnis* ‘all,’ freely occur before demonstratives with no contrastive reading. This is the case, for instance, in (58), where there is no evidence for a contrastivity.

<sup>22</sup> Syed (2015) notes that the focus may be either contrastive or new information. In our analysis, Latin predemonstrative focus is always contrastive.

(58) *omnem hanc disputationem in adventum tuum differo* (Cic. *Fam.* 2.3.2)

omnem            hanc            disputationem    in adventum  
all.FSG.ACC    PROX.FSG.ACC    dispute.FSG.ACC    in arrival.MSG.ACC

tuum                            dif-fero  
2SGPOSS.MSG.ACC    away-carry.1SG.PRES.IND.ACT

‘I put off that entire dispute until your arrival.’

If such words are syntactically adjectives, such qualifications remove the teeth from our claim. In fact, Corver (1990; 1992), Trenkić (2004), and Bošković (2005) have argued that ostensibly functional nominal elements, such as demonstratives and possessives, are in fact syntactically adjectives in articleless languages. Giusti and Iovino (2016, 230ff.) suggest that the same may hold for Latin, which lacks articles.

But there is good reason to believe that Latin has several functional nominal categories, each distinct from adjectives. The argument is as follows. We conventionally assume that a syntactic category (i.e., part of speech) is a group of words that share the same syntactic behavior (Carnie 2021). According to a wide range of diagnostics for adjectivehood, *omnis* is not an adjective. The words *multi* and *totus* share the same syntactic distribution as *omnis*, and so they appear to be in the same category, distinct from adjectives. We will call these (syntactic) (Q)uantifiers. The same argument applies to Demonstratives.

#### 2.2.4.1 Nouns

Nouns are distinguished from other nominal categories in having a fixed gender. Some have fixed number. Like all other nominal categories, they inflect for number and case. They have five declensions, with genitive plurals ending in *-arum*, *-orum*, *-um/-ium*, *-uum*, *-erum*, respectively. Moreover, noun phrases are “endocentric” in having a unique head.

#### 2.2.4.2 Adjectives

The salient property of Latin adjectives, on the other hand, is recursive combination. That is, an adjective may compositionally modify a noun phrase already modified by an adjective, yielding a new noun phrase. Consider (59), for instance, where the noun *rem* ‘matter’ is modified by two adjectives *publicam* ‘public’ and *iustam* ‘just.’

(59) tum vero incipiam proponere mihi *rem publicam iustam* (Cic. *ad Brut.* 1.4a.4)

tum	vero	incipiam	pro-ponere	mihi
then	truly	begin.1SG.FUT.IND.ACT	before-put.PRES.INF.ACT	1SG.DAT
rem	publicam	iustam		
thing.FSG.ACC	public.FSG.ACC	lawful.FSG.ACC		

‘Then, truly, I will begin to imagine for myself a law-abiding republic.’

The adjective *iustam* does not directly modify *rem*. If it did, the noun phrase would be expected to have the same interpretation as if *publicam* and *iustam* were coordinated, as in (60).

(60) (a) *rem publicam iustamque* (construct)  
 (b) [NP *rem* [AP *publicam iustamque*]]

But this is clearly not the case. The noun phrase formed by modifying *rem* and *publicam* has the idiomatic interpretation of ‘republic.’ To describe this property of adjectival modification syntactically, it is necessary to posit recursive structures. The simplest analysis is given in (61).

(61) [NP [NP *rem* [AP *publicam*]] [AP *iustam*]]

In Section 2.4.4 we will continue our discussion of idioms. Let us now consider how to test for adjectivehood.

### 2.2.4.3 Morphosyntactic diagnostics for adjectivehood

Nominals that are prototypically adjectival may be considered to be either of the form *carus* ‘dear’ or *celer* ‘quick.’ The *carus* class has feminine forms in the first declension and masculine and neuter forms in the second. The *celer* class has all genders in the third declension.

Certain nominals, however, traditionally considered pronominal adjectives, share a separate declension with demonstratives and other determiner-like elements, such as *ille* ‘DIST’ (*GL*, §76). An example is *totus* ‘whole,’ and the words considered to be pronominal adjectives are listed in (62).

(62) (a) *alter* ‘one of the two’  
 (b) *alius* ‘other’  
 (c) *neuter* ‘neither’  
 (d) *nullus* ‘no’  
 (e) *solus* ‘sole’  
 (f) *totus* ‘whole’  
 (g) *ullus* ‘any’  
 (h) *unus* ‘one’  
 (i) *uter* ‘which of the two’

Let us consider whether the elements in (62) are truly syntactic adjectives, and if not, what categories of modifiers exist apart from adjectives.

First, prototypical adjectives may combine with a host of derivational suffixes. Abstract nouns are formed from the combination of an adjective stem with one of *-(t)ia*, *-(t)ies*, *-tas*, *-tus*, *-tudo* (AG, §146). Thus, from *carus* ‘dear’ we may obtain *cari-tas* ‘dear-ness.’ Diminutives are formed from noun or adjective stems combining with *-ulus*, *-olus*, *-culus*, *-ellus*, *-illus*.

In general, then, if the stem of a word can be combined with a deadjectival suffix and is not a noun, then it is an adjective; we state this in (63).<sup>23</sup> This does not go in the other direction, however. That is, not every obvious adjective has derived forms. For instance, *Romanus* ‘Roman’ (65)a does not.

(63) *Derivational diagnostic for adjectives*

If the stem of a word can combine with one of the following suffixes, it is an adjective: *-(t)ia*, *-(t)ies*, *-tas*, *-tus*, *-tudo*, *-ulus*, *-olus*, *-culus*, *-ellus*, *-illus*.

Testing the pronominal adjectives alongside a varied selection of canonical adjectives gives the results (64) and (65), respectively.

- (64) (a) *alter*, #*alteritia*, #...  
 (b) *alius*, #*alitia*, #...  
 (c) *neuter*, #*neutri(t)ia*, #...  
 (d) *nullus*, #*nullitia*, #...  
 (e) *solus*, #*solitia*, #*solities*, #*solitas*, #*solitus*, ***solitudo*** (Cic. *Brut.* 63.227), #*solulus*, #...  
 (f) *totus*, #*totitia*, #...  
 (g) *ullus*, #*ullitia*, #...  
 (h) *unus*, #*unitia*, #*unities*, ***unitas***, #*unitus*, #...  
 (i) *uter*, #*utritia*, #...
- (65) (a) *Romanus* ‘Roman,’ #*Romanitia*, #...  
 (b) *carus* ‘dear’, #*caritia*, #*carities*, ***caritas*** (Cic. *Amic.* 20), #*caritus*, #...  
 (c) *primus* ‘first’, #*primitia*, #*primities*, #*primitas*, #*primitus*, #*primitudo*, ***primulus*** (Plaut. *Am.* 735), #...  
 (d) *aureus* ‘gold’, #*aureitia*, #*aureities*, #*aureitas*, #*aureitus*, #*aureitudo*, #*aureulus*, ***aureolus*** (Catul. 2.10), #...

According to this test, then, only *solus*, *unus*, *carus*, *primus*, and *aureus* are adjectives. The test also gives mixed results against Risselada (1984, 230ff.)’s grouping of Latin *determiners* (cf. Spevak 2014, 43ff.). We test one of Risselada’s groups below.

- (66) (a) (i) *unus* (see above)  
 (ii) *duo*, #*duitia*, #...

<sup>23</sup> In what follows, the tests are novel, but based on facts from the standard grammatical handbooks.

- (b) singuli, #singulitia, #...<sup>24</sup>
- (c) (i) aliquot, #aliquotia, #...  
(ii) plerique, #pleriquitia, #...
- (d) nonnulli, #nonnullitia, #...
- (e) uterque, #utriquitia, #...
- (f) (i) multi, #multitia, #multities, #multitas, #multitus, **multitudo** (Cic. *Brut.* 49.83), #...  
(ii) pauci, #paucitia, #paucities, **paucitas** (Cic. *de Orat.* 1.8), #paucitus, #paucitudo, **pauculus** (Cic. *Att.* 5.21.6), #paucolus, #...
- (g) (i) omnis, #omnitia, #...  
(ii) totus, #totia, #...  
(iii) cunctus, #cunctia, #...
- (h) universus, #universitia, #universities, **universitas** (Cic. *Nat. Deo.* 2.65), #universitus, #universulus, #universolus, #universellus, #universillus

It appears, then, that *unus*, *multi*, *pauci*, and *universus*, and do not belong with the others of (66).

A second characteristic property of adjectives is that they freely combine with the prefixes *-per*, *-prae*, *-sub*, and *-in* (AG, §267d). We state this below.

(67) *Prefix test*

If a nominal can combine with *-per*, *-prae*, *-sub*, *-in*, it is an adjective.

- (68) **percarus** (Cic. *Scaur.* 39), #per-/#prae-#sub-/#inromanus, #per-/#prae-#sub-/#inaureus, #per-/#prae-#sub-/#imprimus, #per-/#prae-#sub-/#inalter, #per-/#prae-#sub-/#inalius, #per-/#prae-#sub-/#inneuter, #per-/#prae-#sub-/#insolus, #per-/#prae-#sub-/#intotus, #per-/#prae-#sub-/#inullus, #per-/#prae-#sub-/#inunus, #per-/#prae-#sub-/#induo, #per-/#prae-#sub-/#inuter, #per-/#prae-#sub-/#insinguli, #per-/#prae-#sub-/#inaliquot, #per-/#prae-#sub-/#implerique, #per-/#prae-#sub-/#innonnullus, **permultus** (Cic. *Amic.* 86), **perpaucus** (Cic. *Brut.* 61.220), #per-/#prae-#sub-/#inomnis, #per-/#prae-#sub-/#intotus, #per-/#prae-#sub-/#inuniversus

According to this test, only *carus*, *multi*, and *pauci* are adjectives.

A third characteristic of adjectives is their having distinct comparative and superlative forms. This leads us to (69).

(69) *Comparison test*

If a nominal can form a comparative or superlative form, it is an adjective.

<sup>24</sup> The noun *singultus* ‘sobbing’ is sometimes claimed to be derived from *singulus*, but if so, it has clearly undergone considerable semantic drift, so we do not count it here.

- (70) **carior** (Cic. *Div.* 2.59), #Romanior/-issimus, #aureior/-issimus, **primus**<sup>25</sup>, #alterior/-issimus, #alior/-issimus, ..., **plus/plurimus**<sup>26</sup>, **paucior** (Cic. *Div.* 1.105), ...

According to the comparison test, only *carus*, *primus*, *multi*, and *pauci* are adjectives.

Fourth, adverbs are productively derived from adjectives by combining the adjective stem with *-e* or *-ter*. This gives us another diagnostic, (71).

- (71) *Adverb test*

If a nominal can form an adverb in *-e* or *-ter*, it is an adjective.

- (72) **Romane** (Gell. 13.22.2), **care** (Cic. *Att.* 1.16.6), **uniter** (Luc. 3. 835), **universe** (Cic. *Att.* 5.2.1), ...

Finally, the particle *tam* ‘so’ indicates the degree of a property and combines with (certain) adjectives.<sup>27</sup>

- (73) *‘Tam’ test*

If a nominal can be modified by *tam*, it is an adjective.<sup>28</sup>

- (74) #tam Romanus, tam **carus** (Cic. *Phil.* 1.38), #tam primus, tam **aureus** (NT *Esd.* 1.6)

- (75) #tam alter, tam **alius** (Cic. *Brut.* 233.66), #tam neuter, tam **nullus** (Cic. *Div.* 2.138), tam **solus** (Juv. 1.3.5), #tam totus, #tam ullus, #tam unus, #tam duo, #tam uter, #tam singuli, #tam aliquot, #tam plerique, #tam nonnullus, tam **multi** (Cic. *Brut.* 207.57), tam **pauci** (Cic. *Att.* 1.10.1), #tam omnis, #tam totus, tam **universus** (Sen. *Tranq.* 9.11.11)

According to this test, *carus*, *aureus*, *alius*, *nullus*, *solus*, *multi*, *pauci*, and *universus* are adjectives.

The results are summarized below in (76).

<sup>25</sup> *Primus* is already superlative.

<sup>26</sup> The comparative and superlative of *multus* are suppletive and very common.

<sup>27</sup> In this class perhaps belong also *nimis* ‘too,’ *satis* ‘sufficiently,’ and *parum* ‘too little.’

<sup>28</sup> One must be careful to distinguish what *tam* is modifying, which is not always a nominal. For instance, in (a), *tam* is modifying the predicate expressing possession.

- (a) At haec individua bona, pax et libertas, et *tam* omnium tota quam singulorum sunt. (Sen. *Ep.* 73.8)

‘But these are individual goods—peace and liberty—and are entirely the property of everybody as much as of individuals.’

(76) *Adjective diagnostics*

Word	Declension Test	Derivation Test	Prefix Test	Comparison Test	Adverb Test	<i>Tam</i> Test
carus	✓	✓	✓	✓	✓	✓
aureus	✓	✓	✗	✗	✗	✓
Romanus	✓	✗	✗	✗	✓	✗
solus	✗	✓	✗	✗	✗	✓
unus	✗	✓	✗	✗	✓	✗
multi/pauci	✓	✓	✓	✓	✗	✓
universus	✓	✓	✗	✗	✓	✓
omnis	✓	✗	✗	✗	✗	✗
alter	✗	✗	✗	✗	✗	✗
alius	✗	✗	✗	✗	✗	✗
ille/is/hic/iste	✗	✗	✗	✗	✗	✗
idem	✗	✗	✗	✗	✗	✗

It is important to note that passing any of the above tests is neither necessary nor sufficient for adjectivehood, due both to the limitations of our corpus, and to the fact that some of the above tests likely target morphosyntactic properties that are orthogonal to adjectivehood. For instance, *tam* can combine with verbal predicates, as discussed in fn. 28. Second, what appears to be a single word may in fact have homophonous forms that belong to different syntactic categories. For example, *solus* sometimes patterns as a quantifier with *omnis* in the sense of ‘only,’ and at other times patterns as a predicative adjective with the sense of ‘alone.’

With these caveats in mind, the first three entries of the table are indisputably adjectives, but notice that *Romanus* only passes two of the tests, despite being a very common word. The demonstratives, on the opposite end, fail each of the tests. Let us consider now *multi/pauci*, on the one hand, and *omnis* on the other.

First, *omnis* is the 20th most frequent word in the *Perseus* corpus, according to *Logeion*. It therefore appears significant that it fails each of the above tests, except for the declension test, which is really just a test for being nominal. Interestingly, *multi* and *pauci* pass nearly all of the tests, the 35th and 302nd most common words in the *Perseus* corpus, respectively. These latter two words, however, likely have homophones, as with *solus*, as also in English. This is illustrated in (77), where *multae* is predicative.

(77) Multae sunt Sp. Albini orationes (Cic. *Brut.* 94.25)

Multae	sunt	Spurii	Albini
many.FPL.NOM	be.3PL.PRES.IND	Spurius.MSG.GEN	Albinus.MSG.GEN

orationes  
speech.FPL.NOM

‘The speeches of Spurius Albinus are numerous.’

Let us conclude, then, that *multi* and *pauci* have two lexical entries each, as a quantifier, patterning with *omnis*, and as an adjective, patterning with *carus*.

What this discussion shows is that not every word that looks like an adjective really is one, and the fact that *omnis*, *multi*, *totus* etc. may occur before demonstratives without a resulting contrastive interpretation is not, in fact, at odds with our theory. For these are not adjectives, they are a distinct category, of quantifiers.<sup>29</sup>

It should be clear that demonstratives form a distinct category of nominals. They are clearly not adjectives, failing all of the diagnostics. They may cooccur with quantifiers. An interesting question is whether *is*, which is traditionally considered a “determinative” pronoun, is a demonstrative. It cannot cooccur with demonstratives, but it also cannot cooccur with the class including *alter/alius/idem*. Moreover, *is* cannot combine with the “reinforcer” morpheme *-(c)e*, though *hic/iste/illic* can. It appears then, that *is* is not a demonstrative in the narrow sense.

Let us take stock. This is necessarily a very incomplete discussion of the nominal parts of speech, but we have shown that the Latin noun phrase contains at least the distinct categories of (N)oun, (A)djective, (Q)uantifier, and (D)emonstrative. Each of these categories displays distinct syntactic behavior, particularly in the unmarked orders with which they may combine with the others.

### 2.2.5 Asymmetry in the distribution of nominal idioms

Continuing the discussion of adjectives from Section 2.2.4.2, notice that, although word-orders N A and A N are both frequent, there are apparently no cases of nominal idioms of that require the form A N, which I claim is evidence for an underlying structural distinction.

Olga Spevak, commenting on the work of Lisón Huguet, notes that “in juridical, administrative, military and religious formulas, adjectives are always post-nominal” (Spevak 2010, 228-9; cf. Lisón Huguet 2001, 65ff.). This is too strong, given the fact that certain nominal formulas may occur in the order A N and retain their idiomatic readings. An example is given in (78), where the noun phrase *alieni aeris* ‘debt’ (lit. ‘another’s bronze’), though far more commonly occurring in the reverse order, retains its idiomatic interpretation.

<sup>29</sup> To corroborate this analysis, future work should confirm that canonical adjectives are not subject to constraints on quantifiers (Andrew Carnie, personal communication).

(78) *solutionem alieni aeris in publicam curam verterunt* (Liv. 7.21.5)

*solutionem*            *alieni*                    *aeris*                    *in publicam*  
 payment.FSG.ACC    another.NSG.GEN    bronze.NSG.GEN    in public.FSG.ACC

*curam*                    *verterunt*  
 care.FSG.ACC    turn.3PL.PERF.IND.ACT

‘They turned over the payment of debt into the public care.’

In fact, even split noun phrases, such as the split prepositional phrase *pro alieno ... aere* in (79), may have an obligatory idiomatic reading.

(79) *maiorum exempla persequens pro alieno se aere devovit* (Cic. *Phil.* 11.13)

*maiorum*                    *exempla*                    *per-sequens*  
 ancestor.MPL.GEN    model.NPL.ACC    through-follow.MSG.PRES.PTCP.ACT

*pro alieno*                    *se*                    *aere*                    *devovit*  
 for    another.NSG.ABL    REFL.ABL    bronze.NSG.ABL    devote.3SG.PERF.IND.ACT

‘Following the examples of his ancestors, he sacrificed himself for debt.’

The proper generalization appears instead to be that if a noun phrase of the form A N has an idiomatic reading, N A will also have the idiomatic reading.

(80) *Nominal idiom asymmetry*

(a) If an idiomatic reading is attested for a noun phrase A N, it is attested for N A.

(b) It is *not* the case that if an idiomatic reading is attested for a noun phrase N A, it must be attested for A N.

It follows from (a) that there are no nominal idioms that require the form A N.

To see (b), notice that although we have seen in (59) that *res publica* has an idiomatic reading, the reverse order *publica res*, appears never to have one.<sup>30</sup> In (81), for instance, Lisón Huguet (2001, 67) agrees with Lisardo Rubio (1972, 413) that *publicae rei* has the denotation of “any public thing” (*una cosa pública*).

<sup>30</sup> In classical authors. There are two instances of probably idiomatic use of *publica res* in Ammianus Marcellinus: (16.5.4) and (22.2.5).

(81) hi censores [...] neque quicquam *publicae rei* egerunt (Liv. 27.6.17)

hi	censores	neque	quicquam
PROX.MPL.NOM	sensor.MPL.NOM	nor	anything.NSG.ACC
publicae	rei	egerunt	
public.FSG.GEN	thing.FSG.GEN	do.3PL.PERF.IND.ACT	

‘These censors didn’t do anything of public import’

It is also not the case that if a noun phrase of the form N A has an idiomatic reading, that it then *must* have that reading. For instance, the phrase *res novae* often has the idiomatic meaning of ‘revolution,’ but it sometimes retains its more compositional meaning of ‘news,’ as in (82).

(82) non [...] tam *rebus novis* quam tuis litteris delector (Cic. Att. 4.11.2)

non	tam	<i>rebus</i>	<i>novis</i>	quam	tuis
not	so	thing.FPL.ABL	new.FPL.ABL	as	2SGPOSS.FPL.ABL
litteris	delector				
letter.FPL.ABL	delight.1SG.PRES.IND.DEP				

‘I don’t delight in the news as much as in your letters.’

Here, Cicero is certainly not hinting that he finds joy in revolution.

In general, then, phrases such as *res novae* are ambiguous between a compositional and an idiomatic reading. There is no reason to believe that the ambiguity is structural. In fact, it is lexical, as is generally the case for idioms (Schachter 1973; Vergnaud 1974; Chomsky 1980; etc.).

To see this, consider the nominal idiom *pater conscriptus* ‘senator’ (lit. ‘enlisted father’). The participial adjective *conscriptus* hardly, if ever, occurs outside of this fixed expression. If it did, it would have the reading ‘enlisted,’ or possibly another idiomatic reading, but not the reading ‘senator.’

The noun *pater*, on the other hand, occurs freely and is the 84th most frequent word in the *Perseus* corpus, not only occurring with *conscriptus*. These facts suggest that, synchronically, the *conscriptus*<sub>1</sub> in the idiom *pater conscriptus* is distinct lexical item from the participial adjective *conscriptus*<sub>2</sub> productively derived from the verb *conscribo* ‘enroll,’ regardless of the diachronic facts. The salient property of *conscriptus*<sub>1</sub> is that it does not freely combine with any noun, but obligatorily selects for *pater*: if *conscriptus*<sub>1</sub> is not syntactically generated with *pater*, then the noun phrase is ungrammatical. We may also add that the idiom *pater conscriptus* apparently always occurs in this order, just as *res publica*.

The point of this discussion is that there is an asymmetry between the orders A N and N A. Though the situation is complex, at least certain adjectives appear to select for nouns, yielding an idiomatic reading of the noun phrase, where the syntactic domain in which this selection occurs has the schematic form [N A], not [A N]; idiomatic noun phrases with the order A N are instead

derived via syntactic movement, possibly with subtle semantic effects. Then there must be at least some internal hierarchical structure within the noun phrase.

### 2.2.6 Noun phrase-internal structure: Concluding remarks

Almost nothing is known about the Latin noun phrase. As we have seen, the permissible word-orders are extremely free, with very subtle interpretive differences. It is, in fact, difficult to even detect a neutral order of nominal elements. However, we have taken several steps towards developing a predictive theory. At any rate, we have presented several reasons why there must be structure inside the noun phrase.

In the following chapter we will see one reason why the noun phrase appears so complex: it is subject to prosodic movement, so that the linear order of words does not reflect the underlying structural hierarchy.

## 2.3 Structure in the clause

We have seen several arguments that there is hierarchical structure and syntactic movement within the noun phrase. Next, we will see that the same holds for clause-level structure.

We will begin in Sections 2.3.1–2 by providing novel data for two syntactic conditions on clausal word-order. Next, in Section 2.3.3, we will explain these generalizations by means of an important principle of the relation of Latin syntax and semantics: scope transparency. As a corollary of this principle, we will see that in addition to the complementizer phrase (CP) representing the clause as a whole, there must be a verb phrase (VP), where argument structure is satisfied, and a constituent intermediate between the two, which we will call a tense phrase (TP).

### 2.3.1 The syntax of NPI licensing

In this section we will consider the distribution of a certain class of words, known as negative polarity items (NPIs) (Klima 1964). These are words, such as indefinite *quis* ‘anyone’ and *ullus* ‘any,’ that appear to require the presence of another element, which we can call a *licensor*, typically a negation marker such as the particle *non* ‘not,’ or other *n*-words like the verb *nego* ‘deny’ or the adjective *nullus* ‘no.’

We will see that the distribution of NPIs is descriptively subject to a certain condition: an NPI must be preceded by its licensor within each of the same clauses in which their licensor exists. In Section 2.3.3 I will argue that this condition follows from a more general principle of grammar in which precedence itself is a side-effect of structure.

#### 2.3.1.1 NPIs and nonveridicality

To begin, consider (83), where the NPI *quis* is licensed by *ne*, in the sense that the sentence would presumably be ungrammatical without it.

- (83) Itaque *ne* iustitiam quidem recte *quis* dixerit per se ipsam optabilem (Cic. *Fin.* 1.53).

Itaque ne iustitiam quidem recte quis  
So NEG justice.FSG.ACC indeed rightly any.MSG.NOM

dixerit per se ipsam  
say.3SG.PERF.SBJV.ACT through REFL.ACC itself.FSG.ACC

optabilem.  
desirable.FSG.ACC

‘So one would not correctly say that justice is desirable in of itself.’

The licenser need not carry any negative flavor at all, however. The particle *si* ‘if,’ which introduces conditionals, frequently licenses NPIs, as in (84).

- (84) *si quis* requirit cur Romae non sim [...] (Cic. *Att.* 12.40.3)

si quis requirit cur Romae non  
if any.MSG.NOM ask.3SG.PRES.IND.ACT why Rome.FSG.LOC not

sim  
be.1SG.PRES.SBJV

‘If anyone asks why I’m not at Rome ...’

In other contexts, the identity of the licenser is less clear, as in (85), where *quis* appears to be licensed simply by virtue of appearing in a temporal clause introduced by *cum*.

- (85) Etiam interpretatio nominis habet acumen, *cum* ad ridiculum convertas quam ob rem ita *quis* vocetur (Cic. *Orat.* 2.257).

Etiam interpretatio nominis habet acumen  
even meaning.FSG.NOM name.NSG.GEN have.3SG.PRES.IND.ACT point.NSG.ACC

cum ad ridiculum convertas quam  
when to laughter.NSG.ACC turn.2SG.PRES.SBJV.ACT which.FSG.ACC

ob rem ita *quis* vocetur  
about thing.FSG.ACC thus any.MSG.NOM call.3SG.PRES.SBJV.PASS

‘Even the interpretation of a name has subtlety whenever you burst into laughter on account of why someone is called the way they are.’

What each of the above examples share in common is that the NPI *quis* occurs in a context where the speaker is not committed to the reality of the situation described. In (83) and (84) *quis* occurs

in a clause that describes a potential situation, not necessarily one that holds at any time. The temporal clause in (85) is general or habitual, as indicated by the subjunctive mood of *convertas*, not describing a situation that the speaker believes to presently be occurring.

I will follow Giannikidou (1998) and subsequent work, then, and argue that NPIs not only have a definable syntactic distribution, but must occur in *nonveridical* contexts, that is, in contexts where the speaker is not committed to the truth of a proposition (Giannikidou 2011, 1674ff.).

### 2.3.1.2 The precede-and-command condition on NPI licensing

Regarding the syntax of NPIs, notice first in (83) that the licensor *ne* need not be linearly adjacent to the NPI *quis*. NPIs may also be licensed across finite clause boundaries, as shown in (86), where *ullam* is separated by its licensor *negabant* by the complementizer (subordinating conjunction) *ut*.

(86) *Negabant me adduci posse ut ullam largitionem probarem* (Cic. Agr. 2.12)

Negabant	me	ad-duci	posse
deny.3PL.IMPERF.IND.ACT	1SG.ACC	to-lead.PRES.INF.PASS	able.PRES.INF.ACT

ut	ullam	largitionem	probarem
that	any.FSG.ACC	bribery.FSG.ACC	approve.1SG.IMPERF.SBJV.ACT

‘They said that I couldn’t be convinced to approve of any bribery’

In the examples presented so far, each NPI is preceded by its licensor, and the NPI is in all of the same clauses as the licensor. This latter relation sometimes known as “command” (Carnie 2010, 47ff.). We will see that this dual constraint holds generally, and we give a semi-formal definition in (87).

(87) *Precede-and-Command*

In configuration (a), where X and Y are syntactic objects and ‘...’ represents any string, X *precedes-and-commands* Y if, and only if, (a) cannot be written as (b).

(a) ... [CP ... X ... Y ... ] ...  
 (b) ... [CP1 ... [C2P ... X ... ] ... Y ... ] ...

The label CP stands for “Complementizer Phrase,” in other words a full clause. (Let us assume that every clause is indeed headed by a possibly null complementizer C, such as *ut*, or *quod*.) This relation holds between objects X and Y, then, whenever Y is contained within the deepest clause in which X is, and follows it.

To see that *negabant* precedes-and-commands *ullam* in (86), it is sufficient to check that one may substitute *negabant* for X and *ullam* for Y in (87)a to obtain (88)a, but not in (87)b to form (88)b.

(88) (a) [CP *negabant* ... [CP *ut ullam* ...]]

(b) [CP [CP ... negabant ... ] ... [CP ut *ullam* ...]]

This appears to be the case. That is, whereas (88)a is an accurate, if underinformative, structural description of (86), (88)b is simply incorrect: there is no clause in (86) containing *negabant* but not *ullam*.

As an example of a case not satisfying (87), consider (89), where one might believe that there is a potential licensing relationship between *si* and *quid*.

(89) *Si omnia fato, quid mihi divinatio prodest?* (Cic. *Div.* 2.20)

Si	omnia	fato	quid	mihi	divinatio
if	every.NPL.NOM	fate.NSG.ABL	quid	1SG.DAT	divination.FSG.NOM

prodest  
useful.3SG.PRES.IND.ACT

OK with reading: ‘If everything is by fate, what use is divination to me?’

Unacceptable with reading: ‘If everything is by fate, divination is of some use to me.’

Although *si* precedes *quid*, it does not both precede and command it, because it occurs in the conditional clause that it heads, but *quid* does not. As indicated in (90), (89) satisfies both structural descriptions in (87), thereby failing to satisfy the definition of precede-and-command.

(90) (a) [CP *si* ... *quid* ...]  
(b) [CP [CP *si* ...] *quid* ...]

### 2.3.1.3 Testing the hypothesis

To test that precede-and-command accurately captures the relation between the licensor and its NPI, it is necessary to examine sentences where the licensor could, in principle, fail to satisfy (87). This is not really the case for the licensor *si*, which we may assume to be C, because in typical cases it appears at the left edge of the clause, trivially satisfying the precedence requirement of (87).

Instead, let’s consider cases where the licensor is a verb, *nego* ‘deny,’ or a noun *nemo* ‘no one.’ The position of verbs in the clause is generally very free, with initial, medial, and final positions occurring frequently. The verb *nego* is no exception, reported to precede its clausal complement in only three out of four cases (Spevak 2010, 159). The position of nouns and noun phrases is at least as free as verbs.

To test that *nego* and *nemo* must precede-and-command the NPIs which they license, I searched the *Perseus* corpus for every sentence containing a form of *nego* or *nemo* and a form of the NPI *ullus* ‘any’ or *umquam* ‘ever.’ If one of *nego* or *nemo* were the linearly closest potential licensor of *ullus* or *umquam*, I marked it as the licensor.

The prediction that *nego* and *nemo* must precede-and-command *ullus* and *umquam* when they license them is borne out, as shown in Table (91).<sup>31</sup>

Potential licensor	NPI	# Sentences	# Licensor precedes NPI	# Licenses NPI	# Licenses and precedes-and-commands NPI
<i>nego</i>	<i>ullus</i>	120	96	77	77
<i>nego</i>	<i>umquam</i>	40	31	23	23
<i>nemo</i>	<i>ullus</i>	121	87	35	35
<i>nemo</i>	<i>umquam</i>	198	171	139	139

(91)

What is important here is that in each case where *nego* or *nemo* licenses *ullus* or *umquam*, it also precedes-and-commands it. We therefore have considerable evidence that (87) is the correct syntactic relation for NPI licensing, which we can state as (92).

(92) *NPI generalization*

An NPI must be preceded-and-commanded by its licensor.

An upshot of this discussion is that the informal notion of “clause” must be formally represented somehow in the theory, and the natural place is within the syntactic component, where we have represented “clause” as CP. Precedence must also be represented, an issue which we will return to in Section 2.3.3.<sup>32</sup>

Two important questions face us at this point. First, we may ask, following Giannikidou (2011), what common property of NPIs requires them to be embedded in nonveridical contexts. Second, what is the relation between precede-and-command, which is purely syntactic, and nonveridicality, which is purely semantic? We will answer this latter question in Section 2.3.3.

Regarding the former, Giannikidou (2011) proposes that NPIs have the semantic property of *referential deficiency*: NPIs are characterized by the inability to refer. This appears to be the case, once we understand it to mean that NPIs are lexical items that involve no ontological commitment on the part of a speaker.<sup>33</sup>

For instance, let’s consider (93), where *ullam* is an NPI modifying *legem* and is licensed by *negarunt*.

<sup>31</sup> The list of texts searched is listed in Appendix A, with data given in Appendix C.

<sup>32</sup> Note that, whereas syntactic constraints on the distribution of NPIs are quite strong, this does not seem to be the case for so-called “Free Choice Items” (FCIs), which have an “it doesn’t matter what” reading (Giannikidou 2017, 8). An example is *quicquam* ‘anything at all’ in (a).

(a) *de re publica iam novi quicquam exspectare desieramus* (Cic. *Fam.* 8.4.4; Devine and Stephens 2013, 370)  
‘I have long stopped awaiting any news at all about the republic.’

<sup>33</sup> The reason is that the traditional notion of reference, understood as being some relation between a signifier and a mind-external entity, is misguided, involving aporetic issues of definition (“what is the just,” etc.), not to mention the nature of the relation in question (N. Chomsky, personal communication, 11/7/19). Without going into the details, let us instead take an approach where reference is to mind-internal entities—essentially, concepts.

(93) Caninius et Cato *negarunt* se legem *ullam* ante comitia esse laturos (Cic. *Fam.* 1.4.1)

Caninius	et	Cato	negarunt		
Caninius.MSG.NOM	and	Cato.MSG.NOM	deny.3PL.PERF.IND.ACT		
se	legem	ullam	ante	comitia	esse
REFL	law.FSG.ACC	any.FSG.ACC	before	assembly.NPL.ACC	be.PRES.INF
laturos					
carry.MPL.ACC.FUT.PTCP.ACT					

‘Caninius and Cato denied that they would bring any law before the assembly.’

Here, assume that negation is expressed through the *ne-* in *negarunt*, where *nego* P means “I assert not P,” for a proposition P (*OLD*, s.v. “nego” 1). Then the embedded clause with main verb *esse laturos* is nonveridical, enabling the use of *ullam*. The speakers are indirectly Caninius and Cato, who are certainly not committed to the existence of a law such that they will bring it before the assembly. In fact, they explicitly deny the existence of any such law.

I will argue that there is, in fact, a more precise semantic relation between *ne* and *ullam*. First we will need to develop an understanding of how the manipulation of individual entities is achieved through syntax.

### 2.3.2 *The syntax of quantification*

We have begun to see that there are very precise constraints on the relation of the syntax and semantics of certain words. Here will see an indication that these constraints hold more generally, considering words such as *omnis* ‘all’ and *aliquis* ‘some,’ which represent specific relations between two sets of entities.

#### 2.3.2.1 *Quantification*

Let us first define a *quantifier* as a relation between two sets (Westerståhl 2016, 108ff.).<sup>34</sup> If A is one set and B is another, one can think of a quantifier as asserting B as a property on some subset of A. Very informally, if A represents a “topic,” then B corresponds to the “comment” (Krifka 2016).

For instance, *omnis* ‘all’ in (94) is a quantifier and is interpreted as asserting the predicate *in me contulisset x* of all *x* in the set denoted by *sua studia et officia*.<sup>35</sup>

<sup>34</sup> The notion of quantifier is more generally formulated as an *n*-ary relation, but we will consider only binary quantifiers here.

<sup>35</sup> We use variables (*x*, *y*, etc.) in order to represent individual members of sets. In general, the function of quantifiers is to enable to the “pointwise manipulation of individuals” (Robert Henderson, personal communication). The individuals *x* in the set denoted by *sua studia et officia*, for instance, are each *studium* and *officium* that *is* ‘he’ has.

(94) is *omnia* sua studia et officia in me contulisset (Cic. *Att.* 1.1.4).

is	<i>omnia</i>	sua	studia	et
DET.MSG.NOM	all.NPL.ACC	REFL.POSS.NPL.ACC	zeal.NPL.ACC	and
officia	in me	con-tulisset		
duty.NPL.ACC	in me.MSG.ACC	together-carry.3SG.PLUPERF.SBJV.ACT		

‘He had gathered together all his support and duties for me’

The parts of the sentence corresponding to sets A and B are known as the *restrictor* and the *scope* of the quantifier, respectively, as shown in (95) (Szabolsci 2010, 85).

(95) is *omnia sua studia et officia in me contulisset*

quantifier	restrictor	scope

A reliable heuristic to determine the restrictor is to consider what set it would be sufficient for one to check in order to determine the truth or falsity of the assertion.<sup>36</sup> To determine if (94) is true, for instance, it suffices to check all of “his support and duties.” But it would be insufficient to check all of “what he had gathered together for me:” in doing so one might conceivably miss something.

Given the derivational complexity of Latin words, a quantifier may be realized as a bound morpheme of a word, as is perhaps the case of *ali-* in (96).

(96) ego tibi *aliquid* de meis scriptis mittam (Cic. *Att.* 1.16.18).

ego	tibi	<i>aliquid</i>	de	meis
1SG.NOM	2SG.DAT	something.NSG.ACC	from	1SGPOSS.NPL.ABL
scriptis	mittam			
writing.NPL.ABL	send.1SG.FUT.IND.ACT			

‘I’ll send you some of my writings.’

Given such cases we will follow the literature in calling the quantifier and restrictor together a *generalized quantifier* (Montague 1974). Next let us consider syntactic constraints on quantification.

### 2.3.2.2 The *c-command condition on quantification*

Proceeding to analyze (96), notice that there is an ambiguity, wherein *de meis scriptis* can be understood either as (a) modifying *aliquid* or (b) modifying *mittam*. The former reading is partitive, where *aliquid* denotes one member out of the set of all of the speaker’s writings. In the

<sup>36</sup> This is the *conservativity* property of quantifiers, a human language universal (Keenan and Stavi 1986).

other reading, *de meis scriptis* denotes the source of the sending. To represent these two possibilities, we may adopt our bracket notation as in (97).

- (97) (a) [CP ego tibi [NP aliquid [PP de meis scriptis]] [VP mittam]]  
 (b) [CP ego tibi [NP aliquid] [VP [PP de meis scriptis] mittam]]

Here, I am using NP as an abbreviation for “Noun Phrase,” PP for “Preposition Phrase,” and VP for “Verb Phrase.” Though little hinges on the decision, let us assume (97)a is the correct structural description, where *de meis scriptis* forms a noun phrase constituent with *aliquid*.

To check whether this sentence is true, it suffices to check whether (98) is true.

- (98) There is some  $x$ ,  $x$  “from my writings,” such that I will send you  $x$

Then the noun phrase *aliquid de meis scriptis* can be analyzed as a generalized quantifier with scope *mittam*.

As a descriptive fact, it appears that a generalized quantifier precedes-and-commands its scope quite generally, as stated in (99). In Section 2.3.3 we will explain this, along with the NPI generalization (92).

- (99) *Scope generalization*  
 A generalized quantifier must precede-and-command its scope.

### 2.3.2.3 Testing the hypothesis

To test (99), consider the readings available for sentences containing both the quantifiers *omnis* ‘all’ and *aliquis* ‘some.’ In English, “inverse scope”—scope contrary to precedence—is permitted, but not obligatory, as illustrated in (100), with two possible readings given in (101).

- (100) Every dog likes a treat
- (101) (a) For all dogs  $x$ , there is a treat  $y$ , such that  $x$  likes  $y$   
 (b) There is a treat  $y$ , such that for all dogs  $x$ ,  $x$  likes  $y$

In the first reading, the universal quantifier *every* includes the existential quantifier *a* in its scope, which we can notate as  $\forall > \exists$ . There is a potentially different treat that each dog likes, which could be clarified as in (102)a. The second, inverse scope reading, is also available, however, which says that there’s some treat that every dog likes, the same treat for each dog, which we can notate as  $\exists > \forall$ . The identity of such a treat could be specified as in (102)b.

- (102) (a) Charlie likes peanut butter cookies, Annie likes beef jerky, ...  
 (b) Namely, mango chunks.

In (100), the object is indefinite. If the subject is indefinite, as in (103), two readings remain available, which may be clarified as (104)a and b, respectively.

- (103) A student read every book in the library.  $\exists > \forall$ ,  $\forall > \exists$

- (104) (a) Namely, Jimmy.  
 (b) Billy read *Percy Jackson*, Mary read *Wonder*, ...

I claim that in Latin, the situation is different: inverse scope readings are simply not available. This follows from the scope generalization (99).

In (105)a, for instance, the quantifier *omnes* precedes-and-commands *aliquo* and also includes it in its scope, as is evident from the following question (105)b. Pliny is saying that every man has some fault, as in translation (c), not necessarily the same fault for each man, contrary to what translation (d) would suggest.

- (105) (a) Non *omnes* homines *aliquo* errore ducuntur?  $\forall > \exists$  (Plin. *Ep.* 9.12.1)

Non	omnes	homines	aliquo	errore
not	all.MPL.NOM	person.MPL.NOM	some.MSG.ABL	mistake.MSG.ABL

ducuntur  
 lead.3PL.PRES.IND.PASS

‘Aren’t all people led by some mistake?’

- (b) Non hic in illo sibi, in hoc alius indulget? (Plin. *Ep.* 9.12.1)

Non	hic	in illo	sibi,	in hoc
not	PROX.MSG.NOM	in DIST.MSG.ABL	REFL.DAT	in PROX.MSG.ABL

alius	indulget?
other.MSG.NOM	indulge.3SG.PRES.IND.ACT

‘Doesn’t this man indulge in that mistake, and another in this mistake?’

- (c) ✓ ‘Isn’t it the case that for every person, there is some mistake that they are led by?’

- (d) ✗ ‘Isn’t there some mistake that all people are led by?’

This follows from the syntactic structure of (105), given in (106). Since NP precedes-and-commands the generalized quantifier *aliquo errore*, NP includes it in its scope, yielding reading (c) but not (d), which would require a structure such as (107).

- (106) [<sub>CP</sub> non [<sub>NP</sub> omnes homines] [<sub>?P</sub> aliquo errore ducuntur]]

- (107) [<sub>CP</sub> non [<sub>NP</sub> aliquo errore] [<sub>?P</sub> omnes homines ducuntur]]

Conversely, consider (108), in which *aliquid* precedes *omni*, where Quintilian is discussing the introductions (*prohoemii*) of speeches in the craft of oratory.

(108) quia est aliquid in omni materia naturaliter primum (Quint. 3.8.6)

quia est aliquid in omni  
because be.3SG.PRES.IND something.NSG.NOM in every.FSG.ABL

materia naturaliter primum  
occasion.FSG.NOM naturally first.NSG.NOM

‘Because there is something in every occasion that is naturally first.’

Quintilian proceeds to make clear that what is common all good introductions is the winning of the good-will (*benevolentiae; favor*) of the audience, both before the senate, the assembly, and in the law courts. We may assume then, that *aliquid* includes *omni* in its scope.

Determining the readings available for sentences with multiple quantifiers is challenging enough for native speakers of their own languages (Szabolcsi 2010, 87ff.). The difficulty is compounded when there aren’t even any native speakers to consult. The path that I have maintained is to consider carefully the context of each sentence and the rhetorical objective of the author.

To test the hypothesis (99), I searched the *Perseus* corpus for every sentence in which *omnis* and *aliquis* are separated by up to three words and then examined the scopes of the quantifiers for the cases where one preceded-and-commanded the other. The results are shown in Table (109), and complete data is given in Appendix D.

(109)

Precedence	# Sentences	# Clause mates	# $\forall > \exists$	# $\exists > \forall$	# Uncertain
omnis ... aliquis	96	62	58 (94%)	0	4
aliquis ... omnis	77	31	1	29 (94%)	1

The second column shows the total number of sentences in the data; the third shows the number of sentences where one of *omnis* or *aliquis* precedes-and-commands the other; the fourth shows cases where *omnis* has scope over *aliquis*; the fifth the converse; and the final column shows the number of cases where it is very difficult to judge.

The data in the fourth and fifth columns suggest that there is an overwhelming preference for scope to respect linear order.

#### 2.3.2.4 Tough cases

##### 2.3.2.4.1 Genuine counterexamples: Elliptical sentences

It appears that the situation is rather complex, due to interaction with ellipsis. Consider the clear counterexample (110), discussed by Devine and Stephens (2013, 248ff.).

- (110) AURES. [...] animalium, aliis maiores, aliis minores; cervis tantum scissae ac velut divisae; sorici pilosae; sed *aliquae omnibus* animal dumtaxat generantibus (Plin. *Nat.* 11.136).

‘EARS. Concerning animals, some have bigger ones, others have smaller ones. Only deer have ears that are cut and almost separated; shrews have ears with holes; but all animals, provided that they are viviparous, have some ears.’

The passage as a whole, from which this sentence was taken, can be understood as an encyclopedia entry with the heading EARS, as I indicate in my editing of (110). Nonetheless, we find that *aliquae* precedes *omnibus*. This is a clear case of inverse scope, noted by Devine and Stephens: Pliny is saying that all animals have some ears, not that there are some ears that are common to all animals. Devine and Stephens claim that notions of topic and focus play a role, where *omnibus* has focus.<sup>37</sup>

Setting aside the tricky notion of topic, let us say that a constituent with *focus* signals a contrast with an alternative in the discourse context (Rooth 1992). It is clear that focus interacts with scope in English, at any rate, given the existence of pairs such as (111) and (112) (Krifka 2017).

- (111) (a) All dogs go to heaven  
(b) “For every  $x$ ,  $x$  a dog,  $x$  goes to heaven.”
- (112) (a) All DOGS go to heaven.  
(b) “For all  $x$ , if  $x$  goes to heaven,  $x$  is a dog.”

To me, the alternatives to the set of dogs evoked by focus in (112) are other living creatures, the set of cats, horses, and other animals.

If there were focus on *omnibus* in (110), as Devine and Stephens claim, however, one would expect the alternatives to be the denotations of other quantifiers, *quibusdam* ‘certain,’ *nullis* ‘no,’ etc. There is no indication that that is the intended reading. In fact, what follows is quite a long series of qualifications to the claim that all animals have ears: only those which are viviparous (*animal ... generantibus*), not seals, not dolphins, etc.

It may be the case that there is interference from topic and focus, then, but the situation is not at all clear. Given that there is no data for stress or accent, there is very little evidence for any such analysis. It is important to keep in mind, however, that any sufficiently interesting data will have complex and often unknown interfering factors. These do not, of course, falsify the theory, but suggest that one’s background assumptions are unsatisfactory.

It is relevant in this regard that another alleged counterexample to (99) discussed by Devine and Stephens is highly elliptical (Devine and Stephens 2013, 248).

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<sup>37</sup> These issues have been little investigated in Latin syntax, but considerably more so in other languages. For the interaction of focus and scope in Hungarian, for instance, cf. Kiss (2002, 113ff.).

(113) Tum Piso: “Quoniam igitur aliquid omnes, quid Lucius noster?” (Cic. *Fin.* 5.5)

quoniam	igitur	aliquid	omnes,	quid
since	therefore	something.NSG.ACC	all.MPL.NOM	what.NSG.ACC
Lucius	noster?			
Lucius.MSG.NOM	1PLPOSS.MSG.NOM			

In particular, there is no verb in the sentence. The language appears colloquial, and the context of the sentence is a dialogue where various elite Romans are discussing their Greek philosophical and rhetorical heroes. Raphael Woolf translates (113) as (114).

(114) ‘Well’, said Piso, ‘since we each have our own special place, what about our friend Lucius?’ (Annas 2004).

Let’s assume that (114) is roughly correct. As an indication that it is, consider that the two clauses of (113) are likely parallel. Then we know that *aliquid* is the accusative object and that *omnes* is the nominative subject (without the parallelism, their respective cases would be ambiguous). This configuration can otherwise only exist if there is a transitive verb, such as *habent* ‘have’; here, it must have undergone ellipsis.

Likewise, there is no verb in (110). It appears, then, that ellipsis somehow licenses the violation of the scope generalization.

#### 2.3.2.4.2 False counterexamples: Non-elliptical sentences

Leaving the interaction of scope and ellipsis as a topic for future research, let us now turn to the analysis of non-elliptical sentences that have been interpreted at some point as counterexamples to (99).<sup>38</sup> We will see that, far from being counterexamples, they give weight to the robustness of the generalization.

In (115), from Cicero’s early *De inventione*, we see *aliqua* preceding *omnem*, which Devine and Stephens understand to mean that “different groups of arguments apply to different cases, not that there is a group of arguments that applies to all cases” (Devine and Stephens 2013, 249).

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<sup>38</sup> For the interaction of scope and ellipsis, cf. Merchant (2001, 148ff.).

- (115) Nunc exponemus locos, quorum pars aliqua in omnem coniecturalem incidit controversiam (Cic. *Inv.* 2.16.1).

Nunc	ex-ponemus	locos,	quorum
now	out-put.1PL.PRES.SBJV.ACT	place.MPL.ACC	which.MPL.GEN
pars	aliqua	in omnem	coniecturalem
part.FSG.NOM	some.FSG.NOM	in every.FSG.ACC	conjectural.FSG.ACC
in-cidit	controversiam		
on-fall.3SG.PRES.IND.ACT	dispute.FSG.ACC		

‘We will now set out the themes, some of which are relevant to every dispute based on conjecture.’

This is a misunderstanding. Cicero is not discussing arguments (*argumenta*), but themes (*loci*), upon which arguments are constructed (*OLD*, s.v. ‘locus’). He makes it clear at the end of the section that all arguments are based on the themes of *ex causa* ‘from cause’, *ex persona* ‘from character,’ and *ex facto ipso* ‘from the thing done itself.’

Nunc exponemus locos, quorum pars aliqua in omnem coniecturalem incidit controversiam. (Hoc autem et in horum locorum expositione et in ceterorum oportebit attendere non omnes in omnem causam convenire. Nam ut omne nomen ex aliquibus, non ex omnibus litteris, scribitur, sic *omnem in causam* non omnis argumentorum copia, sed eorum necessario *pars aliqua* conveniet.) Omnis igitur ex causa, ex persona, ex facto ipso coniectura capienda est.

Causa tribuitur in impulsione et in ratiocinationem... (Cic. *Inv.* 2.16.1–17.1)

‘We will now set out the themes, some of which are relevant to every dispute based on conjecture. (Here, however, and in the exposition of these themes and of the rest it will be fitting to notice that not all of them pertain to every case. For just as every name is written from some—not all—letters, in the same way, to every case it’s not the whole supply of arguments, but necessarily some part of them that will pertain.) Every inference, then, must be taken from cause, from character, and from the thing done itself.’

‘Cause is distributed into impulse and premeditation...’

The confusion results from the aside that Cicero makes following *controversiam*, indicated here by parentheses. What he means is that, although these three *loci* of *ex causa*, *ex persona*, and *ex facto* are definitely relevant to every case, the entire ‘supply of arguments’ (*argumentorum copia*) should not be used in every case. For instance, the discussion of *causa* ‘cause’ in 2.17–24 makes it clear that arguments based on *impulsio* ‘impulse’ and arguments based on *ratiocinatio* ‘premeditation’ should not be used in the same cases, although every case should treat *causa* in some way or other.

Lastly, let’s consider (116), where *aliqua* precedes *omnis*, also from the *De inventione*.

- (116) *non quo non in aliqua constitutione omnis semper causa versetur, sed quia [...]* (Cic. *Inv.* 2.155).

non quo non in aliqua constitutione omnis  
not because not in some.FSG.ABL issue.FSG.ABL every.FSG.NOM

semper causa versetur, sed quia  
always case.FSG.NOM turn.3SG.FUT.IND.DEP but because

‘Not because it’s not on some issue that every case will always turn, but because ...’

Here, there is a *non ... sed* construction, where Cicero is denying a particular reason that the reader may suspect he has for organizing his work in a certain way. The suspected reason is represented by the clause *quo...versetur*. The situation described by the *quo* clause is nonveridical due to negation element *non* ‘not,’ and so it doesn’t matter that the scope relations are “incorrect.” Cicero would agree with Devine and Stephens (2013, 248) that every case turns on its own issue, but Cicero is not making that claim here. He is only making a claim about a reason that he has.

To clarify this, consider the English example (117)c, which could be uttered in either context (a) or (b).

- (117) (a) Context: *The speaker is the boss of the addressee, who are very good friends, and have never had any personal issues with each other.*
- (b) Context: *The speaker is the boss of the addressee, and secretly hates the addressee, believing them to be lazy.*
- (c) I’m firing you not because I dislike you, but because you repeatedly miss your quota.

It is clear that the speaker is not committed to the truth or falsehood of the first *because* clause, only to its not being the reason for the firing.

### 2.3.2.5 Evaluation

Although the situation is more complex than in our discussion of NPI licensing, it is clear that (99) is a robust generalization about the interpretation of sentences with multiple quantifiers. If it did not hold, there would be no explanation for the results that we have seen, in which inverse scope is available only in sentences involving ellipsis of the predicate.

### 2.3.3 Explaining the generalizations

We have presented two restrictions on the relation of syntax and semantics, both involving precede-and-command. On first glance these generalizations seem to suggest that precedence is an important factor in Latin grammar, at odds with the thesis of structure-dependence (32). Here we will argue that the opposite is the case: precede-and-command is a side-effect of the

structure-dependent operation of c-command, which elegantly relates syntactic constituents to semantic denotations.

### 2.3.3.1 *The principle of scope transparency*

I claim that the NPI generalization and the scope generalization are side-effects of (118), an important condition on the relation of syntax and semantics.

(118) *Scope transparency*

The scope of a generalized quantifier is the denotation of its c-command domain.

Let us consider evidence that (118) is true.

### 2.3.3.2 *Precedence is a side-effect of asymmetric c-command*

Notice that, unlike the generalizations discussed so far, (118) makes no reference to precedence, in line with structure-dependence (32). There is good reason to believe that precedence is not a syntactic relation, but a side-effect of asymmetric c-command.

In every case where it is clear, a head precedes its complement. Since a head asymmetrically c-commands whatever is dominated by its complement, it follows that it precedes that material as well. Then precedence need not be represented in syntax, only structural relations involving head, complement, and specifier.

For instance, consider example (120)(a), below. The ablative case of *eadem* and *navi* is licensed by the prepositional head *in*. This fact and others can be formally captured if *eadem navi* is an NP complement of *in*, as in (119).

(119) [PP [P' in [NP eadem navi]]]

Recall that c-command is the generalized “aunt” relation, so that X c-commands Y when X is sister to Y, or aunt to Y, or great-aunt to Y, etc. Then *in* c-commands both *eadem* and *navi*, but not vice versa. In other words, *in* asymmetrically c-commands *eadem* and *navi*. The precedence relation of *in* to *navi*, then, is not a syntactic one, but a consequence of the head *in* being pronounced before its complement.

Ostafin (1986) argued that in prepositional phrases, P precedes N quite generally. The descriptive facts are illustrated in (120): out of all six logically possible orders of P, M, and N, where M is some category (here, *eadem*) modifying N, only three are well-attested.

(120) (a) ✓ in eadem navi

in eadem navi  
in same.FSG.ABL ship.FSG.ABL

‘in the same ship’

(b) ✓ in navi eadem

(c) ✓ eadem in navi

- (d) ? navi in eadem  
 (e) # eadem navi in  
 (f) # navi eadem in

Potentially problematic is order (d), the so-called *rebus in arduis* construction (cf. Devine and Stephens 2006, 572). In prose authors it appears to be attested only a few times in Livy and in an example from the *Rhetorica ad Herennium* (*virtute pro vestra* ‘on behalf of your virtue;’ Rhet. Her. 4.44). In the latter text, the author terms it an instance of *perversio*, literally meaning “inversion.” But forms in *pervers-* often have the sense of “error,” “wrong,” or “distorted” (*OLD*, s.v. ‘perverse’ 2; ‘perversus’ 2, 3; ‘perverto’). This is an indication that the construction is at least felt to be strange.

The fact that (d) is marginal but that (e) and (f) are unattested, moreover, suggests that (d) is really a second-position effect, to be treated in Chapter 3. That is, in cases of order (d), the preposition has a phonological feature ensuring that it is final in a prosodic word. In Ciceronian prose, prepositions never have this feature. The fact that it is sometimes present in Livy’s writing may be dialectal: Asinius Pollio famously claimed that Livy had a certain “Paduaness” (*Patavininitatem*; Quint. 1.5.56; 8.1.3).

Prepositions are not unique in preceding their complements. This is also empirically detectable from the positions in which complementizers are attested to appear, such as *ut* ‘that.’ This is discussed somewhat in Section 2.3.4.2.

### 2.3.3.3 *C-command represents scope*

Next, in both the NPI generalization and the scope generalization, precedence is necessary, but not sufficient. The structural relation of command is also required in both cases. In fact, there is no evidence that precedence alone is ever a relation with semantic consequences, casting doubt on whether precedence is a syntactic relation at all.

Consider (121), where the quantifier *nullam* with restrictor *rem* licenses the NPI *umquam*, with interpretation as in (122), where *y* is some object of comparison that we can leave unspecified.

- (121) *nullam rem umquam difficiliorem cogitavi* (Cic. Att. 9.8.2).

<i>nullam</i>	<i>rem</i>	<i>umquam</i>	<i>difficil-iorem</i>
no.FSG.ACC	thing.FSG.ACC	ever	hard-COMP.FSG.ACC

*cogitavi*  
 think.1SG.PERF.IND.ACT

‘I never thought anything more difficult.’

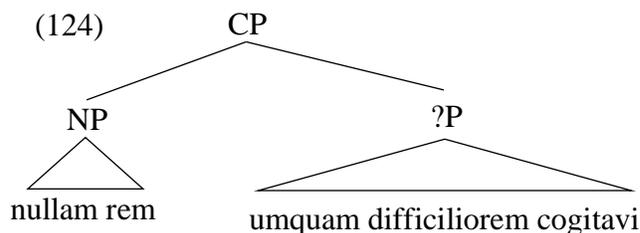
- (122) There is no thing *x*, such that I ever considered *x* more difficult than *y*.

The fact that *nullam rem* forms a generalized quantifier is evidence that it is a noun phrase constituent, an independently motivated assumption, given the two words’ gender, number, and case connectivity.

The interpretation in (122) indicates that its scope corresponds to *umquam difficiliorem cogitavi*. As initial evidence that this latter phrase is a constituent, notice that *umquam* modifies *cogitavi*. At the moment we leave this constituent unlabeled. The structure we are left with is shown in (123).

(123) [CP [NP nullam rem] [?P umquam difficiliorem cogitavi]]

For convenience, let's represent (123) in tree notation as in (124), where triangles simply indicate that there is structure that we are not representing. Here, NP c-commands ?P and its children, including *umquam*.



Crucially, the scope of NP corresponds to its c-command domain. The fact that *nullam* precedes-and-commands everything except itself appears syntactically insignificant: there is no sense in which *rem umquam difficiliorem cogitavi* forms a constituent to the exclusion of *nullam*. It also appears semantically insignificant, not denoting anything. Consider that *nullam* not only precedes-and-commands ?P, but also *rem*. But in other cases, a quantifier will follow the noun that restricts it, as in (125).

(125) vis *nulla* umquam adferebatur (Cic. Nat. D. 2.159)

vis	<i>nulla</i>	umquam	ad-ferebatur
force.FSG.NOM	no.FSG.NOM	ever	toward-carry.3SG.IMPERF.IND.PASS

‘No force was ever brought forth.’

When it comes to the order of a generalized quantifier and its scope, however, the former will precede the latter quite generally.

In general, then, precede-and-command is only a distant approximation to scope, but c-command represents it exactly. We conclude that the NPI and quantifier generalizations are robust but weak, being corollaries of the far more general principle of scope transparency (118).

### 2.3.4 The verb and tense phrases

One consequence of the above discussion is that every Latin sentence with a verb contains a verb phrase, namely, the constituent containing the verb and its arguments. The syntactic relation of a verb to its arguments may be specified as in (126).

(126) *VP generalization*

A verb V precedes one of its arguments XP, if, and only if, VP dominates XP.

We will consider two arguments for these claims.

First, recall from the NPI generalization (92) that an NPI must be preceded-and-commanded by its licensor. As a special case, when an argument of the verb is an NPI and the verb is its licensor, the verb must precede its argument. It follows from scope transparency that this is a c-command relation. Hence *nego* and its arguments form a constituent.

Let us next consider a quite different line of reasoning, based on the cross-Romance distribution of verbs, adverbs, and verbal inflection.

#### 2.3.4.1 Evidence from Romance

Consider that manner adverbs typically precede the verb, even when the verb precedes its arguments, so that we are left with VSO order (or rarely VOS), as in (127).

(127) *facile* indicabat ipsa natura vim suam (Cic. *Lael.* 24)

<i>facile</i>	<i>indicabat</i>	<i>ipsa</i>	<i>natura</i>	<i>vim</i>
easily	reveal.3SG.IMPERF.IND.ACT	self.FSG.NOM	nature.FSG.NOM	force.FSG.ACC
<i>suam</i>				
	REFL.FSG.ACC			

‘Nature itself easily revealed its power.’

In this example, *facile* is a manner adverb, modifying the action or event described by the verb phrase, so that (127) roughly means “nature’s revealing its power was easy.” In the simplest compositional semantics, then, the adverb is as close to the verb as possible. Then *facile* marks the left-edge of VP, and there is no scrambling.

This analysis is corroborated by the fact that, cross-linguistically, adverbs occur in a fairly rigid hierarchy, with manner adverbs being the lowest (for an overview, see Rizzi and Cinque 2016). In Romance, for instance, languages differ by position of the verb with respect to various classes of adverbs, which variation is usually analyzed as movement of the verb to different positions, according to the language. In French, for instance, the verb is very high, as shown by the fact that it must occur before epistemic adverbs like “probably.” The Spanish verb must follow these, suggesting that it is in a lower position. This is shown below in (128), with data from Ian Roberts (2019, 349ff.).

(128) (a) Antoine confond *probablement* (\*confond) le poème [French]  
 (b) Sergio (\*confunde) *probablemente* confunde este poema [Spanish]

‘Anthony/Sergio is probably confusing the poem’

Though Spanish is in the class of Romance languages in which the verb is lowest, the verb still must precede manner adverbs, as shown in (129), suggesting that it moves to a very low position outside of the verb phrase.

- (129) Sergio contesta *bien* (\*contesta) a las preguntas [Spanish]  
 ‘Sergio answers the questions well’

In Latin however, manner adverbs occur before the verb in the neutral case, as in (127).

Moreover, as argued by Norma Schifano (2015; cf. Roberts 2019), the position of the verb in Romance may be predicted by morphological exponence. Roughly, the more the verb is inflected, the lower the position to which it moves. The French verb, for instance, has morphological exponence of mood, but not of tense or aspect, and moves to a high very position, as we have just seen. The Spanish verb, on the other hand, expresses mood, tense, and aspect, and moves to a very low position. The other Romance varieties are somewhere between these two.

In addition to mood, tense, and aspect, the Latin verb additionally inflects for voice, with contrasting synthetic (i.e., non-periphrastic) forms for active and passive. Extending Schifano’s theory, then, would predict that the Latin verb is slightly lower than the Spanish one.<sup>39</sup>

Hence, based on the semantics of manner adverbs, the cross-Romance distribution of adverbs and verbs, and the relation between verbal inflection and verb movement, we conclude that *facile* in (127) marks the left-hand bound of the verb phrase, where neither argument has undergone scrambling. This indicates that (126) holds generally.<sup>40</sup>

#### 2.3.4.2 *The tense phrase: Evidence from epigraphic punctuation*

There is epigraphic evidence from syntactic punctuation that the verb and its preverbal arguments form a unit dominating VP but dominated by CP. We will call this unit the tense phrase (TP).

Consider the following extract from the *Laudatio Murdiae*, where *ut* introduces what appear to be coordinated finite clauses in the subjunctive mood, each set off by apices (’).<sup>41</sup>

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<sup>39</sup> Consider additionally the historical development of the Romanian clause from late Latin. On this issue we find that “the passage from late Latin ... to Romanian consisted in a blend of two distinct processes: a relaxed V2 grammar, specific mostly to main clauses, but also a gradual process of V-raising to the left along the clausal spine (Nicolae 2019, 106).” This is consistent with the classical Latin verb not moving outside of the extended verbal projection.

<sup>40</sup> For reasons of scope, we pass over the issue of the internal structure of the verb phrase. For the morphosyntax of the Latin verb, see Embick (2000), Acedo-Matellán (2016), Zyman and Kalivoda (2020), and references cited there.

<sup>41</sup> Line breaks and tabs indicate line breaks and spaces, respectively, in the inscription. Ellipses have been added by me and represent any material besides line breaks.

- (130) CONSTITIT·...·VT·...  
 MATRIMONIA·...·RETINERET·' NVPTA·MERITEIS·GRA  
 TIOR·FIERET·' FIDE·CARIOR·HABERETVR·' IVDICIO·  
 ORNATIOR·RELINQVERE  
 TVR (*CIL* 6.10230.14-17; Wingo 1972, 89)

constitit [...] ut [...] matrimonia [...] retineret, nupta meritis gratior fieret, fide carior haberetur, iudicio ornatior relinqueretur

con-stitit	ut	matrimonia
together-stand.3SG.PERF.IND.ACT	that	marriage.NPL.ACC
re-tineret,	nupta	meritis
back-hold.3SG.IMPERF.SBJV.ACT	bride.FSG.NOM	service.NPL.ABL
grat-ior	fieret,	fide
pleasing-COMP.FSG.NOM	become.3SG.IMPERF.SBJV	loyalty.FSG.ABL
car-ior	haberetur,	iudicio
dear-COMP.FSG.NOM	hold.3SG.IMPERF.SBJV.PASS	judgement.NSG.ABL
ornat-ior	re-linqueretur	
decorated-COMP.FSG.NOM	back-leave.3SG.IMPERF.SBJV.PASS	

‘She remained constant in keeping her marriages, in becoming a more pleasing bride through her services, in being held dearer from her loyalty, and in being left more decorated in their judgement’ (cf. Lindsay 2004, 93).

Following that principle that punctuation is significant of syntactic boundaries, each coordinated “clause” of (130) must be some constituent including the verb and its arguments but not the subordinating conjunction *ut*, which we understand in our theory to be a complementizer C, the head of CP. Then the constituents in question are in fact smaller than the clause but contained within it. They cannot be VP, because, by the argument presented in Section 2.3.4.1, preverbal arguments have scrambled outside of VP. Let us call these constituents tense phrases (TP), as in (131), where Conj indicates a null conjunction, essentially the same as *et* ‘and.’

- (131) [CP ut [TP [TP1 ... [VP retineret]] Conj [TP2 ... [VP fieret]] Conj [TP3 ... [VP haberetur]] Conj [TP4 ... [VP relinqueretur]]]]

## 2.4 Conclusion

In this chapter we began by presenting the thesis of structure-dependence (32), reprinted as (132) below, which specifies the relation between the major components of grammar: syntax, semantics, and phonology.

- (132) *Structure-dependence of grammar*

The sentence is a recursive, hierarchical structure with displacement that is deterministically mapped to a semantic interpretation and a morphophonological realization.

In particular, the surface appearance of a sentence as a linear sequence of words is a side-effect of the mapping of syntax to morphophonology, but is only a distorted reflection of the underlying syntactic structure and not directly related to meaning.

We began in Section 2.2 by probing for such structure in the noun phrase. Though admittedly still something of a dark forest for Latin linguistics, we have seen several arguments that the noun phrase has a hierarchical structure.

First, in Section 2.2.1 we considered epigraphic evidence that syntactic ambiguities have their source in alternative constituent structures. Next, in Section 2.2.2 we saw that complex noun phrases are sharply restricted in their permissible orders. Then, in Section 2.2.3 it was shown that the different orders of nominal elements have subtle semantic differences, with contrastivity not predictable by the linear relations of individual words. We confirmed the distinctness of the categories of adjective, demonstrative, and quantifier in Section 2.2.4, based on a host of morphosyntactic diagnostics. Lastly, in Section 2.2.5, we saw, based on the distribution of nominal idioms, that idiomatic adjective–noun orders are derived from an underlying noun–adjective order.

In the following chapter we will see one reason why the noun phrase appears so complex: it is subject to prosodic movement, so that the linear order of words does not reflect the underlying c-command relations.

Next, we considered the structure of the clause. In section 2.3.1 we showed that negative polarity items are subject to generalization (92)/(133).

(133) *NPI generalization*

An NPI must be preceded-and-commanded by its licenser.

Next, we showed in Section 2.3.2 that quantifiers are subject to a similar generalization, (99)/(134).

(134) *Scope generalization*

A generalized quantifier must precede-and-command its scope.

We accounted for these generalizations in Section 2.3.3 by a more general principle of Latin grammar, (118)/(135).

(135) *Scope transparency*

The scope of a generalized quantifier is the denotation of its c-command domain.

As a consequence of this principle, we saw in Section 2.3.4 that the Latin sentence must contain a verb phrase and a tense phrase, the former consisting of the verb and its postverbal arguments, the latter dominating the VP, consisting of the verb and its preverbal arguments. We corroborated this based on cross-Romance data on the position of adverbs and verbs and from epigraphic punctuation.

The extreme position that the Latin sentence contains no syntactic structure above the level of the word is untenable. The distribution of NPIs, the description of which depends on the notion of “clause,” would be left unexplained. Describing the distribution of quantifiers, which relate a restrictor to a scope, is not possible without postulating a syntactic constituent corresponding to the scope in each case. Additionally, the placement of punctuation in classical epigraphic texts makes sense if one supposes that they mark syntactic boundaries, hence, constituents, and is mysterious otherwise. We have made many such arguments. In short, precedence alone is never a relation with semantic effects; but a hierarchical syntactic structure is a theoretical necessity. In it, the structural relation of c-command is central.

We have presented considerable evidence, then, for the position that the Latin sentence is a discrete, hierarchical structure with displacement—satisfying Chomsky’s “basic property.” In the following chapter we will show ways in which this structure is distorted in the surface word-order, due to very general prosodic displacement.

### 3. Deriving split noun phrases

#### 3.1 Introduction

Of particular interest in the study of split noun phrases are cases where the left or right fragment of the split appears to be a nonconstituent, such as (136).

(136) *in nullius umquam suorum necem duravit* (Tac. Ann. 1.6)

<i>in</i>	<i>nullius</i>	<i>umquam</i>	<i>suorum</i>	<i>necem</i>
in	no.MSG.GEN	ever	REFL.POSS.MPL.GEN	death.FSG.ACC

*duravit*  
hard.3SG.PERF.IND.ACT

‘He never became inured toward the death of one of his relatives.’

The left fragment, *in nullius*, consists of a preposition followed by a quantifier; the temporal adverb *umquam* separates this from the right fragment, *suorum necem*. Syntactically, the accusative case of *necem* is licensed by *in*, the genitive case of *suorum* is licensed by *nullius* selecting a noun phrase with a partitive interpretation, a so-called “partitive genitive,” and the genitive case of *nullius* itself is licensed by *necem* selecting a noun phrase with the theta role of *theme*, an “objective genitive.”<sup>42</sup>

Such examples, where selectional relations are distributed across the split noun phrase, and where neither the left nor the right fragment are constituents, are not uncommon. What makes them interesting is that they appear to involve both syntactic movement and clitic effects, which we will analyze as a form of prosodic movement.

Recall that *umquam* is an NPI, and as such, the precedence of the negative licenser *nullius* in (136) is critical. The NPI requires a nonveridical context in order to be interpreted, where “context” is represented syntactically as the scope of a quantifier. Scope transparency (118) requires that scope be represented as the c-command domain of a lexical item, here, of *nullius*. Because split noun phrases have such interpretive consequences, they must involve a nontrivial syntactic component, and cannot have a purely phonological basis (*pace* Agyabani and Golston 2016).

The preposition *in* plays no part in these scope relations. Rather, I claim that its position is due to its forming a prosodic word with *nullius* at an earlier stage in the derivation. This is shown in (137), which represents the minimal amount of structure to capture both the selectional relations and the licensing of *umquam* (where the labels CP and TP are not critical to the analysis).

(137) [<sub>CP</sub> *nullius* [<sub>TP</sub> *umquam* [<sub>PP</sub> *in* [<sub>NP</sub> ~~*nullius*~~ *suorum necem*]]] *duravit*]]

As we will see, prepositions have the property of being prosodically “weak,” making them unpronounceable as independent words. The adjacency of *in* and *nullius* in the above PP is a

<sup>42</sup> “Selection” is introduced briefly in Section 1.2.

sufficient environment to form the prosodic constituent *in=nullius*. The quantifier *nullius* subsequently undergoes syntactic movement, and its highest copy is pronounced as *in=nullius*.

In this chapter I argue that split noun phrases, such as *in nullius ... suorum necem*, are the result of the derivational nature of grammar, which interleaves the construction of syntactic and prosodic constituents. The notion of constituency discussed in the previous chapter is, paradoxically, central to the analysis of split noun phrases. It is through local constituent structures that certain syntactic relations, involving selection, case licensing, concord, etc., are established; prosodic constituency is also established locally. But other relations, semantic scope in particular, often require the syntactic movement of constituents; prosodic requirements, such as the weakness of prepositions and the second-position property of certain lexical items such as *autem* ‘but,’ further distort the mapping from syntactic structure to linear order.

### 3.1.1 Chapter overview

In Section 3.2 I argue that a wider variety of syntactic categories exhibit clitic phenomena than are commonly assumed. Beginning with classic second-position clitics such as *autem* ‘but,’ I show that nearly every functional category can have similar properties, building off the insight of Adams (1995; 1996) that clitics can be detected by examining punctuation in epigraphic and papyrus texts.

To explain these phenomena, I propose in Section 3.2.1 that clitics are lexical items that have the prosodic feature [WEAK], barring them from hosting word-level stress, and that second-position clitics are those which additionally have the prosodic feature [FOLLOW], which ensures that they are final a prosodic word.<sup>43</sup> The formation of prosodic words is licensed by adjacency at any point in the derivation of a sentence, and is subject to what I call the accumulation principle (138), discussed in Section 3.3.

(138) *Accumulation principle*

Throughout the derivation of a sentence, prosodic words can only become larger, not smaller.

In (137), for instance, *in* has the feature [WEAK], compelling it to fuse with the lower copy of *nullius*, with which it is adjacent, to form the complex prosodic word *in=nullius*. The syntactic object [Q nullius] is pronounced at the position of its highest copy, which is not adjacent to *in*, but by (138), the entire prosodic word *in=nullius* is pronounced.

In Section 3.4 I briefly consider the question of “why” split noun phrases exist—in other words, their pragmatic and intonational effects. Using Quintilian’s discussion of word-order as a guide to sentence-level prosody, I show that the effect of splitting the noun phrase is either to isolate the left fragment in the left periphery, or to isolate the right fragment in the verb phrase, either of which may be used to bring the listeners’ attention to a particular constituent.

In Section 3.5, we conclude.

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<sup>43</sup> We are then taking a “prosodic inversion” approach to these clitics (e.g., Sadock 1985; Halpern 1995). For a review, see the discussion in Halpern (2001, 109ff.).

## 3.2 Prosody and displacement

### 3.2.1 The grammar of clause-second particles

The best-understood split noun phrases are those which involve what we may call *clause-second* (C2) particles.<sup>44</sup> These are particles that typically occur as the linearly second word in the clause, among which are *enim* ‘indeed,’ *autem* ‘but,’ and *vero* ‘however’ (Spevak 2010, 16).

Momentarily passing over the issue of what a word is, consider the near-minimal pair (139)a-b, for instance, where we find the noun phrase *gratiam ... nostram* in (a) split by *autem*, but not *humanitatem tuam* in (b) by *sed*.

(139) (a) *gratiam autem nostram* exstinguit hominum suspicio (Cic. *Fam.* 1.1.4)

gratiam            autem nostram            exstinguit  
favor.FSG.ACC but    1PLPOSS.FSG.ACC destroy.3SG.PERF.IND.ACT

hominum            suspicio  
person.MPL.GEN    suspicion.FSG.NOM

‘But suspicion of the people destroyed our good-will.’

(b) *sed humanitatem tuam* [...] celeritas declarabit (Cic. *Att.* 4.15.2)

sed    humanitatem    tuam            celeritas  
but    kindness.FSG.ACC 2SGPOSS.FSG.ACC swiftness.FSG.NOM

declarabit  
reveal.3SG.FUT.IND.ACT

‘But your swiftness will reveal your kindness.’

Despite its elements being noncontiguous, *gratiam ... nostram* otherwise behaves as a syntactic constituent, much as *humanitatem tuam*. It rather seems to be a lexical property of *autem* and other C2 particles, but not of *sed* ‘but,’ to “swap” positions with the following word, regardless of constituency.

The behavior of these particles is not stylistic, but in fact grammatical. David Mark Ostafin argues this upon consideration of the Latin Vulgate, in which Jerome translates certain Koine Greek particles, δέ, for instance, into C2 particles, such as *vero* in (140) (Ostafin 1986, 81ff.).

<sup>44</sup> This is a species of second-position clitic, to be discussed in Section 3.2.2. The term Wackernagel’s Law clitic is also used. There is a vast literature on these clitics. For a good but somewhat outdated review, cf. Halpern (2001).

(140) ἡ γνῶσις φυσιοῖ, ἡ δὲ ἀγάπη οἰκοδομεῖ (NT *I Cor.* 8:1)

Scientia inflat, ~~caritas~~ **vero** aedificat (Vulg. *I Cor.* 8:1).

Scientia in-flat, caritas vero  
 knowledge.FSG.NOM in-blow.3SG.PRES.IND.ACT kindness.FSG.NOM but

aedificat  
 build.3SG.PRES.IND.ACT

‘Knowledge puffs up, but love builds up.’

Here, the translation of ἡ δὲ ἀγάπη as *caritas vero* inverts the order of particle and noun. Ostafin argues this to be an indication of the ungrammaticality of the noninverted order in Latin, given Jerome’s belief in the sanctity of scriptural word order (Ostafin 1986, 74–5).<sup>45</sup>

Additional evidence comes from the testimony of Quintilian, who explicitly judges initial position of C2 particles to be a “transposition” error (*transmutatio*), one of four kinds of “solecism,” or grammatical error.

Per quot autem et quas accidat species, non satis convenit. Qui plenissime, quadripertitam volunt esse rationem nec aliam quam barbarismi, ut fiat *adietione*: ‘nam enim,’ ‘de susum,’ ‘in Alexandriam;’ *detractione*: ‘ambulo viam,’ ‘Aegypto venio,’ ‘ne hoc fecit;’ *transmutatione*, qua ordo turbatur: ‘quoque ego,’ ‘enim hoc voluit,’ ‘autem non habuit.’ [...] *Immutatio* [...] (Quint. 1.5.38-9)

But it is not sufficiently agreed how many and what kinds (of Solecism) there are. Those who have most fully considered the matter want there to be a fourfold account, not otherwise than for Barbarism, so that Solecism occurs by *addition*, e.g., ‘nam enim,’ ‘de susum,’ ‘in Alexandriam;’ by *subtraction*, e.g., ‘ambulo viam,’ ‘Aegypto venio,’ ‘ne hoc fecit;’ by *transposition*, e.g., ‘quoque ego,’ ‘enim hoc voluit,’ ‘autem non habuit.’ ... *Substitution* ...

Each of the examples of “transposition,” which I have presented as grammaticality judgements in (141), are bad precisely because they contain second-position particles, *quoque*, *enim*, and *autem*, respectively, which are not in second position.<sup>46</sup>

<sup>45</sup> Jerome had a complex understanding of translation. He professed that the “order of words is a mystery” in scripture (Jer. *Ep.* 57.5; *verborum ordo mysterium est*) but recognized also that ‘as much as is spoken well among the Greeks, if we translate by the word, does not echo in Latin’ (Jer. *Ep.* 57.11; *Quanta enim apud Graecos bene dicuntur, quae si ad verbum transferamus, in Latino non resonant*). We may take this to indicate that Jerome’s deviations from the word-order of the Greek in his translation were for reasons of “not resonating” to himself as a Latin speaker, which we may thereby take as a diagnostic of ungrammaticality.

<sup>46</sup> The particle *quoque* is second-position, but not C2; we return to this later.

(141) (a) \***quoque** ego

quoque	ego
too	1SG.NOM

‘I too’

(b) \***enim** hoc voluit

enim	hoc	voluit
since	PROX.NSG.ACC	wish.3S.PERF.IND.ACT

‘Since he wanted this.’

(c) \***autem** non habuit

autem	non	habuit
but	not	have.3SG.PERF.IND.ACT

‘but he didn’t have (it).’

Let us assume, then, that the behavior of C2 particles is grammatical, rather than stylistic. As we will see, the second-position property is best-characterized as a formal feature of particular lexical items, with partial generalization to the category of connectives.

The module of grammar in which C2 effects belong is not syntax, but morphophonology. To see this, consider (142), where *autem* occurs as the third word in the clause. This occurs often (but not always—see below) when the clause begins with a prepositional phrase.

(142) *de tuo* **autem** *negotio* saepe ad me scribis (Cic. *Att.* 1.19.9)

de	tuo	autem	negotio	saepe	ad	me
about	2SG.POSS.NSG.ABL	but	business.NSG.ABL	often	to	1SG.ACC

scribis
write.2SG.PRES.IND.ACT

‘But you write to me often about your business.’

What distinguishes prepositions is that they may be prosodically “weak,” in the sense of being unable to bear word-level stress (Allen 1973, 24–5). The relevant notion of “word” here is the *prosodic word*, that is, the minimal metrical unit with a single prominent syllable above the level of the foot (Kager 2007). Let us follow tradition and call such “weak” lexical items *clitics* generally, *proclitics* when they form a phonological word with the following lexical item, and *enclitics* in the opposite case.

The view that prepositions are weak has Quintilian as a witness, who observes himself pronouncing the expression *circum litora* as a single word.

cum dico “circum litora,” tamquam unum enuntio dissimulata distinctione, itaque tamquam in una voce, una est acuta (Quint. 1.5.27)

When I say “circum litora,” I hide the separation and pronounce it as one, so that, just as in one word, there’s one acute accent.

Let us interpret Quintilian’s “acute” accent (*acuta*) phonologically to mean a word-level prominence. We can notate this with the IPA primary stress mark (ˈ), and syllable boundaries with a period. Then the expression *circum litora* can be minimally analyzed as in (143), with Quintilian’s analysis of his own speech represented in (a) as opposed to many alternatives, such as (b).

- (143) (a) cir.cum.'li:.to.ra  
(b) \*'cir.cum.'li:.to.ra

Notice that *circum* is weak despite its metrical heaviness, having two long syllables. This is true also for *autem* in (139).

When not relevant, let us eschew syllabification and represent prosodic word constituency with parentheses, so that (143)a corresponds to (144), where whitespace is orthographically convenient but not part of the formal description.<sup>47</sup>

- (144) (circum litora)

Independent motivation for the proclitic characterization of prepositions comes from the absence of interpuncts (·) following prepositions in otherwise well-punctuated epigraphic and papyrus texts (Adams 1995). When prepositions are not followed by an interpunct in such texts, this is a reasonable indicator that they are not independent (prosodic) words. We may state this generally as (145).

- (145) *Interpunct test for prosodic wordhood*  
In documents with regular use of interpuncts, a maximal sequence of letters not separated by punctuation represents an individual prosodic word.

This diagnostic is clearly not applicable to all documents, as for example where there is only irregular use of interpuncts, or where they are used to separate clauses or other syntactic units, but not words, as in the *Rustius Barbarus* (Guéraud 1942). With this caveat in mind, let us consider (146)a, from the *Lex de Gallia Cisalpina* (CIL I<sup>2</sup>.592 = 11.1146), a well-punctuated bronze tablet (Kantor 2018).<sup>48</sup> The prepositional phrase *in ea verba* ‘in those words,’ is written as two words, which, according to the above diagnostic, suggests the prosodic constituency (146)b.

<sup>47</sup> When convenient, let us follow the Leipzig glossing rules in notating complex prosodic words with the equals sign (=) whenever we have evidence for such an analysis, e.g., *in=ea*.

<sup>48</sup> Photographs of the *Lex de Gallia Cisalpina* have been clipped from Gordon (2016).

- (146) (a)   
 INEA·VERBA
- in ea verba
- in ea                      verba  
 in that.NPL.ACC    word.NPL.ACC
- ‘in those words’
- (b) (in ea) (verba)  
 (c) [PP in [NP ea verba]]

This prosodic analysis is consistent with Quintilian’s observation. Notice, however, that there is a mismatch between the prosodic (b) and syntactic (c) constituency. Both levels of representation consist of two units, but these units are different. Prosodically, *in* and *ea* form one constituent, and *verba* another; syntactically, there is no unit consisting solely of *in* and *ea*. On the contrary, *ea* and *verba* form a constituent that is the complement of *in*, as is evident from their gender, number, and case connectivity, their denotation as a single set of entities, the fact that prepositions select for a single complement, and their accusative case, licensed by *in*.

Returning to (142), then, the evidence points towards an analysis of C2 particles in which they immediately follow the first prosodic word. The issue of whether they actually form part of the first prosodic word is difficult to determine, but little hinges on this, so let us take it under hypothesis.

The fact that the surface position of C2 particles, such as *autem*, is sensitive to prosody is related to their general invisibility to syntax: they never affect agreement, case licensing, selection, or the denotation of the constituents in which they appear on the surface.

Without developing a formal account, their semantics predict a sentence-initial position, given that they are all connectives that function to integrate the sentence into a cohesive discourse, and that they are otherwise non-distinct from connectives that *are* initial, as shown by the pair (139). The phonological, syntactic, and semantic facts, then, are consistent with C2 particles occupying the highest position in the syntactic representation, as in (147)a, but undergoing displacement of some sort during the linearization of syntactic structure, yielding (b) and the split noun phrase *tuo ... negotio*.

- (147) (a) [CP *autem* [PP *de tuo negotio*] ...]  
 (b) (*de tuo autem*) (*negotio*) ...

Not every connective particle is C2, as we have already seen with *sed* in (139)b. Others, such as *nam* ‘since’ and *itaque* ‘so,’ obligatorily occur clause-initially (C1), never internally, unlike *sed*, nor in second-position (Spevak 2010, 13).<sup>49</sup> That C1 and C2 particles merely differ in their phonological effects but not in their syntax is confirmed by Quintilian’s judgement of the cooccurrence of C1 *nam* and C2 *enim* as an error of “addition” (*adiectio*).

<sup>49</sup> A third descriptive class, including *igitur* ‘therefore,’ displays both first and second-position effects. This is presumably a competition between (mental) grammars.

(148) \**nam enim* (Quint. 1.5.38; see above)

If C1 and C2 particles occupied distinct syntactic positions, it would be predicted that both could cooccur, provided that prosodic conditions are satisfied, which is the case in (148). But they cannot.

We see, therefore, that the high position of C2 particles in the clause is a consequence of the syntax and semantics of connectives in general, but that their second-position effects are phonological. The fact that the category of connectives includes both C1 and C2 particles indicates that the second-position property is individually specified for or absent from (mental) lexical entries. Let us represent this as a formal feature [FOLLOW] which is present on C2 particles, such as *enim*, but absent from C1 particles, such as *nam*. To formally specify a lexical item as a clitic, let us posit the feature [WEAK]. Thus, *enim* is [WEAK, FOLLOW] but *in* is [WEAK].<sup>50</sup>

As a proof-of-concept, let us assume that the syntactic input is converted to a prosodic representation that is “optimal” in the sense of Optimality Theory (Prince and Smolensky 2004): a form  $F_1$  is optimal with respect to other potential forms (“candidates”) if, according to a fixed set of ordered constraints, there is no other form  $F_2$  such that the highest-ranked constraint that  $F_2$  violates is lower-ranked than the highest-ranked constraint that  $F_1$  violates, or is of the same rank, but has fewer violations.

Let us say that the features we have proposed are evaluated according to the constraints (149), (150), and MAX, which assigns a violation for each deviation from the input, say, by moving a word.

(149) RESPECT-[WEAK]

Assign a violation to a prosodic structure for each instance of a prosodic word consisting solely of lexical items that are [WEAK].

(150) RESPECT-[FOLLOW]

Assign a violation to a prosodic structure for each instance of a lexical item marked as [FOLLOW] that is non-final in a prosodic word.

To see that (147)b is generated from (147)a, consider the tableau (151), where six plausible prosodic forms, listed as the left-most cells (a-b), are evaluated in each row for the input [*autem* [*de tuo negotio*] ...]. The constraints are ordered left-to-right, in order of decreasing strength.<sup>51</sup> Each violation is marked by an asterisk (\*). The left-most violation for each suboptimal candidate is considered “fatal,” and marked with an exclamation mark (!).

The first two candidates, (a) and (b), do not deviate from the linear order of the input, incurring no MAX violations. But (a) assigns *autem* to its own prosodic word, in violation of (149); (b) respects *autem*'s being a clitic, but not its second-position property, incurring a violation of (150). Candidate (c) respects the second-position property of *autem* but forms the prosodic word (*de autem*) out of two clitics, in violation of (149). Candidate (d) is optimal. The

<sup>50</sup> A more developed account might require features to specify proclisis or enclisis, but we do not pursue this here.

<sup>51</sup> We do not show that RESPECT-[WEAK] should be ranked higher than RESPECT-[FOLLOW], but this is irrelevant for the purposes of the present illustration.

features [WEAK] and [FOLLOW] are respected. Notice however, that it incurs two MAX violations, due to shifting *autem* two places to the right of where it occurs in the input. However, MAX is ranked lower than both the other constraints, so these violations do not disbar (d) from optimality. Finally, candidate (e) shows that MAX is necessary in order to prevent “long-distance” prosodic movement: by moving three places instead of two, it incurs one more violation than (d) and is thereby suboptimal.

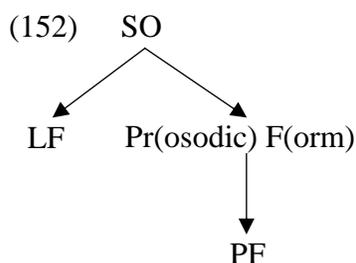
(151)

[autem [de tuo negotio] ...]	RESPECT-[WEAK]	RESPECT-[FOLLOW]	MAX
a. (autem) (de tuo) (negotio)	*!	*	
b. (autem de tuo) (negotio)		*!	
c. (de autem) (tuo) (negotio)	*!		*
 d. (de tuo autem) (negotio)			**
e. (de tuo) (negotio autem)			***!

The features [WEAK] and [FOLLOW] are presumably emergent in language acquisition. In Theresa Biberauer’s (2018) theory, the loci of language variation are a finite set of discrete *parameters* that are postulated by the child upon encountering non-transparent form-meaning mappings (cf. Roberts 2019).

Notice that the existence of these features is further evidence that grammars are not reducible to communicative exigency. There is no sense in which second-position effects aid communication. In contrast, they render the mapping between form and meaning less transparent, and require more computational effort for the listener to parse the input.

The architecture of grammar from Chapter 2 is better specified, then, as (152), where syntactic objects are only indirectly the input to phonological output (narrowly construed), instead being mediated by prosodic representations.



### 3.2.2 Generalized second-position effects

#### 3.2.2.1 2P particles

The above analysis of C2 particles as clausal connectives with the lexically-specified phonological feature [FOLLOW] suggests the possibility that additional syntactic categories may bear the same feature. This appears to be the case. The particles *que* ‘and,’ *ve* ‘or,’ *quidem* ‘indeed,’ and *quoque* ‘too,’ for instance, are well-known for their second-position effects, and do not solely function as clausal connectives. Let us call this more general class that of 2P particles.

In (153), for instance, the conjunction *que* coordinates the two noun phrases *vos* and *rem publicam* but appears as an intervener in the latter.

(153) meum studium erga vos rem**que** publicam (Cic. *Fam.* 6.1.1)

meum	studium	erga	vos
1SG.POSS.NSG.NOM	eagerness.NSG.NOM	towards	2PL.ACC

rem=que	publicam
thing.FSG.ACC=and	public.FSG.ACC

‘My eagerness for you and the republic.’

This particle, then, syntactically behaves as other Latin coordinators *et*, *ac*, and *atque*, but with the phonological property of appearing as a suffix on the following prosodic word, rather than as a medial element (cf. Sadock 1985; 1987; Lapointe 1987; Marantz 1989; Embick and Noyer 2001). That is, the syntactic constituency is as in (154)a, with the prosodic constituency in (b).

(154) (a) [NP [NP vos] que [NP rem publicam]]  
 (b) (vos) (remque) (publicam)

The particles *que* and *ve* are apparently never preceded by an interpunct, always passing (145). This is illustrated in (155), from the *Lex de imperio Vespasiani* (CIL 6.930).<sup>52</sup>

(155) (a)  <sup>53</sup>  
 ·IVS·POTESTASQVE·

[...] ius potestas**que** [...]

ius	potestas=que
law.NSG.NOM	authority.FSG.NOM=and

‘... the right and authority ...’

<sup>52</sup> Photographs of the *Lex de imperio Vespasiani* have been clipped from Kershaw (2014).

<sup>53</sup> The notation [...] simply represents that I am omitting part of the sentence for purposes of presentation. In other respects, I follow the Leiden system for the notation of epigraphic texts.

(b)   
TIBERIVSVE·

[...] Tiberius**ve** [...]

Tiberius=ve  
Tiberius.MSG.NOM=or

‘... or Tiberius ...’

When the following word is a preposition, however, *que* may attach to either the preposition (156)a or the following word (b), regardless of the latter’s syntactic category.

(156) (a) **inque** ea urbe (Cic. *Tusc.* 3.27)

in=que      ea                  urbe  
in=and      DET.FSG.ABL      city.FSG.ABL

‘and in that city’

(b) in **eaque** expletione naturae (Cic. *Fin.* 5.40)

in    ea=que                  expletione                  naturae  
in    DET.FSG.ABL=and    fulfillment.FSG.ABL    nature.FSG.GEN

‘and in that fulfillment of nature’

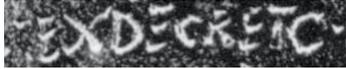
It appears, then, that prepositions have both strong and weak forms. This is corroborated by the fact that one can find minimal pairs of the form P N differing only by the existence or absence of punctuation following P. One such pair is shown in (157), from the *Lex de Gallia Cisalpina*, with no detectable semantic difference.

(157) (a)   
EX·DECRETO

[...] ex decreto [...]

ex      decreto  
from    decree.NSG.ABL

‘... by decree ...’

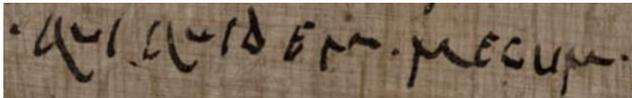
(b)   
EXDECRETO·

[...] ex decreto [...]

ex        decreto  
from    decree.NSG.ABL

‘... by decree ...’

Likewise, the 2P *quoque* ‘too’ and *quidem* ‘even’ appear to have both strong and weak forms. There is a well-preserved papyrus (Brown 1970; P.Oxy.44.3208) containing a letter with regular use of interpuncts, in which *quidem* is not preceded by an interpunct, shown in (158).

(158)  <sup>54</sup>  
·QVIQVIDEM·MECVM·

[...] qui quidem mecum [...]

qui                      quidem    me=cum  
who.MSG.NOM        indeed    1SG.ABL=with

‘... who with me ...’

In the Lyon tablet (*CIL* 13.1668), on the other hand, one can find instances of *quidem* preceded by punctuation, and others not.

(159) (a)  <sup>55</sup>  
·MISERABILI·QVIDEM

[...] miserabili quidem [...]

miserabili            quidem  
pitiable.MSG.DAT    indeed

‘... pitiable ...’

<sup>54</sup> Photographs of this papyrus have been clipped from *Oxyrhynchus Online*.

<sup>55</sup> Photographs of the Lyon tablet have been clipped from Rama (2011).

(b)



·PROVINCIALES·QVIDEM

[...] provinciales quidem [...]

provinciales	quidem
provincial.MPL.NOM	indeed

‘... the provincials ...’

That the 2P property of these particles is grammatical has as evidence Quintilian’s judgement of (160) as a “transposition” error.

(160) \***quoque** ego (Quint. 1.5.39)

quoque	ego
too	1SG.NOM

‘I too’

These particles often seem to appear directly after a single word which they compose semantically. In (161), for instance, *quoque* splits the noun phrase *mearum litterarum*. That it composes with *mearum* is evident from the preceding passage, where Cicero has already mentioned that he has sent Atticus a copy of Antony’s letter.

(161) itaque *mearum* **quoque** *litterarum* misi tibi exemplum (Cic. Att. 14.13.6)

itaque	mearum	quoque	litterarum	misi
so	1SGPOSS.FPL.GEN	too	letter.FPL.GEN	send.1SG.PERF.IND.ACT

tibi	exemplum
2SG.DAT	copy.NSG.ACC

‘So I’ve sent you a copy of MY letter, too.’

More interesting are cases where there is no reading where *quoque* targets a single word. Consider the compound sentence (162), which, in context, immediately follows an example of a syllogism in which both premises are uncontroversial.

(162) *Context:*

Hic et propositio et assumptio perspicua est; quare neutra **quoque** indiget approbatione (Cic. *Inv.* 1.37).

‘Here both the major and minor premise are clear; therefore, neither needs proof either’

*Sentence:*

quare neutra *quoque* indiget approbatione

quare	neutra	quoque	indiget	approbatione
therefore	neither.FSG.NOM	too	need.3S.PRES.IND.ACT	proof.FSG.ABL

‘Therefore, neither needs proof either.’

What *quoque* does here is introduce the presupposition that the proposition of the second clause holds in addition to that of the first clause (the one that precedes the semicolon). Crucially, there is no sense in which *neutra* alone is the target of *quoque*. It seems rather that *quoque* targets the entire part of the clause following *quare*, perhaps TP (cf. Section 2.3.4.2). Let us assume, then, that *quoque* targets syntactic constituents, rather than individual words. This is additional evidence for the thesis of structure dependence (32).

### 3.2.2.2 *Second-position failures*

What makes *quoque* and *quidem* interesting from the perspective of split noun phrases, is that they often appear clustered with other clitics, thereby appearing more distant from the syntactic constituent with which they compose. We may call these cases *second-position failures*. In (163), for instance, Cicero is recalling how Antony sought his advice on founding a colony, with the qualification that the advice was about a different site, Capua, than the subject of the present discussion, Casilinum.

(163) *Context:*

deduxisti coloniam Casilinum, quo Caesar ante deduxerat. Consuluisti me per litteras de *Capua* tu **quidem**, sed idem de Casilino respondiſsem, possesne, ubi colonia esset, eo coloniam novam iure deducere (Cic. *Phil.* 2.102)

‘You founded a colony, Casilinum, where Caesar had previously founded one. You sought my counsel by letter—about Capua, but I would have made the same response about Casilinum—about whether you could legally found a new colony where there was one already.’

*Sentence:*

consuluisti me per litteras de *Capua* tu **quidem**, sed idem de Casilino respondiſsem

consuluisti	me	per	litteras	de
seek_advice.2SG.PERF.IND.ACT	1SG.ACC	through	letter.FPL.ACC	about

Capua	tu	quidem,	sed	idem	de
Capua.FSG.ABL	2SG.NOM	indeed	but	same.NSG.ACC	about

Casilino	respondissem
Casilinum.NSG.ABL	respond.1SG.PLUPERF.SBJV.ACT

‘You sought my counsel by letter—about Capua, but I would have made the same response about Casilinum—...’

This qualification is expressed through *quidem*, which nonetheless does not appear immediately after the PP *de Capua*, but after the following personal pronoun *tu*, which does not form a constituent with the PP nor is it itself composed with *quidem* in the interpretation of the clause.

Likewise, in (164), the character Lucullus introduces the doctrine of his friend (and Cicero’s real-life teacher) Antiochus. The particle *quidem* clearly composes with the adjective *copiosa*, not the demonstrative *illa*, despite directly following the latter. This is evident from the following phrase *sed paulo abstrusior*, which qualifies the speaker’s evaluation.

(164) Sequitur disputatio *copiosa* illa **quidem** sed paulo abstrusior (Cic. *Luc.* 30)

Sequitur	disputatio	copiosa	illa
follow.3SG.PRES.IND.DEP	discussion.FSG.NOM	substantial.FSG.NOM	DIST.FSG.NOM

quidem	sed	paulo	abstrus-ior
indeed	but	little.NSG.ABL	recondite-COMP.FSG.NOM

‘There follows that substantial, but somewhat more recondite, discussion.’

In both of the above examples, *quidem* appears at one remove from the constituent with which it composes, but there is no obvious limit to the number of intervening elements. In (165), for instance, *quidem* targets *misera*, but is separated from it by a copula *est* and a demonstrative *illa*.

- (165) *misera est illa quidem consolatio, tali praesertim civi et viro, sed tamen necessaria*  
(Cic. *Fam.* 6.2.2)

misera est illa quidem consolatio,  
sad.FSG.NOM be.3SG.PRES.IND DIST.FSG.NOM indeed consolation.FSG.NOM

tali praesertim civi et viro,  
such.MSG.DAT especially citizen.MSG.DAT and man.MSG.DAT

sed tamen necessaria  
but still necessary.FSG.NOM

‘That consolation is sad indeed, especially for such a citizen and man, but nonetheless necessary.’

It is clear, then, that *quidem* does not generally immediately follow the constituent with which it semantically composes, but that other elements may intervene. Our hypothesis that 2P particles are unified by bearing the prosodic feature [FOLLOW] predicts that in cases such as (165), the prosodic constituency is as in (166)a.

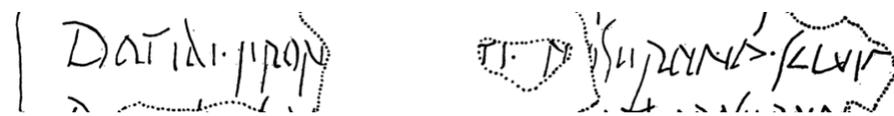
- (166) (misera est illa quidem) (consolatio) ...

It is perhaps surprising that phonological words can be as complex as (misera est illa quidem), especially since forms of *esse* ‘to be,’ and demonstratives are not traditionally considered to be clitics. There is, however, considerable evidence that 2P and clitic phenomena occur far more generally than is currently believed.

### 3.2.2.3 Functional categories and second-position

J. N. Adams has made an epigraphic argument that personal pronouns have both strong and weak forms: in the *Rustius Barbarus* (Guéraud 1942) and the Vindolanda tablets (in particular, Tab. Vind. 2.345), which are regularly punctuated, interpuncts are often absent between verbs and their personal pronoun complements (Adams 1996).

Consideration of additional texts lends support to this view. For example, in the *Plotius defixio* (Fox 1912), a lead curse tablet, use of interpuncts is regular. But the two occurrences of *do tibi X* ‘I give you X’ have only one interpunct, after *tibi*. One of these instances is presented in (167).

(167)  (Fox 1912, 16ff.)

DOTIBI·FRON.....TI·PROSERPINA·SALVIA

[...] do **tibi** frontem Ploti. Proserpina Salvia [...]

do	tibi	frontem	Ploti.
give.1SG.PRES.IND.ACT	2SG.DAT	forehead.FSG.ACC	Plotius.MSG.GEN

Proserpina	Salvia
Proserpina.FSG.VOC	Salvia.FSG.VOC

‘I give you the forehead of Plotius. Proserpina Salvia, ...’

In the related *Vesonia defixio* (Fox 1912, 22ff.), four occurrences of *do tibi X* have one interpunct, after *tibi* (as above); one occurrence has one interpunct, after *do*; and one occurrence has two interpuncts, one after *do* and one after *tibi*. Assuming that neither *do* nor *X* are weak, these occurrences exhaust the possibilities: i) *tibi* as a weak enclitic; ii) *tibi* as a weak proclitic; and iii) *tibi* as strong.

There is another kind of indirect phonological evidence that the same particle may be either strong or weak, or sometimes proclitic and at other times enclitic: namely, the spelling of stem vowels in certain prefixed verbs alternates with the presence of punctuation between the prefix and the stem.

To see this, consider the class of directional particles, including *per* ‘through,’ that are not used solely as prepositions. They are productively used as derivational prefixes on adjectives to indicate a high degree, as in *per-magnus* ‘very great.’ They may also be used as preverbs (Heslin 1987; Acedo-Matellán 2016). In both cases they may be separated from the stem by a clitic, a phenomenon known as *tmesis*. In (168)a *enim* ‘indeed’ has “incorporated” into the adjective *permagni*, and in (b) *que* occurs between the preverb *dis* ‘apart’ and the verb stem *tulissent* ‘carry.’

(168) (a) *per enim magni aestimo tibi firmitudinem* (Cic. *Att.* 4.10.1)

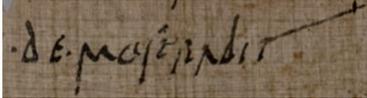
per	enim	magni	aestimo	tibi
through	since	great.NSG.GEN	value.1SG.PRES.IND.ACT	2SG.DAT

firmitudinem
steadfastness.FSG.ACC

‘For I value your steadfastness quite highly.’



Punctuated preverbs are evident in other texts with regular punctuation. Adams mentions the following example (170) from a papyrus letter (Adams 2016, 205; Brown 1970; P.Oxy.44.3208).<sup>57</sup>

(170)   
·DE·MOSTRABIT

[...] demonstrabit [...]

de monstrabit  
from show.3SG.FUT.IND.ACT

‘he will show’

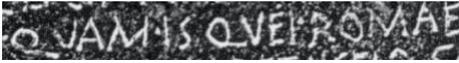
In addition to pronouns and directional particles such as *per* ‘through’ and *de* ‘from,’ there are instances of many, if not all, *qu-* words passing (145), suggesting that these items have both strong and weak forms. This is illustrated in (171), again using the *Lex Gallia* as an example, for the nonconstituents *qua tum* and *is qui*.

(171) (a)   
QVATVM

[...] **qua** tum [...]

qua tum  
which.FSG.ABL then

‘... which, at that time ...’

(b)   
QUAM·IS QVEI·ROMAE

[...] quam is **qui** Romae [...]

quam is qui Romae  
which.FSG.ACC DET.MSG.NOM who.MSG.NOM Rome.FSG.LOC

‘... which he who is at Rome ...’

<sup>57</sup> Photograph clipped from *Oxyrhynchus Online*.

In (171)a, the relative pronoun *qua* and the deictic temporal adverb *tum* are written as a single word, suggesting proclisis of *qua*; in (b), we have the determinative *is* and the relative pronoun *qui*, suggesting enclisis of the latter.

Likewise, it appears that at least some conjugations of *esse* ‘be’ have both strong and weak forms, sometimes behaving proclitically and sometimes enclitically. Thus, in the *lex de imperio Vespasiani* we see *fu*t in (172)a written as a single word, but *sint* in (b) passing the interpunct test for prosodic wordhood (it is not preceded by an interpunct due to being initial in its line).

(172) (a) 

·FVIT·

[...] *fu*t [...]

*fu*t  
be.3SG.PERF.IND

‘has been’

(b) 

SINTACSI·

[...] **sint** ac si [...]

*sint*                      ac      si  
be.3PL.PRES.SBJV   and      if

‘..., even if ...’

There is well-known orthographic evidence from the manuscript tradition that forms of *esse* may participate in prodelision, their initial vowel undergoing aphaeresis. In (173), for instance, the form *nullast* is the product of *nulla* ‘no’ + *est* ‘be,’ with the initial *e-* deleted.

(173) *nullast a me umquam sententia dicta in fratrem tuum* (Cic. *Fam.* 5.2.9)

<i>nulla=st</i>		<i>a me</i>	<i>umquam</i>	<i>sententia</i>
no.FSG.NOM=be.3SG.PRES.IND		by 1SG.ABL	ever	opinion.FSG.NOM

<i>dicta</i>		<i>in</i>	<i>fratrem</i>	<i>tuum</i>
say.FSG.NOM.PTCP.PASS		against	brother.MSG.ACC	2SGPOSS.MSG.ACC

‘No opinion has ever been stated by me against your brother.’

In other cases, such as (174)a-b, prodelision is not evident, though this may be a consequence of orthographic convention, rather than phonology.<sup>58</sup> In such cases it is possible to find near-minimal pairs by the placement of 2P particles, with no detectable difference in meaning, suggesting free variation. Thus, we see that *enim* follows *est* in (174)(a) but precedes it in (b), in either case yielding a split noun phrase.

- (174) (a) *Nulla est enim altercatio* clamoribus umquam habita maioribus (Cic. *Brut.* 44.164).  
 (b) *Nulla enim est natio* quam pertimescamus (Cic. *Catil.* 2.11)

In light of phenomena such as prodelision, it is plausible that *est* is a weak enclitic in (a) but strong in (b). Applying this line of reasoning broadly, at least the conjugations *sum* (175)a, *es* (b), *erat* (c), *sunt* (d), *essem* (e), have weak forms.

- (175) (a) *Petiturus sum enim* ut rursus [...] (Plin. *Ep.* 1.8.2).  
 (b) tu *es enim* is qui me tuis sententiis saepissime ornasti (Cic. *Fam.* 15.4.11)  
 (c) opus *erat enim* auctoritate (Cic. *Dom.* 117)  
 (d) omnia *sunt enim* illa dona naturae (Cic. *de Orat.* 1.114).  
 (e) non *essem quidem* tam diu in desiderio rerum mihi carissimarum (Cic. *Fam.* 2.12.3)

The above examples provide evidence not only for the existence of weak forms of the copula, but for the general possibility of individual phonological words to contain clitic clusters. This too has epigraphic evidence. In (176) we see clear cases of this from the *lex de imperio Vespasiani*, where a preposition together with both the preceding and the following word are written as a single word, in neither case representing a syntactic constituent.

- (176) (a)   
 ·CVMEXREPVBICA  
 [...] cum ex re publica [...]  
 cum ex re publica  
 when from thing.FSG.ABL public.FSG.ABL  
 ‘... when, from the republic ...’

<sup>58</sup> For the sake of readability, we do not gloss (174) and (175). What is important is the position of the copula *esse*.

(b)   
·EVMEXLEGE·

[...] eum ex lege [...]

eum	ex	lege
DET.MSG.ACC	from	law.FSG.ABL

In some cases, it appears that elements other than classical 2P particles display second-position effects. Below we show a complex example.

(177) *Context:*

ergo illam Ἀκαδημικήν, in qua homines nobiles **illi quidem** sed nullo modo philologi nimis acute loquuntur, ad Varronem transferamus. (Cic. *Att.* 13.12.2)

‘Therefore, let us transfer that “Academic” work, in which those famous, but in no way erudite, people speak too sharply, to Varro.

*Sentence:*

homines nobiles illi *quidem* sed nullo modo philologi nimis acute loquuntur

homines	nobiles	illi	quidem	sed nullo
person.MPL.NOM	famous.MPL.NOM	DIST.MPL.NOM	indeed	but no.NSG.ABL

modo	philologi	nimis	acute	loquuntur
way.NSG.ABL	erudite.MPL.NOM	too	sharply	speak.3PL.PRES.IND.DEP

‘those famous, but in no way erudite, people speak too sharply’.

It is evident that *quidem* is semantically composing with the adjective *nobiles*, given the subsequent qualification introduced by *sed nullo philologi*. But following our above analysis, the noun phrase *homines nobiles illi quidem* has the prosodic constituency given in (178).

(178) (homines) (nobiles illi quidem)

Even disregarding the position of *quidem*, however, it is unlikely that this transparently represents the syntactic structure of the noun phrase. First, *nobiles* and *nullo modo philologi* are coordinated by *sed* ‘but,’ and the null hypothesis is that coordination structures are constituents. But in the surface order, the coordination has *illi* as an intervener. Second, as we have seen in Section 2.2.2, the order N A Dem is very rare, optimistically accounting for only 1% of noun phrases composed of a noun, adjective, and demonstrative.

Given these facts, then, the noun phrase appears to minimally have the syntactic structure (179).

(179) [NP homines illi [AP [AP quidem nobiles] sed [AP nullo modo philologi]]]

To generate the prosodic representation (178), the demonstrative *illi* appears to have cliticized onto *quidem*, which together have undergone phonological displacement to make up the tail-end of the phonological word containing *nobiles*, as in (180).

(180) (~~illi~~~~quidem~~ nobiles=illi=quidem)

There is additional evidence for prosodic movement within the noun phrase. Consider “conjunct hyperbaton” phenomena (Devine and Stephens 2006), where a coordination structure appears not to form a surface constituent. Such phenomena may occur within the noun phrase. In (181), for instance, the noun *vitiis* is coordinated with *sceleribus*, but they have *omnibus* as intervener.

(181) tum *vitiis omnibus et sceleribus* legis Cn. Pompei praesidium opponendum putetis.  
(Cic. Agr. 2.25)

tum	vitiis	omnibus	et	sceleribus	legis
then	fault.NPL.ABL	every.NPL.ABL	and	crime.NPL.ABL	law.FSG.GEN

Gnaei	Pompei	praesidium	opponendum
Gnaeus.MSG.GEN	Pompey.MSG.GEN	defense.NSG.ACC	oppose.NSG.ACC.GRDV

putetis.  
think.2PL.FUT.IND.ACT

‘Then you will think that the defense of Pompey must be opposed by all the faults and crimes of the law.’

There are no detectable semantic effects of the displacement in such examples, though the initial position of *vitiis* have other effects, indicating, say, that the speaker is in a heightened emotional state. These facts are explained if the *omnibus* is here specified for the feature [FOLLOW], with the underlying syntactic structure given in (182).

(182) [QP omnibus [NP vitiis et sceleribus]]

This is a not unreasonable proposal since we have seen in Section 2.2.4.3 that *omnibus* belongs to the closed-class of syntactic quantifiers.

### 3.2.3 A taxonomy of clitic effects

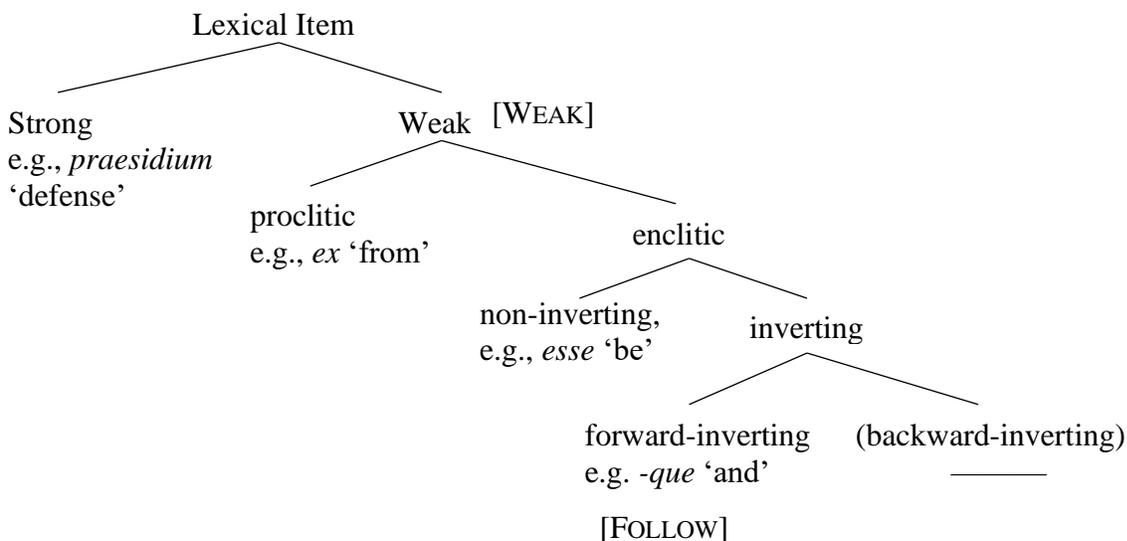
To summarize this discussion, we may organize lexical items into a taxonomy by prosodic “strength” (183). In the strong class are lexical items that are capable of forming independent prosodic words. This includes nearly all open-class categories (those which readily admit of new entries) and lexical words (involving encyclopedic content). Examples are finite verbs besides forms of the copula *esse* and nominals besides pronouns and demonstratives.

In the weak class belong closed-class categories and functional words such as prepositions, demonstratives, personal pronouns, the verb *esse* ‘to be,’ and various particles. Certain of these are typically proclitic, most notably prepositions, others typically enclitic, such as forms of *esse*.

Enclitics often are “forward-inverting,” in the sense of being 2P particles. It is unclear if “backward-inverting” forms exist, which would be required to proclitically attach to the head of the preceding word.

A given lexical item may have various forms that occupy different positions in the taxonomy. Prepositions, for instance, appear to rarely have strong forms, e.g. (157)a, more often proclitic forms, e.g. (157)b, and possibly enclitic forms (cf. (169)).

(183) *Taxonomy of lexical items by prosodic strength*



### 3.3 The accumulation principle

In the course of our analysis, we have seen that many facts about Latin word-order can be explained by appealing to two formal phonological features of certain lexical items: [WEAK] and [FOLLOW]. Ensuring that these features are respected yields prosodic constituencies that do not clearly reflect the syntactic structure.

Let us again consider (136) and (137), reprinted below as (184)a and b, respectively.

(184) (a) *in nullius umquam suorum necem duravit* (Tac. Ann. 1.6)

in nullius	umquam	suorum	necem
in no.MSG.GEN	ever	3SPOSS.MPL.GEN	death.FSG.ACC
duravit			
hard.3SG.PERF.IND.ACT			

‘He never became inured toward the death of one of his relatives.’

(b) [CP nullius [TP umquam [PP in [NP nullius suorum necem]] duravit]]

We know that the position of *nullius* is semantically motivated by the need to license the NPI *umquam*, and so the discontinuity cannot have an entirely phonological basis.

Formally, we are claiming, then, that split noun phrases exhibit *subextraction*, namely, syntactic movement to a landing site external “to the extended projection [...] of the head [...] with which it stands in a certain base relationship” (Corver 2017, 2). This is illustrated in (185), where  $\beta$  has been subextracted out of YP to position  $\alpha$ , within XP.

(185) [XP ...  $\alpha$  ... [YP ...  $\beta$  ...]]

In (184),  $\alpha$  and  $\beta$  are copies of *nullius*, XP is CP and YP is NP.

The position of *in*, on the other hand, tells us that each copy of *nullius* is phonologically significant: the lower copy of *nullius* is used to generate the prosodic word (*in nullius*), but the higher copy specifies the position at which this prosodic word is pronounced. If the grammar were different, this could be otherwise, with the lower copy of *nullius* phonologically invisible, *in* cliticizing onto *suorum* instead. But this is not the case, suggesting the operation of an independent principle, which we state simply in (186).<sup>59</sup>

(186) *Accumulation Principle*

Throughout the derivation of a sentence, prosodic words can only become larger, not smaller.

Evidence for this principle comes from split noun phrases in which the left fragment appears to be a nonconstituent, extending beyond cases that involve prepositions.

Consider, for instance, (187), where the nonconstituent *haec Crassi* appears to have undergone movement to the left-periphery of the subordinate temporal clause introduced by *cum*. This is known as “left-edge fronting” (Danckaert 2012).

(187) *sed haec Crassi cum edita oratio est [...] quattuor et triginta tum habebat annos* (Cic. *Brut.* 161; Pinkster 2021, 1103)

sed	haec	Crassi	cum	edita			
but	PROX.FSG.NOM	Crassus.MSG.GEN	when	publish.FSG.NOM.PTCP.PASS			
oratio	est	quattuor	et	triginta	tum		
speech.FSG.NOM	be.3SG.PRES.IND	four	and	thirty	then		
habebat		annos					
have.3SG.IMPERF.IND.ACT		year.MPL.ACC					

‘But when this speech of Crassus was published, he was then 34 years old.’

<sup>59</sup> The notion of “derivation” has been left undeveloped here as an important topic for future work. An important question arises: why can’t *in* cliticize for the first time at a later stage of the derivation; why must it form a prosodic word when the PP is first built, and not later? Due to limitations of scope and evidence, we do not develop a full-fledged theory of syntax-to-prosody mapping for Latin. One might fruitfully proceed along the lines of Match Theory (Selkirk 2009; 2011; et seq.).

As a consequence of this movement, the noun phrase *haec Crassi ... oratio* is split. This discontinuous constituent passes the usual surface diagnostics for constituency: gender, number, case connectivity, denotation of a single entity, and realization of a single argument (namely, of the predicate *edita*). Moreover, the pragmatics point towards *Crassi* being a topic, denoting the referent that the speaker wishes to bring to the listeners' attention (Roberts 2011). The expression *haec Crassi*, on the other hand, fails every constituency test. These facts point towards a syntactic structure of the form (188).

(188) [<sub>CP1</sub> sed [<sub>C2P</sub> Crassi [<sub>C2'</sub> cum [<sub>TP</sub> edita [<sub>NP</sub> (haec Crassi) oratio] est]]] ...]

The underlying noun phrase is where various syntactic relations are satisfied. Notice that *haec* and *Crassi* are adjacent here. Assuming that the demonstrative *haec* is weak, the phonological word (haec Crassi) is formed. Subsequently *Crassi* undergoes left-edge fronting due to its being a topic; when pronounced, the entire phonological word is pronounced, yielding the illusion of *haec* undergoing syntactic movement.

There are many such cases of the accumulation principle yielding apparent nonconstituent movement. A general explanation of such cases is that syntactically a constituent moves, but its highest copy is pronounced as the entire prosodic word consisting of each element that it has “accumulated” in the course of the derivation.

### 3.4 Intonational effects of split noun phrases

#### 3.4.1 Evidence for prosody above the word

What we have not generally addressed is why split noun phrases exist in the first place. We know from the discussion in Chapter 2 that scrambling is often driven by the need to satisfy Scope Transparency.<sup>60</sup>

But not all cases clearly fit into this mold. Notice first, however, that the question of why split noun phrases exist is a syntactic or perhaps phonological one—not semantic or pragmatic. This is because the conceptual and pragmatic resources available to the speaker of Latin were presumably the same for speakers of any other language. What are demonstrably different between languages, are syntactic and phonological parameters of variation, certain of which we have somewhat treated, as for the features [WEAK] and [FOLLOW], but which we mostly have left undiscussed.

Though we are largely concerned here with the syntax of noun phrases, we may say a few words about their pragmatics, though one should consult Spevak (2014) and Devine and Stephens (2019) for a fuller treatment.

In general, the interpretive consequences of split noun phrases are semantic or prosodic, the latter generally appropriate to the discourse context. As evidence for clause-level prosody, we again have the testimony of Quintilian (9.4.26–32). We are told that to “end the sentence with a verb ... is best” (*verbo sensum cludere ... optimum est*) because “in verbs is the force of speech” (*in verbis enim sermonis est*); that ending a sentence with anything else is a form of

<sup>60</sup> Scrambling in other languages has been claimed to be driven by specificity. In German, for instance, “specific NPs obligatorily move across the negative marker while nonspecific indefinite NPs [...] remain below the negative marker” (Hinterhölzl 2006, 54). In Latin, however, nonspecific indefinites freely occur before *non* ‘not,’ the marker of sentential negation.

“hyperbaton,” which may be fitting when the rhythm is appropriate (*numerus oportune cadens*). Quintilian gives two examples (189) of this kind of hyperbaton, from Domitius Afer, with words placed at the end of a sentence “for the sake of making the composition harsh” (*asperandae compositionis gratia*).<sup>61</sup>

(189) (a) gratias agam **continuo** (Quint. 9.4.31)

gratias	agam	continuo
favor.FPL.ACC	drive.1SG.FUT.IND.ACT	straightaway

‘I’ll give thanks straightaway.’

(b) eis utrisque apud te, iudicem, periclitatur **Laelia** (Quint. 9.4.31)

eis	utrisque	apud	te,	iudicem,
DET.NPL.ABL	both.NPL.ABL	at	2SG.ACC	judge.MSG.ACC

periclitatur	Laelia
in_danger.3SG.PRES.IND.PASS	Laelia.FSG.NOM

‘With both of those facts before you, judge, the one in danger is Laelia.’

What is “harsh” about (a) and (b) is that the category occupying final position is unusual. In (a) it is a temporal adverb; in (b) it is a noun phrase subject.

In general, final position is emphatic, and a word placed there is “impressed and imprinted upon the listener” (*adsignatur auditori et infigitur*), like a seal. Quintilian provides (190) as an example from Cicero, with the remark that moving *postridie*—the sharp “point” (*mucro*) of the sentence—would reduce its force (*transfer hoc ultimum: minus valebit*).

(190) ut tibi necesse esset in conspectu populi Romani vomere **postridie** (Quint. 9.4.29; Cic. *Phil.* 2.63)

ut	tibi	necesse	esset	in conspectu
that	2SG.DAT	necessary	be.3SG.IMPERF.SBJV	in view.MSG.ABL

populi	Romani	vomere	postridie
community.MSG.GEN	Roman.MSG.GEN	vomit.PRES.INF.ACT	next_day

‘So that you would need to vomit in view of the Roman people the next day.’

In contrast, a word may “hide in the middle of the sentence” (*in media parte sententiae latet*).

Quintilian is discussing the rules of rhetorical composition, but we may interpret his remarks linguistically. Let us take as a leading assumption Quintilian’s remarks to mean that the “end of the clause” (*clausula*) is the site of sentence-level stress, or “nuclear focus,” as appears to be

<sup>61</sup> Domitius Afer was an orator of the Claudian period (Schmidt).

cross-linguistically valid.<sup>62</sup> Let us also assume that the verb and subsequent material form a verb phrase constituent, for which there is considerable evidence, as discussed Section 2.3.4.

Though not discussed by Quintilian, it is evident that part of a noun phrase may be scrambled to the left periphery of the clause due to its topicality (bringing a discourse referent to the notice of the speaker). In (187) we have already seen such an example, where the fact that the topical noun phrase *Crassi* precedes the subordinating *wh*- word *cum* ‘when’ makes it clear that it occupies the left edge of CP.

The left-periphery is generally available for topicalization, and movement to this position may occur, for instance, when the speaker wishes to change the topic of the discourse. In (191), for instance, we find the split noun phrase *navem ... valde bonam*.

(191) *navem* spero nos *valde bonam* habere (Cic. *Fam.* 14.7)

<i>navem</i>	<i>spero</i>	<i>nos</i>	<i>valde</i>	<i>bonam</i>
ship.FSG.ACC	hope.1SG.PRES.IND.ACT	1PL.ACC	quite	good.FSG.ACC
<i>habere</i>				
have.PRES.INF.ACT				

‘I hope we have a really good ship.’

This sentence, from a personal letter, introduces a new discourse topic, namely, the fact that the speaker Cicero will soon be sailing. This sentence does not follow from the preceding context.

The prosodic and pragmatic effect of splitting the noun phrase, then, may be either to isolate the left fragment in the left periphery, or to isolate the right fragment in the verb phrase.<sup>63</sup> The salient fragment in each case involves a topic; the material between the left periphery and the verb phrase, for which we may adopt the term *Mittelfeld*, from German linguistics, is intonationally insignificant.

This outline is mostly in line with previous research. Jong (1986) and Bolkestein (2001) claim that the first fragment is almost always emphatic, that interveners are not focal, and that emphasis is varied in nature (Bolkestein 2001). As we have seen, however, the first fragment in Latin split NPs may be, but need not be emphatic. More accurately, in line with so-called “cartographic” work on the cross-linguistic structure of the clause, the left-periphery has a topic position, and right-peripheral focus is located in the verb phrase (Rizzi and Cinque 2016).<sup>64</sup>

### 3.4.2 Case study from Cicero’s second *Catilinarian*

As a more fully worked out example, let us consider (192), from Cicero’s second *Catilinarian*, which was given at a public meeting (*contio*) to “isolate Catiline’s followers from the community and consolidate all others behind his own leadership” (Dyck 2008, 124).

<sup>62</sup> Across typologically-distinct languages, sentential stress lies on the object in simple transitive sentences, or on the verb, in the case of Hungarian (Kahnemuyipour 2009, 15–16).

<sup>63</sup> An illustration of how the stress on VP-internal material may be used can be seen in Catullus 13, where *nasum* ‘nose’ is delayed until the last word for a “humorous punch” (Philip Waddell, personal communication).

<sup>64</sup> It is yet unclear if the precise mapping of the Latin left-periphery closely corresponds with what has been found for other languages (cf. Danckaert 2012).

(192) *Context:*

nulla est enim natio quam pertimescamus, nullus rex qui bellum populo Romano facere possit: omnia sunt externa unius uirtute terra marique pacata, domesticum bellum manet, intus insidiae sunt, intus inclusum periculum est, intus est hostis: cum luxuria nobis, cum amentia, cum scelere certandum est. huic ego me bello ducem profiteor, Quirites. Suscipio inimicitias hominum perditorum (Cic. *Cat.* 2.11).

‘There is no nation for us to fear, no king who can make war on the Roman people. Everything abroad has been made peaceful on land and sea by one man’s virtue. War at home remains, ambushes await within, the danger has been confined within, the enemy is within. We must contend with extravagance, with madness, with crime. For this war I proclaim myself leader, Romans. I accept the hatred of wicked men...’

*Sentence:*

*Huic* ego me bello ducem profiteor, Quirites.

Huic	ego	me	bello	ducem
PROX.SG.DAT	1SG.NOM	1SG.ACC	war.NSG.DAT	leader.MSG.ACC

pro-fiteor,	Quirites
before-speak.1SG.PRES.IND.DEP	Roman.MPL.VOC

‘For this war I proclaim myself leader, Romans.’

Of interest here are the two discontinuous expressions, *huic ... bello*, and *me ... ducem*, in the pattern A ego B A B.

The former expression shows singular number and dative case connectivity, and denotes a single entity, suggesting that it is underlying a constituent. It is not the complement of *ducem*, which would require genitive case (*OLD*, s.v. “dux;” cf. Dyck ad loc.). It is therefore likely to be a benefactive adverbial (dative of advantage), or possibly an applicative argument of *profiteor* (as in the English double object construction; cf. McGinnis 2017).

Moving on, the expression *me ... ducem* shows singular number and accusative case connectivity, where *ducem* is predicated of *me*. The accusative case tells us that at least part of the expression is the direct object of the deponent verb *profiteor*, which is always morphologically passive but syntactically transitive. The simplest analysis is that *me ... ducem* is a bare predication structure without tense, as in (193), known in the literature as a “small clause” (SC) (for an overview, see Citko 2011).

(193) [sc me ducem]

That such predication constructions exist in Latin has been proposed by Renato Oniga, without argument (Oniga 2014, 213ff.). There is evidence, however. Consider first (194)a, where the two expressions *Verrem suem* and *Aelium doctum* are coordinated by *aut*, suggesting that they are constituents, as in (b).

(194) (a) nos quis ferat, si *Verrem suem* aut *Aelium doctum* nominemus? (Quint. 8.6.37)

nos	quis	ferat,	si	Verrem
1PL.NOM	who.M/FSG.NOM	carry.3SG.PRES.SBJV.ACT	if	Verres.MSG.ACC
suem	aut	Aelium	doctum	nominemus?
pig.MSG.ACC	or	Aelius.MSG.ACC	learned.MSG.ACC	name.1PL.PRES.SBJV.ACT

‘Who would bear it if we call Verres “Pig” or Aelius “Learned”?’

(b) [SC [SC [NP Verrem] [NP suem]] aut [SC [NP Aelium] [NP doctum]]]

Also consider that such expressions can be used in what are descriptively known as “expressive small clauses,” which have been characterized as “express[ing] a momentary attitude linked to a situation” (Potts and Roeper 2006). An example is given in (195)a, where the expression *tu Clodiane canis*, in vocative case, expresses predication without tense, which suggests the analysis (b). In fact, vocatives cannot be arguments of verbs of any kind, as shown in (c).

(195) (a) his, *tu Clodiane canis*, insignibus consulatum declarari putas? (Cic. *Pis.* 23)

his,	tu	Clodiane	canis,
PROX.NPL.ABL	2SG.VOC	of_Clodius.MSG.VOC	dog.MSG.VOC
insignibus	consulatum	declarari	
decoration.NPL.ABL	consulship.MSG.ACC	declare.PRES.INF.PASS	
putas?			
think.2SG.PRES.IND.ACT			

‘Do you think, you dog of Clodius, that the consulship can be declared by these decorations?’

(b) [SC [NP tu] [NP Clodiane canis]]

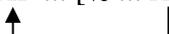
(c) \*tu Clodiane canis es  
2SG.VOC of\_Clodius.MSG.VOC dog.MSG.VOC be.2SG.PRES.IND

We are on good grounds, then, to conclude that small clauses exist in Latin, leaving their internal structure for future work. Then (193) is the most parsimonious analysis of the object of *profiteor* that is consistent with the evidence.

In (192) we see the verb in final position, as is typical. We have established that argument structure is established in the verb phrase, but that arguments may scramble (i.e., undergo syntactic movement) into the TP domain to escape nuclear focus, understood as sentential stress,

when such stress is not pragmatically appropriate (cf. Section 2.3.4).<sup>65</sup> The general schema is shown in (196).

(196) [CP ... ... [TP ... XP ... [VP ... ~~XP~~ ... ]]]



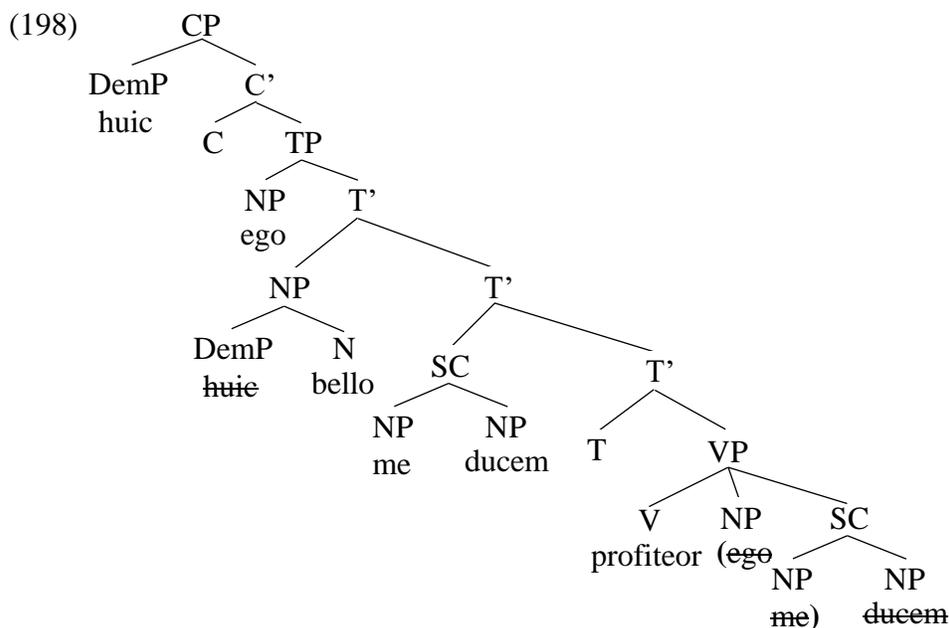
Next, the position of *huic* is compatible with some property of it being topical, in the sense in which we have been using that term. First, Cicero has been describing the peculiar nature of the war that must be fought, namely, against Roman conspirators rather than against a foreign enemy. Whereas external threats required the “virtue of one man” (*unius virtute*), i.e., Pompey, to defeat, the new, internal threats require Cicero to be their leader, and his oratory and counsel in particular (cf. Cic. *Cat.* 17.8; “I will offer to each man the medicine of my counsel and oratory,” *singulis medicinam consili atque orationis meae* [...] *adferam*; cf. Dyck ad loc. and references provided there).

Second, soon after the passage under discussion, Cicero begins a sentence with *hic ego* ‘In this context, I ...,’ and generally places *hi-* ‘PROX’ (see below) words in initial position to qualify an utterance to hold of the present situation (13.1; cf. Dyck ad loc.). We may then assume that it is the proximal deictic feature [PROX] (i.e., indicating closeness to the speaker) of *huic* that is topical. This feature is not shared by *bello*, so by economy of computation, only *huic* moves (cf. Chomsky 1995, 262ff. for *wh-* movement).

Taking each of these facts together, the most parsimonious syntactic analysis of (192) is as in (197), presented more fully in tree form in (198), where lower copies of syntactic objects are crossed out. Note that *ego* and *me* form a prosodic word in VP.

(197) [CP [DemP *huic*] [TP [NP *ego*] [NP [DemP *huic*] *bello*] [SC [NP *me*] [NP *ducem*]]  
[VP *profiteor* [~~NP (*ego*)~~] [~~SC [~~NP (*me*)~~]~~] [~~NP (*ducem*)~~]]]

<sup>65</sup> This is essentially a formalization of Quintilian’s analysis, which we have just considered. It is also worth noting that Quintilian is himself aware of scrambling, in a sense: “words ... are moved from place to place in order to join where they fit best, like in a structure of rough stones: their very irregularity finds where each may fit and rest (9.4.27; *verba* [...] *ex loco transferuntur in locum, ut iungantur quo congruunt maxime, sicut in structura saxorum rudium etiam ipsa enormitas invenit cui adplicari et in quo possit insistere.*)”



Reading (197)/(198) left to right, *huic* has scrambled to the left periphery to express topicality<sup>66</sup>; the subject *ego* has scrambled out of the verb phrase to Spec,TP; *huic bello* is an adverbial PP somewhere within TP; the small clause *me ducem* has scrambled out of the verb phrase also to somewhere in TP; finally, argument structure is established locally in VP.

It is plausible that either of the personal pronouns *ego* or *me* is weak, as suggested in Section 3.2.2. Examples such as (127), with MannerVSO order, indicate that arguments of the verb are adjacent in at least one stage in the derivation of the verb phrase, as we have indicated in (197)/(198) for *ego* and *me ducem*. Then the fact that the expression *ego me* occurs in the surface word-order is explicable in terms of them forming a prosodic word within VP: by the Accumulation Principle (186), they must subsequently be pronounced together. Then, by the principle that only the highest copy of each constituent is pronounced (discussed briefly in Section 2.1.2), the linearization of (197)/(198) is predicted to be (192).

Under only independently motivated and mostly minimal assumptions, then, we have deduced (192). This is an explanatory improvement on other potential analyses, such as that of James McCawley, who proposes that the constituency of (192) is (199), but where *huic* undergoes a special “order-changing transformation” that reorders elements without effecting constituency and without semantic effects (McCawley 1982, 102 (16b)).

(199) [s [NP *ego*] [V' [NP *me*] [NP [Det *huic*] [N *bello*]] [NP *ducem*] *profiteor*]]

As noted in the introduction, Ross (1967/1986) first introduced the “scrambling” transformation, which flips the relative order of any two adjacent words, and relegated it to a stylistic module of grammar, where meaning is unaffected.<sup>67</sup> In our theory, however, the only transformations are syntactic movement and phonological movement, both of which we have motivated. Either kind can be considered stylistic when its prosodic effects are used by the speaker for some purpose, rhetorical or otherwise.

<sup>66</sup> We are here assuming that *huic* is a Dem(onstrative) P(hrase), as was discussed in Section 2.2.4.3.

<sup>67</sup> This is distinct from the term “scrambling” in the sense that we have been using.

In (199), there is no motivation for the stylistic movement of *huic*, other than the fact that under McCawley's analysis it is a Det(erminer), like the English article, and thereby, as a nonconstituent, not capable of undergoing syntactic phrasal movement. Many other facts are also left unexplained, the evidence for the constituency of *me ... ducem*, and the establishment of argument structure, for instance.

### 3.5 Conclusion

The central thesis of this chapter is that the Latin sentence involves not only syntactic movement, necessary to satisfy scope transparency, but extensive prosodic movement.

In Section 3.2.1, I argued that the distribution of clause-second particles is best described by two lexically-specified features for clitics: [WEAK], which ensures that clitics form a phonological word with a nearby non-clitic; and [FOLLOW], which ensures that a clitic is final in its phonological word. Next, in Section 3.2.2 I argued that these features may be present quite generally on any functional element, including prepositions, the copula *esse*, *qu-* words, and demonstratives, yielding the taxonomy of clitics in Section 3.2.3.

Prosodic movement interacts with syntactic movement in a precise way, though we have largely left this unspecified. The accumulation principle (186)/(200) explains how split noun phrases can appear to involve nonconstituent fragments.

#### (200) *Accumulation Principle*

Throughout the derivation of a sentence, prosodic words can only become larger, not smaller.

We briefly considered the prosodic and pragmatic effects of split noun phrases in Section 3.4. Besides the semantic effects discussed in Chapter 2, it was argued here that the prosodic effect of splitting the noun phrase is to isolate the left fragment in the left periphery, or to isolate the right fragment in the verb phrase, in either case yielding an intonationally prominent constituent, thereby pragmatically useful for bringing attention to a topic. Conversely, an element scrambled out of the verb phrase but not into the left-periphery escapes the intonational prominence of the utterance, which is convenient when the material must be spoken without emphasis.

In the brief following chapter we will review the contributions of this thesis.

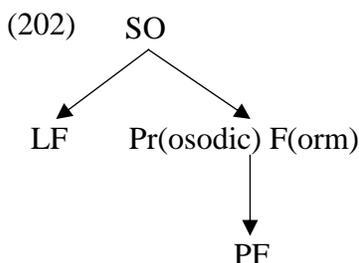
## 4. Conclusion

### 4.1 Summary of results

The central claim of this thesis is that split noun phrases are the consequence of the general architecture of grammar, as stated in (201), and schematically represented in (202), showing that a syntactic object SO is mapped to a logical form LF and a prosodic form PrF, the latter in turn mapped to a phonological form PF.

(201) *Structure-dependence of grammar* (2.1.1)

The sentence is a recursive, hierarchical structure with displacement that is deterministically mapped to a semantic interpretation and a morphophonological realization.



As a fact of language variation, Latin permits more extensive displacement than in other languages. This displacement is not free, but subject to scope transparency.

(203) *Scope transparency* (2.3.3.1)

The scope of a generalized quantifier is the denotation of its c-command domain.

Syntactic displacement interacts with prosodic movement according to the accumulation principle.

(204) *Accumulation principle* (3.3)

Throughout the derivation of a sentence, prosodic words can only become larger, not smaller.

The interaction of these three principles yields split noun phrase phenomena.

We corroborated these claims based on a variety of novel data:

- Epigraphic punctuation provides evidence for a noun phrase (2.2.1), and a tense phrase (2.3.4.2)
- Within the noun phrase:
  - The possible orders of nominal elements are limited: in the entire *Perseus* corpus, no noun phrase with the elements demonstrative, numeral, adjective, and noun has either the demonstrative or numeral final, consistent with a structural account (2.2.2)

- The relative orders of individual elements do not predict contrastivity, but a structural account does (2.2.3–4)
- The distribution of nominal idioms, in which a noun and adjective have an idiosyncratic interpretation, reveals an asymmetry between the orders A N and N A that is best explained by the former being derived from the latter by syntactic movement (2.2.5)
- Within the clause:
  - Novel data was provided for two generalizations:
    - Negative polarity items must be preceded-and-commanded by a licenser (2.3.1)
    - Quantifiers must precede-and-command their scope (2.3.2)
  - Both of these generalizations were argued to follow from scope transparency (203) (2.3.3)
  - The distribution of adverbs, verbs, and verbal inflection across Romance supports a verb phrase constituent (2.3.4.1)
- Extensive epigraphic evidence was provided for the structure of prosodic words (3.2)
- Second-position phenomena:
  - Were argued to result from the interaction of two features, [WEAK] and [FOLLOW], yielding prosodic movement (3.2.1)
  - Were argued to lack semantic effects (3.2)
  - Were argued to apply to every functional category (3.2.2)

## 4.2 Reflections and implications

One who is curious about texts—classical or otherwise—must face the very general question of why a given text is the way it is, and not otherwise. In Homeric studies, for instance, the answer for two millennia was that the *Iliad* and *Odyssey* were the products of an individual genius. This answer does not explain much, if anything, about the language or composition of those great works, and Milman Parry showed that it was largely a wrong one (Kanigel 2021). Instead, “the ... Greek epic legends were not themselves the original fictions of certain authors, but creations of a whole people ... so the style in which they were to be told was not a matter of individual creation, but a popular tradition,” with the choice and placement of phrases largely the consequence of traditional metrical constraints (Parry 1987, 421).

Tradition, then, is another answer. But explanation by tradition or history is incomplete: it does not explain why certain paths have been taken, and not others. More importantly, it cannot explain why common patterns appear in historically unrelated times and places. In this thesis I have argued that Latin grammar and the formal properties of texts are in major respects (i.e., (201)) common to all languages, ultimately the reflex of part of the human genotype, known as Universal Grammar (UG).

That UG must exist alongside language-specific idiosyncrasies is recognized in traditional grammar (though not the biological interpretation). We find, for instance, that

These customs [ZSF: the combinatory rules of a language] are in part the result of general laws or modes of thought (logic), resulting from our habits of mind (*General Grammar*); and in part are what may be called By-Laws, established by custom in a given language (*Particular Grammar*), and making what is called the Syntax of that language (*AG*, Section 268).

There is something universal in every text, then: a text is a window into the soul of an author, their circumstances, tradition, and biology. As the world converges ever more rapidly, the various ways of being human become ever less apparent. Textual remains—and especially ancient ones, through their very remove from the present day—will continue to become more important for learning what is central to being human, and what varies. I have argued that this enterprise requires the development of a scientific methodology for corpus linguistics, and textual studies more broadly.

## Appendix A. Texts searched

Below are a list of the ancient authors and their works that comprise the corpus used for electronic search throughout this study. Cited examples not included in the below list were not subject to systematic search. The data was collected from *Perseus under Philologic 3* by means of the *Persephil* software application (Feldcamp 2021).

Ammianus Marcellinus, *Rerum Gestarum* [Amm.].  
 Apuleius, *Apologia* [Apul. *Apol.*].  
 ———, *Florida* [Apul. *Flor.*].  
 ———, *Metamorphoses* [Apul. *Met.*].  
 Augustine, *Epistulae*. Selections. [August.].  
 Augustus, *Res Gestae* [Aug.].  
 Aulus Gellius, *Attic Nights* [Gell.].  
 Boethius, *Consolatio Philosophiae* [Boethius].  
 Caesar, *Civil War* [Caes. *Civ.*].  
 ———, *Gallic War* [Caes. *Gal.*].  
 Catullus, *Carmina* [Catul.].  
 Celsus, *De Medicina* [Cels. *Med.*].  
 Cicero, *Academica* [Cic. *Acad. Pos.*].  
 ———, *Brutus* [Cic. *Brut.*].  
 ———, *De Amicitia* [Cic. *Amic.*].  
 ———, *De Divinatione* [Cic. *Div.*].  
 ———, *de Domo sua* [Cic. *Dom.*].  
 ———, *de Fato* [Cic. *Fat.*].  
 ———, *de Finibus Bonorum et Malorum* [Cic. *Fin.*].  
 ———, *de Haruspicum Responso* [Cic. *Har.*].  
 ———, *de Lege Agraria* [Cic. *Agr.*].  
 ———, *de Natura Deorum* [Cic. *Nat. D.*].  
 ———, *de Officiis* [Cic. *Off.*].  
 ———, *de Optimo Genere Oratorum* [Cic. *Opt. Gen.*].  
 ———, *de Oratore* [Cic. *de Orat.*].  
 ———, *de Partitione Oratoria* [Cic. *Part. Orat.*].  
 ———, *de Provinciis Consularibus* [Cic. *Prov.*].  
 ———, *de Republica* [Cic. *Rep.*].  
 ———, *de Senectute* [Cic. *Sen.*].  
 ———, *Divinatio in Q. Caecilius* [Cic. *Div. Caec.*].  
 ———, *Epistula ad Octavianum* [Cic. *Oct.*].  
 ———, *Epistulae ad Atticum* [Cic. *Att.*].  
 ———, *Epistulae ad Brutum* [Cic. *ad Brut.*].  
 ———, *Epistulae ad Familiares* [Cic. *Fam.*].  
 ———, *Epistulae ad Quintum fratrem* [Cic. *Q. fr.*].  
 ———, *in Catilinam* [Cic. *Catil.*].  
 ———, *in Pisonem* [Cic. *Pis.*].  
 ———, *in Toga Candida* [Cic. *Tog. Cand.*].  
 ———, *in Vatinius* [Cic. *Vat.*].

- , *in Verrem* [Cic. *Ver.*].  
 ———, *Lucullus* [Cic. *Luc.*].  
 ———, *Orator* [Cic. *Orat.*].  
 ———, *Paradoxa stoicorum ad M. Brutum* [Cic. *Parad.*].  
 ———, *Philippicae* [Cic. *Phil.*].  
 ———, *post Reditum ad Populum* [Cic. *Red. Pop.*].  
 ———, *post Reditum in Senatu* [Cic. *Red. Sen.*].  
 ———, *pro Archia* [Cic. *Arch.*].  
 ———, *pro Balbo* [Cic. *Balb.*].  
 ———, *pro Caecina* [Cic. *Caec.*].  
 ———, *pro Caelio* [Cic. *Cael.*].  
 ———, *pro Cluentio* [Cic. *Clu.*].  
 ———, *pro Flacco* [Cic. *Flac.*].  
 ———, *pro Fonteio* [Cic. *Font.*].  
 ———, *pro Lege Manilia* [Cic. *Man.*].  
 ———, *pro Ligario* [Cic. *Lig.*].  
 ———, *pro Marcello* [Cic. *Marc.*].  
 ———, *pro Milone* [Cic. *Mil.*].  
 ———, *pro Murena* [Cic. *Mur.*].  
 ———, *pro Plancio* [Cic. *Planc.*].  
 ———, *pro Q. Roscio comoedo* [Cic. *Q. Rosc.*].  
 ———, *pro Quinctio* [Cic. *Quinct.*].  
 ———, *pro Rabirio Perduellionis Reo* [Cic. *Rab. Perd.*].  
 ———, *pro Rabirio Postumo* [Cic. *Rab. Post.*].  
 ———, *pro Rege Deiotaro* [Cic. *Deiot.*].  
 ———, *pro S. Roscio Amerino* [Cic. *S. Rosc.*].  
 ———, *pro Scauro* [Cic. *Scaur.*].  
 ———, *pro Sestio* [Cic. *Sest.*].  
 ———, *pro Sulla* [Cic. *Sul.*].  
 ———, *pro Tullio* [Cic. *Tul.*].  
 ———, *Topica* [Cic. *Top.*].  
 ———, *Tusculanae Disputationes* [Cic. *Tusc.*].  
 Columella, Lucius Junius Moderatus, *Res Rustica*, Books I-IV [Columella].  
 Cornelius Nepos, *Vitae* [Nep.].  
 Curtius Rufus, Quintus, *Historiae Alexandri Magni* [Curt.].  
 Horace, *Ars Poetica* [Hor. *Ars*].  
 ———, *Carmina* [Hor. *Carm.*].  
 ———, *Satires* [Hor. *S.*].  
 Juvenal, *Satires* [Juv.].  
 Livy, *ab Urbe Condita* [Liv.].  
 Lucan, *Pharsalia* [Luc.].  
 Florus, Lucius Annaeus, *Epitome Rerum Romanorum* [Flor.].  
 Lucretius, *De Rerum Natura* [Lucr.].  
 Martial, *Epigrammata* [Mart.].  
 Ovid, *Amores* [Ov. *Am.*].  
 ———, *Ars Amatoria* [Ov. *Ars*].

- , *Epistulae* [Ov. *Ep.*].  
 ——, *Medicamina Faciei Femineae* [Ov. *Med.*].  
 ——, *Metamorphoses* [Ov. *Met.*].  
 ——, *Remedia Amoris* [Ov. *Rem.*].  
 Persius, *Satires* [Pers.].  
 Petronius, *Satyricon* [Petron.].  
 Phaedrus, *Fabulae* [Phaed.].  
 Plautus, *Amphitruo* [Pl. *Am.*].  
 ——, *Asinaria* [Pl. *As.*].  
 ——, *Aulularia* [Pl. *Aul.*].  
 ——, *Bacchides* [Pl. *Bac.*].  
 ——, *Captivi* [Pl. *Capt.*].  
 ——, *Casina* [Pl. *Cas.*].  
 ——, *Cistellaria* [Pl. *Cist.*].  
 ——, *Curculio* [Pl. *Cur.*].  
 ——, *Epidicus* [Pl. *Epid.*].  
 ——, *Menaechmi* [Pl. *Men.*].  
 ——, *Mercator* [Pl. *Merc.*].  
 ——, *Miles Gloriosus* [Pl. *Mil.*].  
 ——, *Mostellaria* [Pl. *Mos.*].  
 ——, *Persa* [Pl. *Pre.*].  
 ——, *Poenulus* [Pl. *Poen.*].  
 ——, *Pseudolus* [Pl. *Ps.*].  
 ——, *Rudens* [Pl. *Rud.*].  
 ——, *Stichus* [Pl. *St.*].  
 ——, *Trinummus* [Pl. *Trin.*].  
 ——, *Truculentus* [Pl. *Truc.*].  
 Pliny the Elder, *Natural History* [Plin. *Nat.*].  
 Pliny the Younger, *Letters* [Plin. *Ep.*].  
 Propertius, *Elegies* [Prop.].  
 Prudentius, *Apotheosis* [Prudent. *Apoth.*].  
 ——, *Cathemerina* [Prudent. *Cath.*].  
 ——, *Contra Symmachum* [Prudent. *C. Symm.*].  
 ——, *Dittochaeon* [Prudent. *Ditto.*].  
 ——, *Epilogus* [Prudent. *Epil.*].  
 ——, *Hamartigenia* [Prudent. *Hamar.*].  
 ——, *Peristephanon Liber* [Prudent. *Perist.*].  
 ——, *Praefatio* [Prudent. *praef.*].  
 ——, *Psychomachia* [Prudent. *Psych.*].  
 Q. Tullius Cicero, *Essay on Running for Consul* [Cic. *Pet.*].  
 Quintilian, *Institutio Oratoria* [Quint.].  
 Sallust, *Catilina* [Sal. *Cat.*].  
 ——, *Jugurtha* [Sal. *Jug.*].  
 Seneca the Elder, *Controversiae* [Sen. *Controv.*].  
 ——, *Excerpta Controversiae* [Sen. *Con. ex.*].  
 ——, *Fragmenta* [Sen. *Frag.*].

- , *Suasoriae* [Sen. *Suas.*].  
 Seneca, *Ad Lucilium Epistulae Morales* [Sen. *Ep.*].  
 ——, *Agamemnon* [Sen. *Ag.*].  
 ——, *Apocolocyntosis* [Sen. *Apocol.*].  
 ——, *De Beneficiis* [Sen. *Ben.*].  
 ——, *De Brevitate Vitae* [Sen. *Brev. Vit.*].  
 ——, *De Clementia* [Sen. *Clem.*].  
 ——, *De Consolatione ad Helvium* [Sen. *Cons. Helv.*].  
 ——, *De Consolatione ad Marciam* [Sen. *Cons. Marc.*].  
 ——, *De Consolatione ad Polybium* [Sen. *Cons. Polyb.*].  
 ——, *De Constantia* [Sen. *Constant.*].  
 ——, *De Ira* [Sen. *Ira*].  
 ——, *De Otio* [Sen. *Ot.*].  
 ——, *De Providentia* [Sen. *Prov.*].  
 ——, *De Tranquillitate Animi* [Sen. *Tranq.*].  
 ——, *De Vita Beata* [Sen. *Vit. Beat.*].  
 ——, *Hercules Furens* [Sen. *Herc. Fur.*].  
 ——, *Hercules Oetaeus* [Sen. *Herc. Oet.*].  
 ——, *Medea* [Sen. *Med.*].  
 ——, *Octavia* [Sen. *Oct.*].  
 ——, *Oedipus* [Sen. *Oed.*].  
 ——, *Phaedra* [Sen. *Phaed.*].  
 ——, *Phoenissae* [Sen. *Phoen.*].  
 ——, *Thyestes* [Sen. *Thy.*].  
 ——, *Troades* [Sen. *Tro.*].  
 Sidonius Apollinaris, *Carmina* [Sid. *Apoll. Carm.*].  
 ——, *Epistulae*, Books I-VII [Sid. *Apoll. Epist.*].  
 Silius Italicus, *Punica* [Sil. *Pun.*].  
 Statius, P. Papinius, *Achilleis* [Stat. *Achil.*].  
 ——, P. Papinius, *Silvae* [Stat. *Silv.*].  
 ——, P. Papinius, *Thebais* [Stat. *Theb.*].  
 Suetonius, *Lives* [Suet.].  
 Sulpicia, Poems [Sulpicia].  
 Tacitus, *Agricola* [Tac. *Ag.*].  
 ——, *Annales* [Tac. *Ann.*].  
 ——, *Dialogus de Oratoribus* [Tac. *Dial.*].  
 ——, *Germania* [Tac. *Ger.*].  
 ——, *Historiae* [Tac. *Hist.*].  
 Terence, *Adelphi* [Ter. *Ad.*].  
 ——, *Andria* [Ter. *An.*].  
 ——, *Eunuchus* [Ter. *Eu.*].  
 ——, *Heautontimorumenos* [Ter. *Hau.*].  
 ——, *Hecyra* [Ter. *Hec.*].  
 ——, *Phormio* [Ter. *Ph.*].  
 Tertullian, *Apologeticum* [Tert. *Apol.*].  
 ——, *De Spectaculis* [Tert. *de spect.*].

The Venerable Bede, *Historiam ecclesiasticam gentis Anglorum* [Bede].  
Tibullus, *Elegiae* [Tib.].  
Flaccus, Valerius, *Argonautica* [Flac.].  
Vergil, *Aeneid* [Verg. *A.*].  
———, *Eclogues* [Verg. *Ecl.*].  
———, *Georgics* [Verg. *G.*].  
Vitruvius, *de Architectura* [Vitr.].  
Vulgate, *Latin Vulgate* [NT].

## Appendix B. Sample of noun phrases with demonstrative, adjective, and noun

Provided below is a random sample of 100 noun phrases from the *Perseus* corpus, each containing a demonstrative, a noun, and an adjective. Only “true” adjectives were counted, as characterized in Section 2.2.4.2–3, excluding, for example, quantifiers such as *omnis* ‘every.’ Each logically possible word order was searched, and the results were collated into a spreadsheet, by means of the *Persephil* tool (Feldcamp 2021). The results were shuffled and the first 100 noun phrases adhering to one of the six desired patterns were marked. The frequency of each order is discussed in Section 2.2.2.

Text	Work	Passage	Order
ut <b>antiquus ille Cunctator</b> pro negotio consultabat	Amm.	29.5.32	A Dem N
quos <b>Martia ista pectora</b> viros existimant	Amm.	24.8.1	A Dem N
cum haec ita essent, aestimari poterat (ut ipse aiebat), <b>vetus illa Iustitia</b> , quam offensam vitiis hominum, Aratus extollit in caelum, eo imperante	Amm.	25.4.19	A Dem N
rursus <b>molares illos circuitus</b> requirebam.	Apul. <i>Met.</i>	7.17	A Dem N
Adhuc sine <b>miserum istum asinum</b> iugi furore iactari credimus?	Apul. <i>Met.</i>	9.3	A Dem N
<b>arida haec medicamenta</b> ex suco murti conteruntur.	Cels. <i>Med.</i>	6.6.16b	A Dem N
Campanus ager et <b>praeclara illa Capua</b> servatur	Cic. <i>Agr.</i>	3.16	A Dem N
quamquam <b>blanda ista vanitas</b> apud eos valet	Cic. <i>Amic.</i>	99	A Dem N
quod <b>gravis illa opinio</b> ...	Cic. <i>Att.</i>	3.24.2	A Dem N
<b>longumque illud tempus</b> cum non ero magis me movet quam hoc exiguum	Cic. <i>Att.</i>	12.18.1	A Dem N
<b>vulgaris haec cognitio</b> satis magna est ad eam, quam specto, eloquentiam	Cic. <i>de Orat.</i>	3.147	A Dem N
<b>primas illas hastas</b> ita iactare leniter, ut ...	Cic. <i>de Orat.</i>	2.316	A Dem N
nec vero alia sunt quaerenda contra <b>Carneadeam illam sententiam</b> .	Cic. <i>Fin.</i>	5.22	A Dem N
qui post patris mortem <b>primam illam aetatulam</b> suam ad scurrarum locupletium libidines detulit	Cic. <i>Har.</i>	42	A Dem N
diutius cogitandum est? ante fundum Clodi quo in fundo propter <b>insanas illas substructiones</b> facile hominum mille versabatur valentium, edito	Cic. <i>Mil.</i>	53	A Dem N
brevior altera, eadem etiam planior. est autem longioris <b>prima illa quaestio</b> sitne omnino ulla numerosa oratio; quibusdam enim non videtur, quia nih	Cic. <i>Orat.</i>	54	A Dem N

non existimes <b>mediam illam partem</b> et turbam flagitiorum tuorum mihi esse inauditam	Cic. <i>Pis.</i>	94	A Dem N
notata a nobis sunt et <b>prima illa scelera</b> in adventu	Cic. <i>Pis.</i>	83	A Dem N
ut meminerim Iovis orationem quae est in <b>extremo illo libro</b>	Cic. <i>Q. fr.</i>	2.7.1	A Dem N
quamquam non est omittenda <b>singularis illa integritas</b> provincialis	Cic. <i>Sest.</i>	13	A Dem N
renovabitur <b>prima illa militia</b>	Cic. <i>Ver.</i>	2.5.33	A Dem N
responderet illud argentum se <b>paucis illis diebus</b> misisse Lilybaeum.	Cic. <i>Ver.</i>	2.4.39	A Dem N
Timaeum, <b>nobilem illum dialogum</b> , concinnasset.	Gell.	3.17.5	A Dem N
convolante quidem tam <b>numerosa illa cohorte</b>	Plin. <i>Nat.</i>	7.63	A Dem N
potest turpis esse <b>domesticus ille praeceptor</b>	Quint.	1.2.4	A Dem N
<b>veterem illum horrorem</b> dicendi malim quam istam novam licentiam.	Quint.	8.5.34	A Dem N
<b>novum illud exemplum</b> ab dignis et idoneis ad indignos et non idoneos transfertur.	Sal. <i>Cat.</i>	51	A Dem N
Fuit sine dubio, ut dicitis, <b>vetus illa sapientia</b>	Sen. <i>Ep.</i>	95.14	A Dem N
in unum saporem <b>varia illa libamenta</b> confundere	Sen. <i>Ep.</i>	84.5	A Dem N
<b>Tertium illud genus</b> extra multa et magna vitia est	Sen. <i>Ep.</i>	75.14	A Dem N
quamquam bene cognita et olim <b>atrox illa fides</b>	Sil. <i>Pun.</i>	6.378	A Dem N
At non <b>quotidiana cura haec</b> angeret animum.	Ter. <i>Ph.</i>	157	A N Dem
<b>Hoc memorabili bello</b> , comparando quidem Punicis et Teutonicis, ...	Amm.	17.1.14	Dem A N
Quo confecto simulatur necessaria praecordiis leniendis bilique subtrahendae <b>illa praenobilis potio</b> , quam sacram doctiores.	Apul. <i>Met.</i>	10.25	Dem A N
<b>Hac opportuna fallacia</b> vigorati iuvenis	Apul. <i>Met.</i>	9.21	Dem A N
quare <b>haec diuina praenotio</b> naturam rerum proprietatemque non mutat	Boethius	5.P6	Dem A N
hoc tu emes <b>ista innumerabili pecunia</b> quod arari aut coli possit?	Cic. <i>Agr.</i>	2.67	Dem A N
grata haec et magna mihi que nondum laboriosa ex <b>illa vetere militia</b> .	Cic. <i>Att.</i>	6.2.5	Dem A N
verum tamen <b>ista multa iudicia</b> quae sunt?	Cic. <i>Clu.</i>	88	Dem A N

quod in tanto otio etiam sine <b>hac forensi exercitatione</b> efficere potuerunt	<i>Cic. de Orat.</i>	2.139	Dem A N
aut vobis haec Carneadia aut <b>illa Aristotelia vis</b> comprehendenda est.	<i>Cic. de Orat.</i>	3.71	Dem A N
quam <b>huius civilis turbae</b> ac fori.	<i>Cic. de Orat.</i>	1.81	Dem A N
denique etiam <b>ille novicius Ligus</b> , venalis adscriptor et subscriptor tuus, ...	<i>Cic. Dom.</i>	49	Dem A N
<b>has paternas possessiones</b> tenebis	<i>Cic. Fam.</i>	7.20.1	Dem A N
itaque neque ego <b>hunc Hispaniensem casum</b> exspecto	<i>Cic. Fam.</i>	2.16.6	Dem A N
de quo tibi homine haec spondeo non <b>illo vetere verbo</b> meo	<i>Cic. Fam.</i>	7.5.3	Dem A N
<b>hi novi timores</b> retexunt superiora.	<i>Cic. Fam.</i>	11.14.3	Dem A N
si <b>istas exiguas copias</b> , quas habuisti, quam minime imminueris.	<i>Cic. Fam.</i>	3.3.2	Dem A N
multa praeclara in <b>illo calamitoso otio</b> scripsit	<i>Cic. Fin.</i>	5.54	Dem A N
Decianus ad Laelium detulerit <b>hanc opimam accusationem</b> .	<i>Cic. Flac.</i>	81	Dem A N
sed ad <b>hanc insignem poenam</b> reservatus.	<i>Cic. Mil.</i>	86	Dem A N
Servius hic nobiscum <b>hanc urbanam militiam</b> respondendi, scribendi, cavendi plenam sollicitudinis ac stomachi secutus est	<i>Cic. Mur.</i>	19	Dem A N
laetatus est statimque <b>illa mirabilia facinora</b> effecit.	<i>Cic. Phil.</i>	2.109	Dem A N
si mihi cum <b>illo bustuario gladiatore</b> et tecum et cum conlega tuo decertandum fuisset.	<i>Cic. Pis.</i>	19	Dem A N
caverat enim sibi <b>ille sororius adulter</b> ut ...	<i>Cic. Pis.</i>	28	Dem A N
ubi <b>illa antiqua libertas</b> quae ...	<i>Cic. Planc.</i>	33	Dem A N
si planum facio post <b>hanc recentem stipulationem</b> Rosci HS CCCIOOO a Flavio te abstulisse	<i>Cic. Q. Rosc.</i>	41	Dem A N
sed in <b>his veteribus municipiis</b> quae ...	<i>Cic. S. Rosc.</i>	48	Dem A N
sin <b>istius ingentes divitiae</b> iudiciorum religionem veritatemque perfregerint ...	<i>Cic. Ver.</i>	1.1.3	Dem A N
<b>Haec mera veritas</b> Tusculani hominis ...	Gell.	13.24.2	Dem A N
eodem tenore duo insequentes consulatus gessi, eodem <b>haec imperiosa dictatura</b> geretur	Liv.	7.40.9	Dem A N
iisdem <b>istis ferocibus animis</b> egredimini extra portam Esquilinam	Liv.	3.68.2	Dem A N

qui me nominationis die per <b>hos continuos annos</b> inter sacerdotes nominabat	Plin. <i>Ep.</i>	4.8.3	Dem A N
ut obiter emolliam catullum conterraneum meum (agnoscis et <b>hoc castrense verbum</b> ) ...	Plin. <i>Nat.</i>	preface.1	Dem A N
iacet <b>illud nobile templum</b> , cur iacet?	Prudent. <i>Apoth.</i>	3	Dem A N
hic <b>ille natalis dies</b> , quo te creator arduus spiravit et limo indidit, ...	Prudent. <i>Cath.</i>	11	Dem A N
sed quis, tyranne pertinax, <b>hunc inpotentem spiritum</b> determinabit exitus?	Prudent. <i>Perist.</i>	5	Dem A N
quales legimus panegyricos, totumque <b>hoc demonstrativum genus</b> , permittitur adhibere plus cultus omnemque artem	Quint.	2.10.11	Dem A N
<b>illis antiquis temporibus</b> non studii modo verum etiam venerationis habuisse	Quint.	1.10.9	Dem A N
et sic in <b>hac calamitosa fama</b> quasi in aliqua perniciosissima flamma, et non enim tam spe	Quint.	9.3.75	Dem A N
si hoc tibi inter cenam in <b>illis immanibus poculis</b> tuis accidisset.	Quint.	5.10.99	Dem A N
ab <b>illa vera imagine</b> orandi recesserunt	Quint.	5.12.16	Dem A N
scalpello aperitur ad <b>illam magnam libertatem</b> via et puncto securitas constat.	Sen. <i>Ep.</i>	70.16	Dem A N
hoc maximum vinculum, haec arcana sacra, <b>hos coniugales deos</b> arbitrantur.	Tac. <i>Ger.</i>	18.3	Dem A N
si litterae M. Aurelii gravissimi imperatoris requirantur, quibus <b>illam Germanicam sitim</b> Christianorum forte militum precationibus impetrato imbri discussam contestatur.	Tert. <i>Apol.</i>	5.6	Dem A N
ad <b>hanc mortem repentinam</b> vocemque morientis omnia praeterea quae solent esse ...	Cic. <i>Clu.</i>	30	Dem N A
non numquam in <b>hoc vitium scurrile</b> delabitur.	Cic. <i>de Orat.</i>	2.246	Dem N A
sibi ipse peperit maximam laudem ex <b>illa accusatione nobili et gloriosa</b>	Cic. <i>Off.</i>	2.47	Dem N A
quam ad <b>hanc rationem</b> extremam necessario devenire.	Cic. <i>Quinct.</i>	54	Dem N A
sin <b>illa res prima</b> valuit, num ...	Cic. <i>Sul.</i>	81	Dem N A
valeret hoc crimen in <b>illa vetere severitate</b> ac dignitate rei publicae	Cic. <i>Ver.</i>	2.5.46	Dem N A
sed mi intervallum iam <b>hos dies multos</b> fuit	Pl. <i>Men.</i>	101	Dem N A

ut ocepi dicere, lenulle, de <b>illa pugna Pentetronica</b>	Pl. <i>Poen.</i>	471	Dem N A
<b>Hi iudices Clodiani</b> a senatu petierant praesidium	Sen. Ep.	97.6	Dem N A
unde <b>haec aula recens</b> fulgorque inopinus agresti Alcidae?	Stat. <i>Silv.</i>	3.1	Dem N A
eis indito <b>catenas singularias istas</b> , maiores	Pl. <i>Capt.</i>	108	N A Dem
Athos in Macedonia <b>mons ille praecelsus</b> navibus quondam Medicis pervius	Amm.	22.8.2	N Dem A
Unico illi contubernio communem vitam sustinebant meque ad <b>vasa illa compluria</b> gestanda praedestinarant, quae ...	Apul. <i>Met.</i>	10.13	N Dem A
<b>orationem illam vanam</b> testimonium esse laudum suarum putant.	Cic. <i>Amic.</i>	98	N Dem A
nam M. Coelium Vinicianum <b>mentio illa fatua</b> , quam ...	Cic. <i>Fam.</i>	8.4.3	N Dem A
quod se <b>legem illam praeclaram</b> neglecturum negaret	Cic. <i>Rep.</i>	2.61	N Dem A
Eius nomini Plato <b>librum illum divinum</b> de immortalitate animae dedit.	Gell.	2.18.2	N Dem A
audiens populus <b>sermonem hunc pessimum</b> luxit	NT	Exod.33	N Dem A
si ingredientibus nobis terram signum fuerit <b>funiculus iste coccineus</b>	NT	Josh.2	N Dem A
ipse fecit nobis <b>malum hoc grande</b>	NT	1 Sam.6	N Dem A
adduxistis in <b>locum istum pessimum</b>	NT	Num.20	N Dem A
ut omni studio <b>dies ista sollemnis</b> sanciretur in posterum	NT	Esther.9	N Dem A
egeritque bitumen temperandum <b>fonte illo ingustabili</b>	Plin. <i>Nat.</i>	2.105	N Dem A
alioqui <b>tumor ille inanis</b> primo cuiusque veri operis conatu deprehendetur.	Quint.	2.10.6	N Dem A
huc <b>ager ille malus</b> dulcesque a fontibus undae ad plenum calcentur	Verg. <i>G.</i>	2.240	N Dem A

## Appendix C. NPI licensing

The complete data for the results presented in Section 2.3.1, regarding the precede-and-command constraint on NPI licensing, is presented below.

### C1 *Nego* licenses *ullus*

Below is listed each instance in the *Perseus* corpus where *nego* ‘deny’ licenses *ullus* ‘any.’ A search was conducted on 2/27/21 over the entire corpus listed in Appendix A, with the query ‘lemma:ullus lemma:nego,’ anywhere in the same sentence.

As indicated in Section 2.3.1.3, in each case, *nego* precedes-and-commands *ullus*.

Excerpt	Text	Passage	<i>Nego</i> licenses <i>ullus</i> ?	<i>Nego</i> precedes-and-commands <i>ullus</i> ?
ego uero <b>nego ullum</b> esse bonum quod noceat habenti num id mentior?	Boethius	2.P5	y	y
<b>negat</b> se more et exemplo populi Romani posse iter <b>ulli</b> per provinciam dare	Caes. <i>Gal.</i>	1.8.3	y	y
<b>negabant</b> me adduci posse ut <b>ullam</b> largitionem probarem. finem feci offerendi mei ne forte mea sedulitas	Cic. <i>Agr.</i>	2.12	y	y
<b>negabat ullam</b> vocem inimiciorem amicitiae potuisse reperiri quam eius qui dixisset ita	Cic. <i>Amic.</i>	59	y	y
quod <b>negas</b> praecipuum mihi <b>ullum</b> in communibus incommodis impendere, etsi ista res non nihil habet con	Cic. <i>Att.</i>	11.3.2	y	y
<b>nego ullam</b> rem esse quae aut comprehendi satis aut caveri aut excipi possit	Cic. <i>Caec.</i>	81	y	y
<b>nego</b> rem esse <b>ullam</b> cuiquam illorum obiectam quae Fidiculanio non obiecta	Cic. <i>Clu.</i>	113	y	y
Artem vero <b>negabat</b> esse <b>ullam</b> , nisi quae cognitis penitusque perspectis et in unum exitum spectantibus et	Cic. <i>de Orat.</i>	1.92	y	y
qui partim omnino motus <b>negant</b> in animis <b>ullos</b> esse debere, quique eos in iudicum mentibus concitent, scelus eos nefarium	Cic. <i>de Orat.</i>	1.220	y	y
Non possum <b>negare</b> prodesse <b>ullam</b> scientiam, ei praesertim, cuius eloquentia copia rerum debeat esse ornata; sed	Cic. <i>de Orat.</i>	1.250	y	y

quae <b>negat ullo</b> modo posse dissolvi, et genus sermonis adfert non liquidum, non fustum	<i>Cic. de Orat.</i>	2.159	y	y
et <b>negant</b> historici Lacedaemoniis <b>ullum</b> ostentum hoc tristius accidisse!	<i>Cic. Div.</i>	2.69	y	y
<b>negat ullo</b> modo posse sciri	<i>Cic. Div.</i>	2.90	y	y
sed quid ad te, qui <b>negas</b> esse verum quemquam <b>ulli</b> rei publicae extra ordinem praefici? atque	<i>Cic. Dom.</i>	21	y	y
<b>nego</b> potuisse iure publico, legibus iis quibus haec civitas utitur, quemquam civem <b>ulla</b> eius modi calamitate adfici sine iudicio	<i>Cic. Dom.</i>	33	y	y
Caninius et Cato <b>negarunt</b> se legem <b>ullam</b> ante comitia esse laturos.	<i>Cic. Fam.</i>	1.4.1	y	y
hostem esse in Syria <b>negant ullum</b> .	<i>Cic. Fam.</i>	3.8.10	y	y
<b>negabat</b> se <b>ullo</b> modo pati posse decerni supplicationes, ne quod furore Pauli adeptus esse	<i>Cic. Fam.</i>	8.11.1	y	y
contra equitem Parthum <b>negant ullam</b> armaturam meliorem inveniri posse.	<i>Cic. Fam.</i>	9.25.1	y	y
sed ut ad rem redeam, legionem Martiam et quartam <b>negant</b> qui illas norunt <b>ulla</b> condicione ad te posse perduci	<i>Cic. Fam.</i>	11.14.2	y	y
sin autem ad animum, falsum est, quod <b>negas</b> animi <b>ullum</b> esse gaudium, quod non referatur ad corpus.	<i>Cic. Fin.</i>	2.98	y	y
<b>negarine ullo</b> modo possit numquam quemquam stabili et firmo et magno	<i>Cic. Fin.</i>	3.29	y	y
<b>negabat</b> igitur <b>ullam</b> esse artem, quae ipsa a se proficisceretur	<i>Cic. Fin.</i>	5.16	y	y
<b>negant</b> esse <b>ullam</b> causam, cur aliud alii anteponatur	<i>Cic. Fin.</i>	5.23	y	y
praeter vitia atque virtutes <b>negavit</b> rem esse <b>ullam</b> aut fugiendam aut expetendam.	<i>Cic. Fin.</i>	5.73	y	y
at enim <b>negas</b> fratrem meum, qui L. Flacco successerit, pecuniam <b>ullam</b> in remiges imperasse.	<i>Cic. Flac.</i>	33	y	y
<b>negavit</b> sese omnino versuram <b>ullam</b> fecisse Romae	<i>Cic. Flac.</i>	48	y	y

<b>nego</b> umquam post sacra constituta, quorum eadem est antiquitas quae ipsius urbis, <b>ulla</b> de re, ne de capite quidem virginum Vestalium, tam frequens conlegium	<i>Cic. Har.</i>	13	y	y
<b>nego</b> esse <b>ullam</b> domum aliam privato eodem quo quae optima lege,	<i>Cic. Har.</i>	14	y	y
<b>nego ullo</b> de opere publico, de monumento, de templo tot senatus exst	<i>Cic. Har.</i>	15	y	y
<b>nego ulla</b> verba Lentulum, gravem oratorem ac disertum, saepius, cum te accusaret,	<i>Cic. Har.</i>	37	y	y
<b>negabis</b> esse rem <b>ullam</b> quae cognosci compendi percipi possit?	<i>Cic. Luc.</i>	62	y	y
praesto est qui <b>neget</b> rem <b>ullam</b> percipi posse sensibus.	<i>Cic. Luc.</i>	101	y	y
licet enim haec quivis arbitrato suo reprehendat quod <b>negemus</b> rem <b>ullam</b> percipi posse, certe levior reprehensio est, quod tamen dicimus esse quaed	<i>Cic. Luc.</i>	102	y	y
Alterum est quod <b>negatis</b> actionem <b>ullius</b> rei posse in eo esse qui nullam rem adsensu suo conprobet.	<i>Cic. Luc.</i>	108	y	y
At scire <b>negatis</b> quemquam rem <b>ullam</b> nisi sapientem.	<i>Cic. Luc.</i>	145	y	y
ea forma <b>neget ullam</b> esse pulchriorem Plato	<i>Cic. Nat. D.</i>	1.24	y	y
<b>negat</b> enim esse <b>ullum</b> cibum tam gravem quin is nocte et die concoquatur	<i>Cic. Nat. D.</i>	2.24	y	y
<b>neget</b> in his <b>ullam</b> inesse rationem eaque casu fieri dicat	<i>Cic. Nat. D.</i>	2.97	y	y
<b>negabant</b> immortalis esse <b>ullos</b> qui aliquando homines fuissent	<i>Cic. Nat. D.</i>	3.49	y	y
M. Crassus <b>negabat ullam</b> satis magnam pecuniam esse ei	<i>Cic. Off.</i>	1.25	y	y
saepe testatur <b>negatque ullam</b> pestem maiorem in vitam hominum invasisse quam eorum opinionem	<i>Cic. Off.</i>	3.34	y	y
<b>negat</b> Calenus rem <b>ullam</b> novam adlatam esse.	<i>Cic. Phil.</i>	12.3	y	y
quod <b>negant</b> sapientem suscepturum <b>ullam</b> rei publicae partem	<i>Cic. Rep.</i>	1.10	y	y

Xenocrates animi figuram et quasi corpus <b>negavit</b> esse <b>ullum</b> , numerum dixit esse, cuius vis, ut iam ante Pyt	<i>Cic. Tusc.</i>	1.20	y	y
<b>negat ullam</b> in sapientem vim esse fortunae, tenuem victum antefert copioso	<i>Cic. Tusc.</i>	3.49	y	y
<b>negat ullum</b> esse tempus, quo sapiens non beatus sit.	<i>Cic. Tusc.</i>	3.49	y	y
<b>negant</b> ab <b>ullo</b> philosopho quicquam dictum esse languidius.	<i>Cic. Tusc.</i>	5.25	y	y
<b>nego</b> tibi ipsi <b>ullum</b> nummum esse numeratum	<i>Cic. Ver.</i>	2.2.26	y	y
<b>negant</b> id Syracusani per religiones sacrorum <b>ullo</b> modo fieri posse	<i>Cic. Ver.</i>	2.2.127	y	y
istam se cellam atque istam aestimationem <b>negant ullo</b> modo ferre posse.	<i>Cic. Ver.</i>	2.3.203	y	y
<b>nego</b> in Sicilia tota, tam locupleti, tam vetere provincia, tot oppidis, tot familiis tam copiosis, <b>ullum</b> argenteum vas, ullum Corinthium aut Deliacum fuisse	<i>Cic. Ver.</i>	2.4.1	y	y
<b>nego</b> in Sicilia tota, tam locupleti, tam vetere provincia, tot oppidis, tot familiis tam copiosis, ullum argenteum vas, <b>ullum</b> Corinthium aut Deliacum fuisse	<i>Cic. Ver.</i>	2.4.1	y	y
<b>nego</b> in Sicilia tota, tam locupleti, tam vetere provincia, tot oppidis, tot familiis tam copiosis, ullum argenteum vas, ullum Corinthium aut Deliacum fuisse, <b>ullam</b> gemmam aut margaritam	<i>Cic. Ver.</i>	2.4.1	y	y
<b>nego</b> in Sicilia tota, tam locupleti, tam vetere provincia, tot oppidis, tot familiis tam copiosis, ullum argenteum vas, ullum Corinthium aut Deliacum fuisse, ullam gemmam aut margaritam, quicquam ex auro aut ebore factum, signum <b>ullum</b> aeneum, marmoreum, eburneum	<i>Cic. Ver.</i>	2.4.1	y	y
<b>nego ullam</b> picturam neque in tabula neque in textili	<i>Cic. Ver.</i>	2.4.1	y	y
<b>negat ullo</b> modo fieri posse	<i>Cic. Ver.</i>	2.4.85	y	y
Sacerdos parentem eius <b>negat ullius</b> scelere posse violari	<i>Curt.</i>	4.7.27	y	y
qui <b>negant ullam</b> avem praeter ficedulam totam comesse oportere	<i>Gell.</i>	15.8.2	y	y

qui cum ex ueteribus tribunis <b>negaret</b> se <b>ullius</b> rationem habiturum	Liv.	3.64.5	y	y
qua <b>negarent</b> oportere extra Peloponnesum <b>ullam</b> urbem muros habere	Nep. <i>Them.</i>	6.2	y	y
<b>negát</b> ponere álio modo <b>úlo</b> profécto, nisi se sciát vilicó non datum íri.	Pl. <i>Cas.</i>	697	y	y
<b>negabisque ullius</b> pretii esse, cuius pretium reposcaris.	Plin. <i>Ep.</i>	7.12.6	y	y
praeterea <b>negat ullum</b> atrocius esse animal ad conficiendum hominem in aqua.	Plin. <i>Nat.</i>	9.50	y	y
et insectis <b>negatur</b> aequae esse <b>ulla</b> cartilagine a aquatiliis habent medullam in spina	Plin. <i>Nat.</i>	11.90	y	y
qui <b>negant</b> volucrem <b>ullam</b> sine pedibus esse	Plin. <i>Nat.</i>	11.112	y	y
artemisiarum quoque secum habentibus <b>negant</b> nocere mala medicamenta aut bestiam <b>ullam</b> , ne solem quidem	Plin. <i>Nat.</i>	25.67	y	y
lysippum sicyonium duris <b>negat ullius</b> fuisse discipulum	Plin. <i>Nat.</i>	34.26	y	y
<b>negas</b> te <b>ullum</b> munus accepisse?	Sen. <i>Ben.</i>	4.6.2	y	y
<b>Negas</b> , " inquit, " <b>ullum</b> dare beneficium eum, qui me gratuita nave per flumen Padum tulit?"	Sen. <i>Ben.</i>	6.19.1	y	y
et <b>negauit ullam</b> aliam illi causam esse persequendi tyrannicidam nisi libertatem publicam	Sen. <i>Controv.</i>	1.7.13	y	y
primum <b>negauit ullam</b> esse prodicionem	Sen. <i>Controv.</i>	7.7.10	y	y
<b>negabat</b> itaque <b>ulli</b> se placere posse nisi totum;	Sen. <i>Controv.</i>	10.pr.15	y	y
quod <b>negatis ullum</b> esse aliud honesto bonum	Sen. <i>Ep.</i>	74.22	y	y
ut primum <b>negaret ullas</b> in Oceano aut trans Oceanum esse terras habitabiles.	Sen. <i>Suas.</i>	1.10	y	y
ac <b>negante</b> quodam per contumeliam facile hoc <b>ulli</b> feminae fore, responderit quasi adludens	Suet. <i>Jul.</i>	22.2	y	y
uerum neque senatu interueniente et aduersariis <b>negantibus ullam</b> se de re	Suet. <i>Jul.</i>	30.1	y	y

publica facturos pactionem, transiit in citeriorem Galliam				
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## C2 *Nego* licenses *umquam*

Below is listed each instance in the *Perseus* corpus where *nego* ‘deny’ licenses *umquam* ‘ever.’ A search was conducted on 3/7/21 over the entire corpus listed in Appendix A, with the query ‘lemma:nego umquam,’ anywhere in the same sentence.

As indicated in Section 2.3.1.3, in each case, *nego* precedes-and-commands *umquam*.

Excerpt	Text	Passage	<i>Nego</i> licenses <i>umquam</i> ?	<i>Nego</i> precedes-and-commands <i>umquam</i> ?
<b>negansque umquam</b> habuisse, uxoris colli decus vel capitis poscebatur.	Amm.	20.4.17	y	y
sed enim uersutiam tam insidiosam, tam admirabili scelere conflatam <b>negabis</b> te <b>umquam</b> cognouisse.	Apul. <i>Apol.</i>	81	y	y
introducitur Vettius primo <b>negabat</b> se <b>umquam</b> cum Curione constitisse, neque id sane diu	Cic. <i>Att.</i>	2.24.2	y	y
<b>nego</b> usquam <b>umquam</b> fuisse maiores	Cic. <i>Clu.</i>	111	y	y
quod eum <b>negasti</b> , qui non cito quid didicisset, <b>umquam</b> omnino posse perdiscere	Cic. <i>de Orat.</i>	3.146	y	y
<b>negat umquam</b> se a te in Deiotari tetrarchia pedem discessisse	Cic. <i>Deiot.</i>	42	y	y
qui tibi venit in mentem <b>negare</b> Papirium quemquam <b>umquam</b> nisi plebeium fuisse?	Cic. <i>Fam.</i>	9.21.2	y	y
qui omnia ponat in voluptate, et tamen non <b>negat</b> libenter cenasse <b>umquam</b> Gallonium— mentiretur enim—, sed bene.	Cic. <i>Fin.</i>	2.24	y	y
recte ergo is <b>negat umquam</b> bene cenasse Gallonium, recte miserum	Cic. <i>Fin.</i>	2.25	y	y
<b>nego umquam</b> post sacra constituta	Cic. <i>Har.</i>	13	y	y

itaque Timagoras Epicureus <b>negat</b> sibi <b>umquam</b> cum oculum torsisset duas ex lucerna flammulas esse visas	Cic. <i>Luc.</i>	80	y	y
si <b>negem</b> me <b>umquam</b> ad te istas litteras misisse	Cic. <i>Phil.</i>	2.8	y	y
<b>negavit</b> se triumphi cupidum <b>umquam</b> fuisse.	Cic. <i>Pis.</i>	56	y	y
<b>negat</b> se <b>umquam</b> sensisse senectutem suam imbecillioem factam quam adulescentia fuisset.	Cic. <i>Sen.</i>	30	y	y
<b>negare umquam</b> laetitia adfici posse insipientem, quod nihil umquam haberet boni	Cic. <i>Tusc.</i>	4.66	y	y
<b>negaretque umquam</b> beatiorem quemquam fuisse	Cic. <i>Tusc.</i>	5.61	y	y
<b>negavit umquam</b> se bibisse iucundius.	Cic. <i>Tusc.</i>	5.97	y	y
<b>negat</b> Socraten de caeli atque naturae causis rationibusque <b>umquam</b> disputavisse	Gell.	14.3.5	y	y
quosque <b>neges umquam</b> posse iacere, cadunt.	Ov. <i>Am.</i>	1.9.30	y	y
Sanun es, qui istuc exoptes aut <b>neges</b> te <b>umquam</b> pedem in eas aedis intulisse ubi habitas, insanissime?	Pl. <i>Men.</i>	817	y	y
<b>umquam</b> solam hanc alitem fulmine exanimatam	Plin. <i>Nat.</i>	10.4	y	y
nil suis bonus <b>negavit</b> Christus <b>umquam</b> testibus	Prudent. <i>Perist.</i>	1	y	y
Idem enim <b>negat umquam</b> virtutem esse sine voluptate	Sen. <i>Ep.</i>	85.18	y	y

### C3 *Nemo* licenses *ullus*

Below is listed each instance in the *Perseus* corpus where *nemo* ‘no one’ licenses *ullus* ‘any.’ A search was conducted on 3/7/21 over the entire corpus listed in Appendix A, with the query ‘lemma:nemo lemma:ullus,’ anywhere in the same sentence.

As indicated in Section 2.3.1.3, in each case, *nemo* precedes-and-commands *ullus*.

<b>Excerpt</b>	<b>Text</b>	<b>Passage</b>	<b>Nemo licenses ullus?</b>	<b>Nemo precedes-and-commands ullus?</b>
ad urbem ita veni ut <b>nemo ullius</b> ordinis homo nomenclatori notus fuerit qui mihi obviam non venerit	Cic. <i>Att.</i>	4.1.5	y	y
quo <b>neminem</b> umquam melius <b>ullam</b> oravisse capitis causam	Cic. <i>Brut.</i>	12.47	y	y
<b>nemo</b> rem <b>ullam</b> contrahebat	Cic. <i>Clu.</i>	41	y	y
<b>nemo</b> umquam te placavit inimicus qui <b>ullas</b> resedissee in te simultatis reliquias senserit.	Cic. <i>Deiot.</i>	9	y	y
civitatem vero <b>nemo</b> umquam <b>ullo</b> populi iussu amittet invitus.	Cic. <i>Dom.</i>	78	y	y
civis est <b>nemo</b> tanto in populo, extra contaminatam illam et cruentam P. Clodi manum, qui rem <b>ullam</b> de meis bonis attigerit	Cic. <i>Dom.</i>	108	y	y
ex quibus <b>nemo</b> rem <b>ullam</b> attigit qui non omnium iudicio sceleratissimus haberetur	Cic. <i>Dom.</i>	108	y	y
in qua <b>neminem</b> prudentem hominem res <b>ulla</b> delectet	Cic. <i>Fam.</i>	5.17.3	y	y
Min qua <b>nemo</b> nostrum post Afranium superatum bellum <b>ullum</b> fore putaret,	Cic. <i>Fam.</i>	9.13.1	y	y
sic <b>nemo ulla</b> in re potest id	Cic. <i>Fin.</i>	3.29	y	y
<b>neminem</b> tamen adeo infatuare potuit ut ei nummum <b>ullum</b> crederet.	Cic. <i>Flac.</i>	47	y	y
<b>nemo</b> est civis Romanus qui sibi <b>ulla</b> excusatione utendum putet	Cic. <i>Font.</i>	46	y	y
ut coarguant <b>neminem ulla</b> de re posse contendere	Cic. <i>Luc.</i>	35	y	y
et quem ad modum <b>nemini</b> illorum molestus <b>ulla</b> in me umquam fuisti	Cic. <i>Pet.</i>	5.20	y	y
omnino <b>nemo ullius</b> rei fuit emptor cui defuerit hic venditor.	Cic. <i>Phil.</i>	2.97	y	y
ex vobis audio <b>nemini</b> civi <b>ullam</b> quo minus adesset satis iustam excusationem esse visam	Cic. <i>Pis.</i>	36	y	y

<b>neminem</b> umquam est hic ordo complexus honoribus et beneficiis suis qui <b>ullam</b> dignitatem praestabiliorem ea quam per vos esset adeptus putarit	Cic. <i>Prov.</i>	38	y	y
quorum regum summo imperio <b>nemo</b> umquam verbum <b>ullum</b> asperius audivit.	Cic. <i>Q. fr.</i>	1.2.7	y	y
Quem vi/dit <b>nemo ulli</b> i/ngemescente/m malo!	Cic. <i>Tusc.</i>	2.21	y	y
<b>nemo</b> sit qui te <b>ullo</b> cruciatu esse indignum putet	Cic. <i>Vat.</i>	19	y	y
quorum ex testimoniis cognoscere potuistis tota Sicilia per triennium <b>neminem ulla</b> in civitate senatorem factum esse gratis	Cic. <i>Ver.</i>	2.2.120	y	y
ad quod facinus <b>nemo</b> praeter te <b>ulla</b> pecunia adduci potuerit	Cic. <i>Ver.</i>	2.5.11	y	y
<b>nemo</b> est qui <b>ullam</b> spem salutis reliquam esse arbitretur.	Cic. <i>Ver.</i>	2.5.12	y	y
ut <b>nemini</b> minus expediret <b>ullum</b> in Sicilia tumultum aut bellum commoveri	Cic. <i>Ver.</i>	2.5.20	y	y
ut <b>nemo</b> tam rusticanus homo L. Lucullo [et ] M. Cotta consulibus Romam ex <b>ullo</b> municipio vadimoni causa venerit	Cic. <i>Ver.</i>	2.5.34	y	y
<b>nemo ullius</b> nisi fugae memor.	Liv.	2.59.8	y	y
<b>nemo</b> in Epirum venit, cui res <b>ulla</b> defuerit	Nep. <i>Att.</i>	11.1	y	y
ut <b>nemo</b> interpellat adversus eum de <b>ullo</b> negotio nec quisquam ei molestus sit de ulla ratione	NT	1 Macc.10	y	y
ut Iudaei utantur cibis et legibus suis sicut et prius et <b>nemo</b> eorum <b>ullo</b> modo molestiam patiat de his quae per ignorantiam gesta sunt	NT	2 Macc.11	y	y
ecce nunc tempus acceptabile ecce nunc dies salutis <b>nemini</b> dantes <b>ullam</b> offensionem ut non vituperetur ministerium	NT	2 Cor.6	y	y
<b>nemo</b> umquam <b>ulli</b> artium validius favit.	Plin. <i>Nat.</i>	30.4	y	y
<b>nemo</b> rem <b>ullam</b> contrahebat	Quint.	9.3.38	y	y

<b>nemo</b> enim tam expers erit sensus ac sanitatis, ut fortunam <b>ulli</b> queratur luctum intulisse	Sen. <i>Cons. Polyb.</i>	11.15.2	y	y
<b>Nemo ullum</b> auferat diem nihil dignum tanto impendio redditurus	Sen. <i>Tranq.</i>	9.1.11	y	y
Itaque <b>nemo</b> artem <b>ullam</b> aliam conatur domi facere	Vitr.	6.preface.7	y	y

#### C4 *Nemo* licenses *umquam*

Below is listed each instance in the *Perseus* corpus where *nemo* ‘no one’ licenses *umquam* ‘ever.’ A search was conducted on 3/7/21 over the entire corpus listed in Appendix A, with the query ‘lemma:nemo lemma:umquam,’ anywhere in the same sentence. As indicated in Section 2.3.1.3, in each case, *nemo* precedes-and-commands *umquam*.

Excerpt	Text	Passage	<i>Nemo</i> licenses <i>umquam</i> ?	<i>Nemo</i> precedes-and-commands <i>umquam</i> ?
probro <b>nemini umquam</b> fuit.	Amm.	30.8.7	y	y
<b>neminem umquam</b> superbia inflauit	Apul. <i>Apol.</i>	18	y	y
reliquit enim te quam non relicturam <b>nemo umquam</b> poterit esse securus.	Boethius	2.P1	y	y
cui <b>nemo umquam</b> ueterum refragatus est	Boethius	5.P1	y	y
moveor enim tali amico orbatus, qualis, ut arbitror, <b>nemo umquam</b> erit, ut confirmare possum, nemo certe fuit.	Cic. <i>Amic.</i>	10	y	y
<b>nemo umquam</b> animo aut spe maiora suscipiet qui sibi non illius memoriam	Cic. <i>Amic.</i>	102	y	y
hoc adfirmo, <b>neminem umquam</b> tanta calamitate esse adfectum, nemini mortem magis optandam fuisse.	Cic. <i>Att.</i>	3.7.2	y	y
ita sim adflictus ut <b>nemo umquam</b> , quod tute intellegis.	Cic. <i>Att.</i>	3.12.1	y	y
me adflictum videas ut <b>neminem umquam</b> nec videris nec audieris.	Cic. <i>Att.</i>	3.13.2	y	y
<b>nemo</b> enim <b>umquam</b> tantum de urbanis praediis detraxit.	Cic. <i>Att.</i>	7.17.1	y	y
iam illa HS LX quae scribis <b>nemo</b> mihi <b>umquam</b> dixit ex dote esse detracta	Cic. <i>Att.</i>	11.2.2	y	y

<b>nemo umquam</b> neque poeta neque orator fuit qui quemquam meliorem quam se arbitraretur.	<i>Cic. Att.</i>	14.20.3	y	y
hoc vero <b>neminem umquam</b> audivi!	<i>Cic. Att.</i>	15.11.2	y	y
<b>nemo</b> doctus <b>umquam</b> (multa autem de hoc genere scripta sunt) mutationem consili inconstantiam dixit	<i>Cic. Att.</i>	16.7.2	y	y
peritus vero nostri moris ac iuris <b>nemo umquam</b> , qui hanc civitatem retinere vellet, in aliam se civitatem dicavit.	<i>Cic. Balb.</i>	30	y	y
<b>nemo umquam</b> est de civitate accusatus	<i>Cic. Balb.</i>	52	y	y
in maximis nostris malis atque discordiis <b>neminem umquam</b> alterius rationis ac partis non re, non verbo, non vultu	<i>Cic. Balb.</i>	58	y	y
quo <b>neminem umquam</b> melius ullam oravisse capitis causam	<i>Cic. Brut.</i>	12.47	y	y
eum enim magistratum <b>nemo umquam</b> Scaevolarum petivit.	<i>Cic. Brut.</i>	43.161	y	y
sed <b>nemo umquam</b> urbanitate, nemo lepore, nemo suavitate conditor.	<i>Cic. Brut.</i>	48.177	y	y
sic <b>nemo umquam</b> interdixit; novum est, non dico inusitatum, verum omnino inauditum.	<i>Cic. Caec.</i>	36	y	y
nam quod est obiectum municipibus esse adulescentem non probatum suis, <b>nemini umquam</b> praesenti Praestutiani	<i>Cic. Cael.</i>	5	y	y
obiurgavit M. Caelium, sicut <b>neminem umquam</b> parens	<i>Cic. Cael.</i>	25	y	y
postea <b>nemini umquam</b> concessit aequalium plus ut in foro	<i>Cic. Cael.</i>	74	y	y
<b>neminem umquam</b> maioribus criminibus gravioribus testibus esse in iudicium vocatum	<i>Cic. Clu.</i>	9	y	y
<b>nemo</b> illum ex tam multis cognatis et adfinibus tutorem <b>umquam</b> liberis suis scripsit	<i>Cic. Clu.</i>	41	y	y
quae res <b>nemini umquam</b> fraudi fuit	<i>Cic. Clu.</i>	91	y	y
<b>neminem umquam</b> esse confirmo.	<i>Cic. Clu.</i>	157	y	y
quamquam tibi par mea sententia <b>nemo umquam</b> fuit	<i>Cic. de Orat.</i>	1.122	y	y

<b>nemo umquam</b> adsequetur	<i>Cic. de Orat.</i>	1.134	y	y
qua tibi <b>nemo umquam</b> praestitit	<i>Cic. de Orat.</i>	1.263	y	y
etenim me dicentem qui audiret, <b>nemo umquam</b> tam sui despiciens	<i>Cic. de Orat.</i>	2.364	y	y
Crasso dicente <b>nemo</b> tam arrogans, qui similiter se <b>umquam</b> dicturum esse confideret.	<i>Cic. de Orat.</i>	2.364	y	y
<b>nemo enim umquam</b> est oratorem, quod Latine loqueretur, admiratus	<i>Cic. de Orat.</i>	3.52	y	y
quos <b>nemo</b> oratorum istorum <b>umquam</b> attigit	<i>Cic. de Orat.</i>	3.81	y	y
<b>nemo umquam</b> te placavit inimicus qui ullas resedissee in te similtatis reliquias senserit.	<i>Cic. Deiot.</i>	9	y	y
<b>nemone</b> igitur <b>umquam</b> alius ovum somniavit?	<i>Cic. Div.</i>	2.134	y	y
<b>nemo umquam</b> tulit	<i>Cic. Dom.</i>	43	y	y
civitatem vero <b>nemo umquam</b> ullo populi iussu amittet invitus	<i>Cic. Dom.</i>	78	y	y
<b>nemo umquam</b> sanus exsulem appellavit	<i>Cic. Dom.</i>	83	y	y
ambulationis postis <b>nemo umquam</b> tenuit in dedicando	<i>Cic. Dom.</i>	121	y	y
etenim si <b>nemo umquam</b> praedo tam barbarus atque immanis fuit	<i>Cic. Dom.</i>	140	y	y
qua iniuria <b>nemo umquam</b> in aliquo magistratu improbissimus civis adfectus est	<i>Cic. Fam.</i>	5.2.7	y	y
hominem esse <b>neminem</b> , qui <b>umquam</b> mentionem tui sine tua summa laude fecerit	<i>Cic. Fam.</i>	13.24.2	y	y
ut <b>nemini</b> se intellegat commendatiorem <b>umquam</b> fuisse	<i>Cic. Fam.</i>	13.49	y	y
ut <b>nemo umquam</b> vinulentum illum, nemo in eo libidinis vestigium viderit.	<i>Cic. Fat.</i>	10	y	y
quam <b>nemo umquam</b> voluptatem appellavit, appellat	<i>Cic. Fin.</i>	2.30	y	y

Nam <b>nemo</b> haec <b>umquam</b> est transvectus caerulea cursu	Cic. <i>Fin.</i>	5.49	y	y
<b>neminem umquam</b> putavi per eos ipsos periculum huius fortunae atque insidias creaturum	Cic. <i>Flac.</i>	2	y	y
Cum vero is quem <b>nemo</b> vestrum vidit <b>umquam</b>	Cic. <i>Flac.</i>	40	y	y
<b>nemo umquam</b> adiit	Cic. <i>Har.</i>	37	y	y
<b>nemo umquam</b> superiorum non modo expresserat	Cic. <i>Luc.</i>	77	y	y
hoc brevissime dicam, <b>neminem umquam</b> tam impudentem fuisse	Cic. <i>Man.</i>	48	y	y
<b>neminem umquam</b> hominem homini cariorum fuisse quam te sibi	Cic. <i>Mil.</i>	68	y	y
in qua <b>nemini umquam</b> infimo maiores nostri patronum deesse voluerunt.	Cic. <i>Mur.</i>	10	y	y
<b>nemo</b> gustavit <b>umquam</b> cubans	Cic. <i>Mur.</i>	74	y	y
sed <b>nemo umquam</b> docebit	Cic. <i>Nat. D.</i>	2.87	y	y
virtutem autem <b>nemo umquam</b> acceptam deo rettulit	Cic. <i>Nat. D.</i>	3.86	y	y
si exploratum quidem habeat id omnino <b>neminem umquam</b> suspicaturum.	Cic. <i>Off.</i>	3.75	y	y
<b>nemo umquam</b> multitudini fuit carior.	Cic. <i>Off.</i>	3.80	y	y
<b>Nemo</b> is, inquit, <b>umquam</b> fuit.	Cic. <i>Orat.</i>	29	y	y
hoc modo dicere <b>nemo umquam</b> noluit	Cic. <i>Orat.</i>	70.234	y	y
et quem ad modum <b>nemini</b> illorum molestus ulla in me <b>umquam</b> fuisti	Cic. <i>Pet.</i>	5.20	y	y
se probatos <b>nemini umquam</b> fore.	Cic. <i>Pet.</i>	6.21	y	y
<b>nemo</b> credet <b>umquam</b>	Cic. <i>Phil.</i>	2.36	y	y
<b>nemo umquam</b> puer emptus libidinis causa tam fuit in domini potestate quam tu	Cic. <i>Phil.</i>	2.45	y	y
non modo hic latro quem clientem habere <b>nemo</b> velit sed quis <b>umquam</b> tantis opibus	Cic. <i>Phil.</i>	6.12	y	y
tempus habes tale quale <b>nemo</b> habuit <b>umquam</b> .	Cic. <i>Phil.</i>	7.27	y	y

est autem ita adfectus ut <b>nemo umquam</b> unici filii mortem magis doluerit quam ille maeret patris.	<i>Cic. Phil.</i>	9.12	y	y
qua <b>nemo umquam</b> ignominia notaretur	<i>Cic. Pis.</i>	45	y	y
ut <b>nemo umquam</b> prior eam tulerit	<i>Cic. Planc.</i>	49	y	y
sed <b>nemo umquam</b> sic egit ut tu	<i>Cic. Planc.</i>	60	y	y
quas nationes <b>nemo umquam</b> fuit quin frangi domarique cuperet.	<i>Cic. Prov.</i>	33	y	y
<b>neminem umquam</b> est hic ordo complexus honoribus et beneficiis suis	<i>Cic. Prov.</i>	38	y	y
<b>nemo umquam</b> hic potuit esse princeps qui maluerit esse popularis.	<i>Cic. Prov.</i>	38	y	y
quorum regum summo imperio <b>nemo umquam</b> verbum ullum asperius audivit.	<i>Cic. Q. fr.</i>	1.2.7	y	y
quoniam in tantum luctum laboremque detrusus es quantum <b>nemo umquam</b>	<i>Cic. Q. fr.</i>	1.4.4	y	y
ne is de cuius officio <b>nemo umquam</b> dubitavit	<i>Cic. Quinct.</i>	99	y	y
<b>neminem umquam</b> adhuc de se esse confessum	<i>Cic. Rab. Perd.</i>	23	y	y
ita contendo, <b>neminem umquam</b> 'Qvo ea pecunia pervenisset ' causam dixisse	<i>Cic. Rab. Post.</i>	9	y	y
quo <b>nemo</b> melior <b>umquam</b> fuit	<i>Cic. Rab. Post.</i>	48	y	y
ut intellegere possitis <b>neminem umquam</b> tanta eloquentia fuisse	<i>Cic. Red. Pop.</i>	5	y	y
inrisit squalorem vestrum et luctum gratissimae civitatis, fecitque, quod <b>nemo umquam</b> tyrannus	<i>Cic. Red. Sen.</i>	12	y	y
quam opinionem <b>nemo umquam</b> mortalis adsequi potuit sine eximia virtutis gloria.	<i>Cic. Rep.</i>	2.17	y	y
<b>nemo umquam</b> mihi, Scipio, persuadebit	<i>Cic. Sen.</i>	82	y	y
qui per se pungere <b>neminem umquam</b> potuissent	<i>Cic. Sest.</i>	24	y	y

<b>neminem umquam</b> fore qui auderet suscipere contra improbos civis salutem rei publicae	Cic. <i>Sest.</i>	49	y	y
<b>nemo</b> huic ipsi nostro C. Mario, cum ei multi inviderent, obiecit <b>umquam</b>	Cic. <i>Sul.</i>	23	y	y
<b>nemo umquam</b> me tenuissima suspicione perstrinxit	Cic. <i>Sul.</i>	46	y	y
<b>nemo umquam</b> sine magna spe immortalitatis se pro patria offerret ad mortem.	Cic. <i>Tusc.</i>	1.32	y	y
quorum non modo <b>nemo</b> exclamavit <b>umquam</b> , sed ne ingemuit quidem.	Cic. <i>Tusc.</i>	2.34	y	y
in qua sapiens <b>nemo</b> efficietur <b>umquam</b>	Cic. <i>Tusc.</i>	5.100	y	y
quas contra praeter te <b>nemo umquam</b> est facere conatus	Cic. <i>Vat.</i>	18	y	y
quod <b>nemo umquam</b> ademit	Cic. <i>Vat.</i>	35	y	y
ut <b>nemo umquam</b> post hominum memoriam paratior, vigilantior, compositor ad iudicium venisse videatur.	Cic. <i>Ver.</i>	1.1.32	y	y
<b>nemo umquam</b> sapiens proditori credendum putavit.	Cic. <i>Ver.</i>	2.1.38	y	y
<b>neminem umquam</b> hoc postea alium edixisse?	Cic. <i>Ver.</i>	2.1.117	y	y
<b>nemo umquam</b> reus tam nocens adducetur	Cic. <i>Ver.</i>	2.2.27	y	y
clamare omnes ex conventu <b>neminem umquam</b> in Sicilia fuisse Verrucium.	Cic. <i>Ver.</i>	2.2.188	y	y
quod <b>nemo umquam</b> post hominum memoriam fecit	Cic. <i>Ver.</i>	2.3.44	y	y
vivere <b>nemo umquam</b> nisi turpis impurusque voluisset	Cic. <i>Ver.</i>	2.3.65	y	y
ut eum <b>nemo umquam</b> in equo sedentem viderit	Cic. <i>Ver.</i>	2.5.27	y	y
quodque <b>nemo</b> visurum se <b>umquam</b> speraverat factum	Flor.	1.34.18.11	y	y
quod <b>nemo umquam</b> meminerat	Flor.	2.13.2.79	y	y
<b>neminem umquam</b> ab eo descivisse	Gell.	15.22.10	y	y

quod praeter tribunos plebi—et id ipsum pessimo exemplo— <b>nemo unquam</b> fecisset.	Liv.	3.35.8	y	y
ut <b>neminem unquam</b> Graeca lingua loquentem magis sint admirati.	Nep. <i>Di.</i>	1.5	y	y
quas <b>nemo unquam</b> cum exercitu ante eum praeter Herculem Graium transierat	Nep. <i>Han.</i>	3.4	y	y
cui <b>nemo unquam</b> hominum sedit	NT	Luke.19	y	y
Deum <b>nemo</b> vidit <b>unquam</b> unigenitus Filius	NT	John.1	y	y
<b>nemini</b> servivimus <b>unquam</b>	NT	John.8	y	y
<b>nemo</b> enim <b>unquam</b> carnem suam odio habuit	NT	Eph.5	y	y
Deum <b>nemo</b> vidit <b>unquam</b>	NT	1 John.4	y	y
<b>Nemo unquam</b> convivarum per eandem ianuam emissus est	Petron. <i>Satyricon</i>	72	y	y
<b>Nemo unquam</b> tibi parem gratiam refert.	Petron. <i>Satyricon</i>	77	y	y
Amor ingenii <b>neminem unquam</b> divitem fecit.	Petron. <i>Satyricon</i>	83	y	y
quod <b>nemo unquam</b> homo antehac vidit	Pl. <i>Am.</i>	565	y	y
<b>Nemo</b> homo <b>unquam</b> ita arbitratus.	Pl. <i>Pre.</i>	207	y	y
<b>nemo unquam</b> ulli artium validius favit.	Plin. <i>Nat.</i>	30.4	y	y
quem <b>nemo</b> vidit <b>unquam</b>	Prudent. <i>Cath.</i>	6	y	y
<b>nemo</b> illum ex tam multis cognatis et adfinibus tutorem <b>unquam</b> liberis suis scripsit	Quint.	9.3.38	y	y
ut <b>nemo unquam</b> ab eo frustra auxilium petiverit.	Sal. <i>Cat.</i>	34	y	y
<b>nemo</b> enim <b>unquam</b> illum natum putavit.	Sen. <i>Apocol.</i>	3	y	y
<b>Neminem unquam</b> vidi tam benignum etiam levissimorum officiorum aestimatorem	Sen. <i>Ben.</i>	5.1.3	y	y
<b>Nemo</b> in summam nequitiam incidit, qui <b>unquam</b> haesit sapientiae	Sen. <i>Ben.</i>	7.19.6	y	y

<b>nemo</b> unus homo uni homini tam carus <b>umquam</b> fuit	Sen. <i>Clem.</i>	1.1.5	y	y
<b>nemo umquam</b> tardius periit	Sen. <i>Con. ex.</i>	4.3	y	y
<b>Nemo umquam</b> tam palam uxori uenenum dedit	Sen. <i>Con. ex.</i>	6.4	y	y
<b>Nemo umquam</b> raptor serius periit.	Sen. <i>Con. ex.</i>	8.6	y	y
<b>nemo umquam</b> quod cupiit deflet.	Sen. <i>Con. ex.</i>	8.6	y	y
Hoc <b>nemo</b> praestitit <b>umquam</b> Gallione nostro decentius.	Sen. <i>Controv.</i>	7.pr.5	y	y
quibus <b>nemo umquam</b> nisi dum disputat captus est?	Sen. <i>Ep.</i>	45.6	y	y
<b>nemo</b> me comitem tibi eripiet <b>umquam</b> .	Sen. <i>Phoen.</i>	53	y	y
<b>nemo umquam</b> amplius declamantem audiuit	Sen. <i>Suas.</i>	2.15	y	y
Valerius Messala tradit, <b>neminem umquam</b> libertinorum adhibitum ab eo cenae excepto Mena	Suet. <i>Aug.</i>	74.1	y	y
identidem diulgavit <b>neminem umquam</b> per adoptionem familiae Claudiae insertum.	Suet. <i>Cl.</i>	39.2	y	y
<b>nemo</b> enim <b>umquam</b> imperium flagitio quaesitum bonis artibus exercuit.	Tac. <i>Hist.</i>	1.30	y	y
<b>Nemini</b> ego plura acerba credo esse ex amore homini <b>unquam</b> oblata quam mihi.	Ter. <i>Hec.</i>	279	y	y
Hoc pro suis omni atrocitate dissipatis <b>nemo unquam</b> temptavit Christianus.	Tert. <i>Apol.</i>	46.16	y	y

## Appendix D. Quantifier scope

The complete data for the results presented in Section 2.3.2, regarding the precede-and-command constraint on quantifier scope, is presented below.

### D1 *Omnis ... aliquis*

Below is listed each instance in the *Perseus* corpus where *omnis* ‘every’ precedes-and-commands *aliquis* ‘some,’ separated by up to three words, due to time constraints. A search was conducted on 3/9/21 over the entire corpus listed in Appendix A, with the query ‘lemma:omnis lemma:aliquis.’

As indicated in Section 2.3.2.3–5, *omnis* preceding-and-commanding *aliquis* implies the former containing the latter in its scope, excepting certain cases of ellipsis.

Excerpt	Text	Passage	$\forall > \exists?$
et <b>omnibus</b> annis <b>aliqua</b> sanitatum miracula in eodem loco solent ad utilitatem eorum	Bede	2.16	y
<b>omnes</b> qui <b>aliquid</b> de ingeniis poterant iudicare cognitione atque hospitio dignum existimarunt.	Cic. <i>Arch.</i>	5	y
quocum <b>omnia</b> quae me cura <b>aliqua</b> adficiunt uno communicem	Cic. <i>Att.</i>	1.18.1	y
de re publica video te conligere <b>omnia</b> quae putes <b>aliquam</b> spem mihi posse adferre mutandarum rerum.	Cic. <i>Att.</i>	3.7.3	y
hanc vero iniquitatem <b>omnes</b> cum <b>aliqua</b> crudelitate coniunctam.	Cic. <i>Balb.</i>	62	?
non quo <b>omnes</b> sint procuratores qui <b>aliquid</b> nostri negoti gerunt	Cic. <i>Caec.</i>	58	y
ab <b>omnibus</b> quibus potuerit <b>aliqua</b> de causa esse notus.	Cic. <i>Cael.</i>	3	y
datur enim concessu <b>omnium</b> huic <b>aliqui</b> ludus aetati	Cic. <i>Cael.</i>	28	y
nisi <b>omnia</b> quae cum turpitudine <b>aliqua</b> dicerentur in istam quadrare apte viderentur.	Cic. <i>Cael.</i>	69	y
<b>omnes</b> abhorrebant, omnes ut <b>aliquam</b> immanem ac perniciosam bestiam pestemque fugiebant.	Cic. <i>Clu.</i>	41	?
<b>omnes</b> ut <b>aliquam</b> immanem ac perniciosam bestiam pestemque fugiebant.	Cic. <i>Clu.</i>	41	?
commotus Crassus surrexit <b>omnesque</b> admirati maiorem <b>aliquam</b> esse causam eorum adventus suspicati sunt.	Cic. <i>de Orat.</i>	2.12	y
maxime necessarius, homo et magnis meis beneficiis devinctus et prope <b>omnium</b> , qui mihi debere <b>aliquid</b> videntur, gratissimus	Cic. <i>Fam.</i>	13.27.2	y

nostri non ex <b>omni</b> , quod aestimatione <b>aliqua</b> dignum sit, compleri vitam beatam putent.	Cic. <i>Fin.</i>	3.41	y
eorum <b>omnium</b> est <b>aliqua</b> summa facienda	Cic. <i>Fin.</i>	4.32	?
existimavique in <b>omnibus</b> rebus esse <b>aliquid</b> optimum	Cic. <i>Orat.</i>	11.36	y
nec quicquam est aliud dicere nisi <b>omnis</b> aut certe plerasque <b>aliqua</b> specie inluminare sententias	Cic. <i>Orat.</i>	39.136	y
<b>omnes</b> , qui <b>aliquid</b> scire videntur, tamquam domini timentur	Cic. <i>Parad.</i>	40	y
sed tamen in <b>omni</b> calamitate retinetur <b>aliquid</b> vestigium libertatis.	Cic. <i>Rab. Perd.</i>	16	?
cum plebes publica calamitate inpendiis debilitata deficeret, salutis <b>omnium</b> causa <b>aliqua</b> sublevatio et medicina quaesita est.	Cic. <i>Rep.</i>	2.59	?
nam cum <b>omnibus</b> horis <b>aliquid</b> atrociter fieri videmus aut audimus,	Cic. <i>S. Rosc.</i>	154	y
Testimonium autem nunc dicimus <b>omne</b> quod ab <b>aliqua</b> re externa sumitur ad faciendam fidem.	Cic. <i>Top.</i>	19.73	y
Sed <b>omnis</b> quaestio earum <b>aliqua</b> de re est quibus causae continentur	Cic. <i>Top.</i>	21.80	y
putasti, te in praetura atque imperio tot res tam pretiosas, <b>omnis</b> denique res quae <b>alicuius</b> preti fuerint, tota ex provincia coemisse?	Cic. <i>Ver.</i>	2.4.8	y
quod <b>omnis</b> qui artifici <b>aliquid</b> habuerant aut formae removerat atque abduxerat	Cic. <i>Ver.</i>	2.5.71	y
sed <b>omnia</b> prorsum ad <b>aliquid</b> referri taliaque videri qualis sit eorum species dum videntur	Gell.	11.5.7	y
et ut <b>omnium</b> ordinum uiribus <b>aliquid</b> ex nouo populo adiceretur equitum decem turmas ex Albanis legit	Liv.	1.30.3	y
et <b>omnis</b> populus qui habebat <b>aliquam</b> quaestionem egrediebatur	NT	Exod.33	y
<b>Omnibus</b> ergo dandum est <b>aliquid</b> quod teneant	Plin. <i>Ep.</i>	1.20.13	y
Nam cum est <b>omnium</b> officiorum finis <b>aliquis</b>	Plin. <i>Ep.</i>	3.4.8	y
Equidem <b>omnes</b> qui <b>aliquid</b> in studiis faciunt venerari etiam mirarique soleo	Plin. <i>Ep.</i>	6.17.5	y
Non <b>omnes</b> homines <b>aliquo</b> errore ducuntur? Non hic in illo sibi, in hoc alius indulget?"	Plin. <i>Ep.</i>	9.12.1	y
<b>Omnes</b> ego qui magnum <b>aliquid</b> memorandumque fecerunt,	Plin. <i>Ep.</i>	9.19.3	y
iussit inferre.	Plin. <i>Ep.</i>	10.112.3	y

Superest ergo, ut ipse dispicias, an in <b>omnibus</b> civitatibus certum <b>aliquid</b> omnes, qui deinde buleutae legentur, debeant pro introitu dare.			
nec dubium est <b>omnes</b> istos famam novitate <b>aliqua</b> aucupantes anima statim nostra negotiari.	Plin. <i>Nat.</i>	29.3	y
fore libri videbantur, quos ab ipsis dicendi velut incunabulis, per <b>omnes</b> , quae modo <b>aliquid</b> oratori futuro conferant, artis ad summam eius operis perducere destinabamus	Quint.	1.pr.6	y
danda est tamen <b>omnibus aliqua</b> remissio	Quint.	1.3.8	y
cantatur ac saltatur per <b>omnes</b> gentes <b>aliquo</b> modo.	Quint.	2.17.10	y
aiunt etiam <b>omnes</b> artes habere finem <b>aliquem</b> propositum, ad quem tendant	Quint.	2.17.22	y
omnibus aut in plerisque eorum. ergo cum <b>omnis</b> causa contineatur <b>aliquo</b> statu	Quint.	3.6.1	y
praeter haec in <b>omni</b> partitione est utique <b>aliquid</b> potentissimum	Quint.	4.5.8	y
sed in <b>omnes aliquid</b> ex his cadit.	Quint.	7.2.50	y
nisi <b>omnes</b> aut certe plerasque <b>aliqua</b> specie illuminare sententias.	Quint.	9.1.40	y
ratus ex <b>omnibus</b> aequae <b>aliquos</b> ab tergo hostibus venturos.	Sal. <i>Jug.</i>	101	y
Hoc commune est patri eum <b>omnibus</b> , qui vitam <b>alicui</b> dederunt;	Sen. <i>Ben.</i>	3.35.4	y
sic in <b>omni</b> negotio, etiam cum <b>aliquid</b> , quod prodesset sibi, fecerit, non tamen debet referre gratiam sibi	Sen. <i>Ben.</i>	5.8.2	y
erat a paucis etiam iustam excusationem non accipi quam ab <b>omnibus aliquam</b> temptari.	Sen. <i>Ben.</i>	7.16.3	y
Scio a praeceptis incipere <b>omnis</b> , qui monere <b>aliquem</b> volunt, in exemplis desinere.	Sen. <i>Cons. Marc.</i>	6.2.1	y
contumeliosus mira libidine ferebatur <b>omnis aliqua</b> nota feriendi, ipse materia risus benignissima	Sen. <i>Constant.</i>	2.18.1	y
<b>Omnes aliquid</b> belli dixerunt illo loco quo deprensus sunt adulteri et dimissi.	Sen. <i>Controv.</i>	1.4.10	y
<b>omnes aliquid</b> ad uos inbecilli, alter alterius onera, detulimus:	Sen. <i>Controv.</i>	2.4.12	y
<b>Omnes</b> declamatores aiebat uoluisse <b>aliquid</b> noui dicere illo loco quo nominabat nouerca filiam consciam.	Sen. <i>Controv.</i>	8.6.16	y
	Sen. <i>Controv.</i>	10.pr.3	y

Pleraeque actiones malae, in <b>omnibus</b> tamen <b>aliquid</b> magni neclectique ingeni uestigium extabat.			
Illud autem vide, ne ista lectio auctorum multorum et <b>omnis</b> generis voluminum habeat <b>aliquid</b> vagum et instabile.	Sen. <i>Ep.</i>	2.2	y
noster error inposuit, et vocentur, quo turpius non sint— <b>omnibus</b> rebus tuis desset <b>aliquid</b>	Sen. <i>Ep.</i>	107.1	y
Illud probo, quod <b>omnia</b> ad <b>aliquem</b> profectum redigis et tunc tantum offenderis	Sen. <i>Ep.</i>	124.1	y
<b>omnis</b> scientia atque ars <b>aliquid</b> debet habere manifestum sensuque comprehensum,	Sen. <i>Ep.</i>	124.5	y
colit hic reges, calcet ut <b>omnes</b> perdatque <b>aliquos</b> nullumque levet	Sen. <i>Herc. Oet.</i>	638	y
ad <b>omne</b> , quodcumque calore <b>aliquo</b> gerendum est, vocet.	Sen. <i>Ira</i>	3.3.5	y
aeque autem et ab esuriente et a sitiente et ab <b>omni</b> homine quem <b>aliqua</b> res urit.	Sen. <i>Ira</i>	3.9.5	y
<b>Omnis</b> itaque labor <b>aliquo</b> referatur, aliquo respiciat!	Sen. <i>Tranq.</i>	9.12.5	y
Nam nos <b>omnes</b> , quibus est alicunde <b>aliquis</b> obiectus labos	Ter. <i>Hec.</i>	286	y

## D2 *Aliquis ... omnis*

Below is listed each instance in the *Perseus* corpus where *aliquis* ‘some’ precedes-and-commands *omnis* ‘every,’ separated by up to three words, due to limited time. A search was conducted on 3/10/21 over the entire corpus listed in Appendix A, with the query ‘lemma:aliquis lemma:omnis.’

As indicated in Section 2.3.2.3–5, *aliquis* preceding-and-commanding *omnis* implies the former containing the latter in its scope, excepting certain cases of ellipsis.

Excerpt	Text	Passage	∃ > ∀?
<b>aliquis</b> qui <b>omnia</b> posse homines putet?	Boethius	4.P2	y
bellum <b>aliquod</b> relinqueretur quod <b>omnis</b> Gallia libenter sine praesenti periculo susciperet.	Caes. <i>Gal.</i>	8.49.2	y
Accedit uero <b>aliquid</b> difficultatis sub <b>omni</b> ictu	Cels. <i>Med.</i>	7.5.4a	y
da ponderosam <b>aliquam</b> epistulam plenam <b>omnium</b> non modo actorum sed etiam opinionum tuarum	Cic. <i>Att.</i>	2.11.1	y
eo multi etiam sine doctrina <b>aliquid omnium</b> generum atque artium consequuntur	Cic. <i>de Orat.</i>	2.38	y
Quoniam igitur <b>aliquid omnes</b> , quid Lucius noster?	Cic. <i>Fin.</i>	5.5	?
hisce <b>aliqua</b> fretus mora semper <b>omnis</b> aditus ad Sullam intercludere.	Cic. <i>S. Rosc.</i>	110	y

vique cogat <b>aliquem</b> de suis bonis <b>omnibus</b> decedere	Cic. Ver.	2.2.43	y
fingite vobis si potestis, <b>aliquem</b> qui in <b>omnibus</b> isti rebus par ad omnium flagitiorum nefarias libidines	Cic. Ver.	2.3.23	y
erit etiam <b>aliquis</b> qui haec <b>omnia</b> dissimulare ac negligere possit?	Cic. Ver.	2.3.144	y
spem sibi <b>aliquam</b> proponit, quorum <b>omnium</b> palam causa incognita voce damnatus est?	Cic. Ver.	2.5.41	y
cum eo sunt ne unum quidem quod si urbem <b>aliquam</b> fuerit ingressus circumdabit <b>omnis</b> Israhel civitati illi funes et trahemus eam in torrentem ut non	NT	2 Sam.17	y
et nemo potestatem agere aliquid habeat et movere negotii adversus <b>aliquem</b> eorum in <b>omni</b> causa et ut adscribantur ex Iudaeis in exercitu regis	NT	1 Macc.10	y
hic státui volo primum † <b>aliqua</b> mihi, unde égo <b>omnis</b> hilarios, lúdentis, laetíficantis faciam út fiant	Pl. Pre.	760	y
Superest ergo, ut ipse dispicias, an in omnibus civitatibus certum <b>aliquid omnes</b> , qui deinde buleutae legentur, debeant pro introitu dare.	Plin. Ep.	10.112.3	y
interque eos candor <b>alicuius</b> praeter lucem <b>omnia</b> excludens	Plin. Nat.	2.92	y
<b>aliquae omnibus</b> animal dumtaxat generantibus	Plin. Nat.	11.54	n
<b>aliqui omnia</b> haec in milio servari malunt	Plin. Nat.	15.21	y
quin et protinus moriuntur <b>aliqua</b> caelo fecunditatem <b>omnem</b> eblandito, quod maxime vitibus evenit.	Plin. Nat.	16.63	y
libet et coquendi dare <b>aliquas</b> communes in <b>omni</b> eo genere observationes	Plin. Nat.	22.47	y
quia est <b>aliquid</b> in <b>omni</b> materia naturaliter primum.	Quint.	3.8.6	y
si certa <b>aliqua</b> via tradi in <b>omnes</b> materias ullo modo posset	Quint.	7.pr.4	y
Quemadmodum potest <b>aliquis</b> donare sapienti, si <b>omnia</b> sapientis sunt?	Sen. Ben.	7.4.1	y
ne in hoc quidem <b>aliquem</b> retinuit, ut non <b>omnes</b> abdicaret.	Sen. Controv.	2.1.30	y
Est <b>aliquis</b> , qui <b>omnis</b> complectatur et cingat	Sen. Ep.	12.6	y
ergo commune <b>aliquid</b> quaerendum est his <b>omnibus</b> vinculum, quod illa complectatur et sub se habeat.	Sen. Ep.	58.9	y
Contemnere <b>aliquis omnia</b> potest, omnia habere nemo potest.	Sen. Ep.	62.3	y
apud nos veritatis argumentum est <b>aliquid omnibus</b> videri.	Sen. Ep.	117.6	y
Inventus est qui concupisceret <b>aliquid</b> post <b>omnia</b>	Sen. Ep.	119.8	y

Habet <b>aliquid</b> ex iniquo <b>omne</b> magnum exemplum, quod contra singulos utilitate publica rependitur.	Tac. <i>Ann.</i>	14.44	y
Nam nos omnes, quibus est alicunde <b>aliquis</b> obiectus labos, <b>Omne</b> quod est interea tempus prius quam id rescitum est lucro est.	Ter. <i>Hec.</i>	286	y

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