ON THE DISTRIBUTION OF
ADNOMINAL PREPOSITIONAL PHRASES IN LATIN PROSE

DAVID WHARTON

THE USE OF PREPOSITIONAL PHRASES as elements in noun phrases in
Latin—to be sure, a rather restricted use of prepositions—is a phe-
nomenon that has not been deeply studied. It is sometimes taught in
schools that such phrases are simply not allowed in Latin. Thus, although
one may say (in English), "A bird in the hand is worth two in the bush" or
"The man with the blue guitar," common wisdom in Latin pedagogy says
that Romans would not use phrases such as *avis in manu aestimatur duobus
in silva* or *ille vir cum cithara caerulea*. But this is clearly not accurate:
although the standard English-language handbook grammars contain almost
no discussion of the subject, Kühner-Stegmann provides several pages of
examples and discussion of the phenomenon, Hofmann-Szantyr has a brief
discussion with good examples, and Christian Jäneke's dissertation is wholly
devoted to such prepositional uses in Cicero. Additionally, several of the
articles on prepositions in the *TLL* devote specific attention to adnominal
uses of them, sometimes providing alphabetical lists of nouns to which they
have been attached.[1]

Some scholars appear to lean toward the assumption that adnominal
prepositional phrases (hereafter, APPs) are primarily associated with verbal
nouns. Rosén's study of verbal nouns in early Latin treats the presence of
a prepositional phrase in the noun phrase as at least prima facie evidence
that the noun is a verbal *nomen actionis*, though Rosén asserts in the same
work that prepositional phrases may sometimes also appear adnominally with
concrete nouns.[2] And the notion that prepositional phrases are usually attached
to verbal nouns turns up at least implicitly elsewhere, such as in the *OLD*'s
article on the preposition *ex*, which says, "Prep. phrs. w. *ex* are frequently used
attributively without verb, vbl. noun, etc., esp. in senses indicating source,
composition, etc.," an assertion that presupposes that adnominal uses of other
prepositions with nonverbal nouns are unusual or infrequent; otherwise,
ex's propensity to do so would not be worth commenting on.

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1. See Kühner-Stegmann 1976, 213–18; Hofmann-Szantyr 1965, 428; and Jäneke 1886–87. The *TLL*
article for *de* gives an alphabetical word list of substantives that have APPs attached, whereas other articles
(for example, *erga*, *apud*, and *inter*) mention a few nouns that appear frequently with prepositional phrases,
but many of these phrases are not attributive. See below for a fuller elaboration of what constitutes a noun
phrase for the purposes of this article.
2. Rosén 1981, 24–33.

Diachronic issues have also been raised concerning APPs. Jäneke asserts that the use of APPs becomes both "freer and more frequent" in post-Augustan authors, while Hofmann-Szantyr claims that the enclosure of the APP by other elements of the noun phrase is a pattern starting in the Classical period and continuing into later Latin. Behind these questions, somewhat broader ones loom: at what point, if any, did Latin start tending toward the more frequent use of APPs found in the modern Romance languages? And, for that matter, how wide is the difference between Latin and other languages regarding the frequency of APPs? If early Latin APPs are usually restricted to verbal noun phrases, with other uses being more or less exceptional, as seems often to be supposed, does this restriction change over time as Latin usage approaches that of the Romance languages?

I undertake here to provide preliminary answers to these questions, based on samples of Latin prose ranging in time from Cato the Elder through Gregory of Tours. The primary focus of this study is on the distribution of APPs in Latin, and I touch on matters of syntax, semantics, and pragmatics only secondarily, insofar as they relate to distributional questions. I have written before about some of the conditions in the noun phrase and in the sentence that tend to accompany APPs, namely that APPs tend to appear in noun phrases that are coordinated with another noun phrase that also includes both a noun and at least one attribute, as in *vos **fidem in bello** quam praesentem victoriam maluistis; nos fide provocati victoriam ultro detulimus* (Livy 5.27.13), where *fidem in bello* is coordinated with *praesentem victoriam*. I also argued that APPs tend to appear in noun phrases that contain some additional constituent(s) other than the noun head and the prepositional phrase, such as *ne nova Caesaris officia veterum suorum beneficiorum in eos memoriam expellerent* (Caes. *B Civ.* 1.34.3) and *si manebat tanta illa consuetudo Caeli, tanta familiaritas cum Clodia, quid suspicionis esset, si apud Caelium mulieris servus visus esset?* (Cic. *Cael.* 25 / 61). These additional constitutents are very frequently quantifiers, possessives, demonstratives, and so forth, rather than full lexical adjectives. I argued that the distribution of APPs thus differs from that of full lexical adjectives in the above-mentioned respects, since such lexical adjectives do not tend nearly so strongly to appear in coordinated noun phrases or in noun phrases with three or more constituents.[3]

The study undertaken here greatly expands the available data set of APPs[4] and focuses on APPs' broad distribution in Latin prose over time. It pays particular attention to APPs' distribution in relation to the verbal nature (or lack thereof) of the nouns to which they are attached and to APPs' sensitivity to literary genre, style, and linguistic register. Finally, it provides an overview of their diachronic distribution in Latin prose.

METHODS

One of the main difficulties in earlier attempts to form a clear view of how APPs are distributed in Latin was a lack of a source of clearly unbiased

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3. Wharton 1996.
4. The entire corpus of APPs gathered is available on my Web page at http://www.uncg.edu/~dbwharto/APP/.

data. Jäneke's study of such prepositional uses in Cicero falls short of being either a complete or an accurate compilation of Cicero's APPs, which, in all fairness, it does not claim to be. Jäneke's work includes a number of doubtful cases and omits some APPs that my searches uncovered in Cicero's writings. Nor does Jäneke provide any information about their frequency of occurrence.

On the other hand, the examples provided in the reference grammars of Kühner-Stegmann and Hofmann-Szantyr are indeed all real APPs and have the added advantage of being gathered from a variety of authors, thus giving us a better impression of their range of use. However, neither grammar supplies precise information regarding APPs' frequency, and in fact we are somewhat in the dark about how representative their samples are, since they give little indication of how their APPs were gathered. Lacking this information, we must wonder to what extent their samples are liable to observational bias. Similarly, the lists of nouns to which prepositional phrases may be attached that are provided in some of the *TLL*'s articles on prepositions, although useful and illuminating in many respects, do not specify whether the lists are exhaustive, distinguish between types and tokens, or explain the nature of the selection criteria that were applied to the nouns that are listed. Nor does the *TLL* provide such information about APPs uniformly from article to article.

In order to get an unbiased sample, I gathered APPs from the following texts: Augustine, *Confessiones* (Books 1–3); Caesar, *Bellum Civile* (Book 1); Cicero, *Tusculanae disputationes* (1.1–30) and *Pro Caelio*; Cato, *De agricultura*; Egeria, *Itinerarium*; Gregory of Tours, *Historiae* (6.1–41); Livy, *Ab urbe condita* (5.1–40); Petronius, *Satyrica* (30.5–72—the *Cena Trimalchionis*); Pliny the Elder, *Naturalis historia* (8.1–125); Suetonius, *Vita Tiberi*; Tacitus, *Annales* (Book 1); Tertullian, *De pudicitia*; and Varro, *De re rustica* (Book 3). These texts were chosen with a number of ends in mind. Poetry was excluded from the sample texts, since poetic usage is acknowledged to be nonstandard. To find out whether the use of APPs changed over time, I chose authors ranging in date from our earliest connected Latin prose (Cato the Elder) to the early medieval period (Gregory of Tours). To find whether literary genre is related to the use of APPs, I chose texts written in a variety of genres, including didactic prose (Cato, Varro, and Pliny the Elder), informal dialogue (Cicero's *Tusculanae disputationes* and Varro), history (Caesar, Tacitus, Livy, and Gregory of Tours), biography and autobiography (Suetonius, Augustine), the ancient novel (Petronius), rhetoric (Cicero's *Pro Caelio*), and rhetorical polemic (Tertullian). Furthermore, I wished to find whether the use of APPs bears any relation to linguistic register—that is, "everyday" as opposed to "literary" Latin—so I chose authors ranging from those whose register is some variety of common speech (Egeria, Gregory), to a literary author writing an educated man's imitation of some versions of common speech (the freedmen's speeches in Petronius),[5] to those writing in a consciously conversational, though edu-

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5. Adams (1977, 2003) observes that Petronius' freedmen's speeches accurately represent a variety of observed features of the vulgar Latin found in the letters of Claudius Terentianus and in the Vindolanda

TABLE 1. WORD COUNTS AND APPS FOR ALL AUTHORS

Author	No. of Words in Sample	APPs
Cato (b. 234 B.C.E.)	17,095	34
Varro (b. 116 B.C.E.)	9,846	24
Cicero (b. 106 B.C.E.)	16,131	23
Caesar (b. 100 B.C.E.)	10,075	24
Livy (b. 59 B.C.E.)	11,854	33
Pliny (b. 23 C.E.)	7,346	25
Petronius (b. ? C.E.)	9,959	23
Tacitus (b. 55 C.E.)	10,758	32
Suetonius (b. 69 C.E.)	9,399	34
Tertullian (b. 160 C.E.)	13,865	34
Egeria (b. c. 340? C.E.)	17,893	51
Augustine (b. 354 C.E.)	9,844	13
Gregory (b. 538 C.E.)	11,791	19
TOTALS	155,856	369

cated, Latin (Cicero, Varro), to those using efficient and unadorned, no-frills prose (Cato, Pliny), to authors striving for particular literary or rhetorical effects (Cicero, Tacitus, Tertullian).[6]

I chose these authors with no preconceptions about their use of APPs, with the exception of Tacitus, who is singled out by Kühner-Stegmann and Jäneke for his notable and frequent use of them. The data were collected without the aid of electronic searches, since computational methods are unable to distinguish adnominal prepositional phrases from adverbial ones. The entire amount of Latin text sampled for this study, when all sample texts are combined, is about 172,000 words (over seven hundred typical OCT pages), containing slightly over 10,000 prepositional phrases, of which I judged that 376 were definitely APPs.

I do not claim that the samples I gathered are fully representative, either of Latin literature as a whole, or even of the authors from whom I have drawn them, and certainly not of the Latin language as it was spoken in many places, by people with many different cultural, ethnic, and linguistic backgrounds, and through many centuries. But I do claim that the samples are more representative than anything that we have had before and that they give us a clearer picture than we had before of the distribution of APPs in Latin prose across time. Table 1 shows the total number of words in the samples for each author and the total number of APPs found in each of those samples, with authors listed in order of their date of birth.

writing tablets: "As more non-literary Latin comes to light it becomes more obvious that Petronius was a competent linguistic observer whose portrayal of the speech of the freedmen made use of substandard features which were genuinely current in spoken varieties of the language" (Adams 2003, 22).

6. Obviously, many authors and genres are missing from this list that would be desirable to include in a more detailed study. My aim was to compile a corpus that is very broadly representative along the lines laid out above.

Included in this corpus are prepositional phrases whose most immediate heads are nouns, noun phrases, or pronouns. Attachment directly to the noun is quite straightforward; for example, "in the hand" is attached to "bird" in the phrase "a bird in the hand," and such cases are also found in Latin: for example, *ibi **turres cum ternis tabulatis** erigebat* (Caes. *B Civ.* 26.1), where *cum ternis tabulatis* stands as a modifier of *turres*. But in the case of a noun phrase such as "the tennis ball under the couch," the prepositional phrase "under the couch" may reasonably be thought to be attached to the noun phrase "tennis ball," and not to "ball" or "tennis" individually. Thus, we also find in Cicero, *sunt enim qui **discessum animi a corpore** putent esse mortem* (*Tusc.* 1.18), where *a corpore* may be construed as being attached to the noun phrase *discessum animi* as shown in the diagram below:[7]
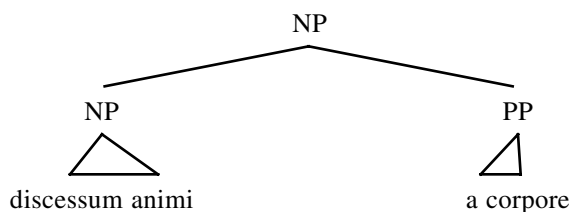
Excluded from this study, however, are prepositional phrases that are headed most closely by an adjective or participle, even if those items are themselves constituents of a noun phrase, as in Cato's phrase describing what food items are to be stored underground, *nuces praenestinas recentes in urceo in terra obrutas habeat* (*Agr. Orig.* 143.3), where the prepositional phrases *in urceo* and *in terra* are probably headed more closely by the participle *obrutas* than by *nuces*. I have also excluded APPs that are attached to any verbal nouns that make up a part of a verb's regular inflectional system (gerunds, infinitives, and supines).

I have, however, included in this study a number of prepositional phrases that function in phrases that, although they lack an explicit noun head, are nonetheless clearly substantival. Many of these cases involve apparently substantival uses of quantifying adjectives or numerals with *ex* or *de* in partitive expressions, where the noun head must be recovered from the general situation, as in ***pauci ex his militibus*** *ablati flumine ab equitatu excipiuntur ac sublevantur* (Caes. *B Civ.* 1.64.6), *quae si est **una ex omnibus** quae se ipsa moveat, neque nata certe est et aeterna est* (Cic. *Tusc.* 1.54), and *sed **nullus de familia** sensit* (Gregory of Tours *Hist.* 6.13),[8] though in other

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7. Other syntactic analyses of this noun phrase are possible that attach *a corpore* directly to *discessum*, and it may be the case, as one scholar has suggested to me, that all APPs are syntactic "sisters" of the head noun in their phrase, although that position is difficult to reconcile with noun phrases like *fructus apud te ex bubulo pecore* (Varro *Rust.* 3.2.11) if you believe that Latin noun phrases have binary branching structure. However, the essential point here is that I have not included in this study prepositional phrases that are directly headed by adjectives. I claim little theoretical sophistication in the abstract syntax of noun phrases, and I include a tree diagram here primarily for the elucidation of structure, without making commitments to any particular syntactic theory.

8. It is possible that *nullus* in this context is not in fact an adjective but a substantive, since "in Vulgar Latin *nemo* was replaced by *nullus* in all forms under the Empire" (Adams 1977, 48–49).

cases a noun head is explicitly supplied in the nearby linguistic context, as in this sentence from Varro: *sed non haec, inquit, **villa**, quam aedificarunt maiores nostri, frugalior ac melior est quam **tua illa perpolita in Reatino**?* (*Rust.* 3.2.3). I have treated the prepositional phrases in these instances, and in others like them, as constituents of noun phrases and not as constituents of adjective phrases.[9] I have included as well prepositional phrases headed by pronouns, such as *sic hi loculatas habent piscinas, ubi dispares disclusos habeant pisces, quos, proinde ut sacri sint ac sanctiores quam **illi in Lydia**, quos sacrificanti tibi, Varro, ad tibicinem gregatim venisse dicebas* (Varro *Rust.* 3.17.4), *dicet psalmum **quicumque de presbyteris** et respondent omnes; post hoc fit oratio. item dicit psalmum **quicumque de diaconibus**, similiter fit oratio* (Egeria *Itinerarium* 24.9), and *unde factum est, ut epolante eo in domo sua, **quidam de aulicis regis** puerum dilectum sibi, qui a dysenteria correptus fuerat, lamentaret* (Gregory of Tours *Hist.* 6.35).

DIFFICULT CASES

Deciding which prepositional phrases are adnominal and which are not can be a complicated matter. Sometimes the phrases in question are apparently ambiguous in their attachment, either to a noun or to some other item in their clause. For example, consider the highlighted prepositional phrase *de libro regnorum* in this passage from Egeria (4.2–3):

> nam hic est locus Choreb, ubi fuit sanctus Helias propheta, qua fugit a facie Achab regis, ubi ei locutus est Deus dicens: quid tu hic, Helias?, sicut scriptum est in libris regnorum. nam et spelunca, ubi latuit sanctus Helias, in hodie ibi ostenditur etiam ibi altarium lapideum, quem posuit ipse sanctus Helias ad offerendum Deo, sicut et illi sancti singula nobis ostendere dignabantur. fecimus ergo et ibi oblationem et orationem impensissimam, et lectus est ipse locus **de libro regnorum**: id enim nobis vel maxime ego desideraveram semper, ut, ubicumque venissemus, semper ipse locus de libro legeretur.

De libro regnorum may be construed either as a constituent of a noun phrase, *ipse locus de libro regnorum*, or as a constitutent of a verb phrase, *lectus est . . . de libro regnorum*, and no simple, firm, or formal criteria for sorting out the syntax are available. In this case, word order is not particularly helpful; Egeria has chosen a verb-initial word order, and the position of *lectus est* can probably be understood as responding to the implied question raised by the preceding clause whether the request for the reading of a certain passage was in fact carried out, placing focus on the fact that the reading was actually done as requested. In English this might be rendered, "Therefore at that place we begged and pleaded excessively [that the passage be read], and that passage WAS read."[10] The sentence-final position of the prepositional phrase does not preclude its being construed as a constituent of the verb phrase. If Egeria's utterance is considered to be a variation of a more standard

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9. In some cases this may be controversial, since the underlying syntax in such phrases is not always clear. I have assumed that the prepositional phrases in these cases are best construed as attached to the null head or to the head-modifier pair rather than simply to the modifier.

10. Devine and Stephens (2006, 146–47) call this "positive polarity" focus; it is called "verum" focus by Höhle (1992).

word order such as *ipse locus lectus est de libro regnorum*—where the prepositional phrase is a postverbal constituent of the verb phrase—then the prepositional phrase's final position in Egeria's utterance can be understood as an artifact of the leftward movement of the verb phrase *lectus est* with the prepositional phrase left in situ.[11]

In this case, however, the discourse status of the information encoded in *de libro regnorum* helps to sort out the syntax. The Bible passage to which Egeria refers was previously established in the discourse (*sicut scriptum est in libris regnorum*); this makes it natural for Egeria to include it in the identifying noun phrase *ipse locus de libro regnorum*, because the aim of her utterance is to establish that the very passage that she mentioned before was in fact read, and she wishes to identify that passage unambiguously. Therefore, it seems somewhat less likely that *de libro regnorum* is a part of the verb phrase, since in that case it would rather pointlessly specify something about the reading of the passage, namely, that it was done from the Book of Kings. Thus, the totality of the evidence tips the balance in favor of an adnominal reading for *de libro regnorum*.

In all such difficult cases, my guiding principle has been to assume that a prepositional phrase is adnominal only when the adnominal interpretation appears to make better sense than the adverbial one on logical, semantic, or pragmatic grounds. In syntactically ambiguous cases where no information is available to tip the balance toward either an adnominal or an adverbial interpretation, I have assumed that the prepositional phrase is not adnominal. For example, Varro, in describing some aspects of the care of bees, writes, *alii aquam mulsam **in vasculis** prope ut sit curant, in quae addunt lanam puram, per quam* [*apes*] *sugant, uno tempore ne potu nimium impleantur aut ne incidant in aquam* (*Rust.* 3.16.28). The prepositional phrase whose syntactic status may be thought questionable is *in vasculis*. Does Varro mean to express "Some see to it that [sweetened water in small vessels] is nearby" or "Some see to it that sweetened water [is nearby in small vessels]"? *Aquam mulsam in vasculis* constitutes a perfectly sensible noun phrase, and Varro elsewhere uses locative *in* in his APPs.[12] In this interpretation, *aquam mulsam in vasculis* could be understood as responding to a description of water provided for bees in the previous section—*cibi pars quod potio et ea iis* [*apibus*] *aqua liquida, unde bibant esse oportet, eamque propinquam, quae praeterfluat aut in aliquem lacum influat* (*Rust.* 3.16.27)—such that *aquam mulsam in vasculis* corresponds syntactically to *aqua liquida . . . quae praeterfluat*, etc. But *in vasculis* could just as easily be a part of the verb phrase, with *in vasculis* placed before *prope ut* perhaps because it is a focused element, conveying new information that contrasts with the way that water was pre-

11. Cf. *transit etiam cohors Illurgavonensis ad eum* (Caes. *B Civ.* 1.60) and *circumibant enim senatorum domos cum veste sordida* (Livy 26.29.3), wherein the prepositional phrase remains in sentence-final position even when the verb is placed initially.

12. E.g., *Rust.* 3.2.3, cited above; at 3.2.5: *tua scilicet, inquit Axius, **haec in campo Martio extremo** utilis et non deliciis sumptuosior quam omnes omnium universae Reatinae?*; and at 3.2.10: *quid? inquit, si propter pastiones **tuus fundus in Rosea** probandus sit . . .*

sented to the bees in the previous section.[13] Therefore, since nothing in the surrounding context or in the semantics of the sentence itself indicates that an adnominal reading is preferable to an adverbial one, I did not count this prepositional phrase as adnominal, even though that is a reasonable reading of the sentence.

COMPARATIVE FREQUENCY OF LATIN APPs

We turn now to the broadest question about Latin APPs, namely, How frequently do they occur, and how does their frequency compare with that in other languages? The apparent infrequency of APPs in Latin has been anecdotally remarked,[14] though actual numbers have never before been gathered. I took some small samples from modern French, modern English, and ancient Greek to delineate the differences in broad, preliminary strokes (see table 2).[15] The frequency of APPs is more than two times greater in ancient Greek than in Latin, and in the two modern languages sampled it is greater by a factor of ten or more. Yet much of the more than tenfold difference between the rates of occurrence of APPs for the ancient and modern languages is easily accounted for by the fact that both of the modern languages often use APPs with *of* or *de* (or *du*, *des*) where Latin and Greek would normally use the genitive case. However, even when we remove APPs with *of* or *de* and its permutations from the English and French data, we still find a striking and statistically significant difference between those modern languages and Latin (see table 3).[16]

Thus, previous intuitions that APPs occur in Latin less frequently than in some other languages are confirmed. Yet Latin's actual frequency of occurrence—roughly, about once every two pages of a typical Oxford Classical Text volume—makes them hardly a rare phenomenon.

THE ROLE OF WORD ORDER IN THE NOUN PHRASE

Hofmann-Szantyr asserts that in the Classical period and later, Latin shows a preference for APPs that are enclosed by other elements in the noun phrase,[17]

13. For a similar placement of the prepositional phrase outside the subordinate clause, cf. Cato *Agr. Orig*. 38.4: *ventus ad praefurnium caveto ne accedat*, although there is no ambiguity in Cato's sentence regarding the attachment of the prepositional phrase, nor does the prepositional phrase carry focus. Devine and Stephens (2006, 119) comment that such sentences in Cato "probably represent a more archaic syntactic typology in which . . . the verb phrase was typically less complex than in Classical Latin," which may be applicable to some extent to Varro's prose as well.

14. E.g., Jäneke 1886–87, 1: "Diese Ausdrucksweise ist in anderen Sprachen viel häufiger als im Lateinischen."

15. The sample texts used were the Latin texts cited above; Thuc. 1.1–8 and Xen. *An*. 4.1–3 for Greek; Pinker (1995, 25–29) for English; and Marouzeau (1947, 298–327) for French. Obviously, the samples for Greek, English, and French are much smaller than those for Latin. Further samples would be required for more detailed comparisons than those made here, but these data do support the generally held intuition that Latin's use of APPs is comparatively restrained.

16. For the difference between Latin and French, $\chi^2 = 12.38$, and $P < .001$, which means that the probability that the difference between the two samples is due to chance alone is less than one in a thousand. For the difference between Latin and English, $\chi^2 = 14.34$, and $P < .001$, showing a similarly low probability that the difference is due to chance.

17. Hofmann-Szantyr 1965, 428.

TABLE 2. FREQUENCY OF APPS

Language	APPs/1,000 Words
Latin	2.2
Ancient Greek	6
Modern French	26
Modern English	37

TABLE 3. FREQUENCY OF APPS, WITH *OF*, *DE*, *DU*, *DES* EXCLUDED

Language	APPs/1,000 Words
Latin	2.2
Ancient Greek	6
Modern French	9
Modern English	11

such as *transitu in Italiam Gallorum* (Livy 5.34.1) or *mammis in pectore geminis* (Plin. *HN* 8.72). Thus, one would expect to find that, in situations where it is possible, the APP should normally appear between other items in the noun phrase, especially in the Classical period and later.

But this turns out not to be the case. Of eighty-eight noun phrases in this corpus that were made up of a substantive, an APP, and one other modifier (an adjective, a specifier such as a demonstrative or a numeral, or a noun in the genitive case), forty enclosed the APP between the noun and modifier (e.g., *optimam erga se voluntatem*, Caes. *B Civ.* 1.12.1), forty-five had the APP in the final position of the noun phrase (e.g., *tuus fundus in Rosea*, Varro *Rust.* 3.2.10), and three had the APP in the initial position (e.g., *in aratrum subiugia lora*, Cato *Agr. Orig.* 63.1). Obviously, Latin strongly disfavors the noun-phrase initial position for APPs (see below), but, those cases aside, the overall distribution of APPs in either intermediate or final position most closely resembles one due entirely to chance.[18]

Individual authors, however, vary in their tendencies in this regard. Whereas Cato, Cicero, and Livy generally follow the equal distribution described above, Tacitus and Suetonius strongly favor the enclosed structure, with Tacitus enclosing 73% of his APPs occurring in such noun phrases, and Suetonius, 100%. Some authors, including Caesar, Cicero, Tacitus, and Tertullian, strongly prefer a particular pattern when they do enclose the APP, arranging almost all of them in the specific order modifier-APP-head (for example, *magna apud Tiberium auctoritate*, Tac. *Ann.* 1.24) rather than head-

18. The sample phrases used to test Kühner-Stegmann's hypothesis did not include noun phrases having additional modifiers (e.g., *omnium externorum bellorum post Punica* [Suet. *Tib.* 16.1]), because the number of these was relatively small and was therefore unlikely to yield statistically significant results. It should be noted, however, that the more items there are in the noun phrase, the likelier it is that the APP will be enclosed by them, even if the elements of the noun phrase are arranged randomly.

APP-modifier.[19] But in Cato's *De agricultura*, the modifier-APP-head order does not appear at all (although the head-initial pattern turns up three times, e.g., *ligna in caminum ficulna*, *Agr. Orig.* 37.5.4), and it only appears once in the samples from Varro and Livy. The later authors Augustine, Egeria, and Gregory of Tours, however, favor an APP-final word order and do not enclose any of their APPs in the three-element noun phrases gathered. Thus, it would appear that the enclosure of the APP by other elements of the noun phrase is not a restriction on its use, and in the later authors we see what appears to be the development of a tendency away from enclosure, with an APP-final position seeming to become dominant, perhaps anticipating not only the typical word order of the Romance languages, but also the increasing fixity of noun phrase word order in late Latin observed by Jószef Herman.[20]

We should also address Kühner-Stegmann's somewhat stronger position about word order in the noun phrase, which asserts that Greek's use of the definite article to enclose or surround the APP accounts for the APP's more frequent occurrence in Greek than in Latin.[21] In the small Greek sample gathered for this study, the definite article is indeed an element in all but one of the nineteen noun phrases having an APP attached. But the role of the article in incorporating the APP within the boundaries of the Greek noun phrase is not entirely clear. The APP is enclosed by the noun and the definite article in only seven of the nineteen Greek examples; in three other instances, the repetition of the article necessitates an adnominal understanding of the APP: for example, ἐφείπετο δὲ ἀεὶ τὸ ὑπερβάλλον τοῦ στρατεύματος εἰς **τὰς κώμας τὰς ἐν τοῖς ἄγκεσί τε καὶ μυχοῖς τῶν ὀρέων** (Xen. *An.* 4.1.7.3). In nine examples, the article itself is the only other overt element in the noun phrase, such as at Xenophon *Anabasis* 4.1.6.4: ἔνθα δὴ Χειρίσοφος μὲν ἡγεῖτο τοῦ στρατεύματος λαβὼν **τὸ ἀμφ' αὐτὸν** καὶ τοὺς γυμνῆτας πάντας.[22] In each

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19. Devine and Stephens (2006) give a theoretically sophisticated analysis of the word order of prepositional complements in such noun phrases, detailing the role that preposed possessive adjectives, genitives, and scalar adjectives play in moving the prepositional phrase into prehead position, using samples with the preposition *erga* from Cicero's speeches and letters. Since they believe that Latin modifiers are generated in posthead position, they explain the postadjective, prehead placement of the prepositional phrase thus (Devine and Stephens 2006, 332): "The adjective or quantifier is an operator taking scope over the noun phrase from a c-commanding position. The instantiation of a higher functional projection has the effect of licensing a lower position into which the prepositional phrase is raised." Devine and Stephens (2006, 336) explain the motive for prehead placement of the prepositional phrase by saying, "It is easier for the adjective to scope over the whole noun phrase if the complement is in a specifier position than in a complement position: [A [PP N]] is preferable to [A-N[PP]]. The presence of the modifier causes the rest of the phrase to be treated as a single item of information rather than two separate items of information." This makes a good deal of intuitive sense, though it leaves open the question of why the prepositional phrase is not raised more often than it is; clearly, the word order of all types of APPs deserves a closer syntactic and pragmatic analysis than can be given here.

20. Herman 2000, 81.

21. "Trotz alledem ist die attributive Verwendung eines präpositionalen Ausdrucks im Lateinischen nicht so frei und häufig wie im Griechishen, das die Natur der Attributive durch die Stellung zwischen Artikel und Substantiv klar macht, und im Deutschen" (Kühner–Stegmann 1976, 216).

22. The grammars sometimes talk of the "substantivization" of prepositional phrases; see, e.g., Jannaris [1897] 1968, §§1223, 1237, and 1241; Kühner-Gerth 1890–1904, 2.1 §461.6. But in the case of the prepositional phrases cited here, I think it is best to consider them as attributes of an unstated noun rather than as "virtual" nouns themselves. The surface similarity of constructions like τὸ σιγᾶν and τὸ ἀμφ' αὐτὸν should

of these nine examples the APP follows the article, although enclitics and particles are sometimes allowed to intervene between the two elements. Of course, the article's unambiguous status as an element or marker of noun phrases probably helps our adnominal understanding of such APPs, but it is interesting that bare nouns, which are equally unambiguously nominal items, much less frequently incorporate prepositional continuations in Greek. Only one of the nineteen APPs gathered fits that description: πορευόμενοι δ' ἐν-τυγχάνουσι **λόφῳ ὑπὲρ τῆς ὁδοῦ** κατειλημμένῳ ὑπὸ τῶν πολεμίων (Xen. *An.* 4.2.10.1). Thus, the enclosing word order does not seem, at least in this small sample, to be the decisive factor in the licensing of APPs in Greek, either. Interestingly, if we remove from consideration those Greek APPs that appear with the article alone—since they have no counterpart construction in Latin—the rate of occurrence of APPs in Greek drops very near to that of Latin. It cannot be doubted, however, that the Greek article obviously makes possible a degree of complexity in the use of APPs that cannot easily be reproduced in Latin: for example, ἔστι μὲν οὖν **τὰ ἐν τῇ φωνῇ τῶν ἐν τῇ ψυχῇ παθημάτων σύμβολα** (Arist. *Int.* 16a).

APP-Initial Noun Phrases

The rarity of APPs in initial position in the noun phrase was noted above; these make up less than 5 percent of all APPs gathered. Three APPs in initial position are in Cato, and they all occur in chiastic, or nearly chiastic, constructions. Two are in lists of farm equipment, very similar to each other in form and content: *funem torculum esse oportet extentum pedes LV;* ***funem loreum in plaustrum*** *p. LX, lora retinacula longa p. XXVI,* ***subiugia in plostrum*** *p. XIIX, funiculum p. XV;* ***in aratrum subiugia lora*** *p. XVI, funiculum p. VIII* (*Agr. Orig.* 63.1) and *lora praeductoria p. XXVII S,* ***subiugia in plostrum lora*** *p. XIX, funiculum p. XV,* ***in aratrum subiugia lora*** *p. XII, funiculum p. IIX* (*Agr. Orig.* 135.5). The third we find in a recipe: *alvum de[i]icere hoc modo oportet: si vis bene tibi deicere, sume tibi ollam, addito eo aquae sextarios sex et eo addito* ***ungulam de perna****; si ungulam non habebis, addito* ***de perna frustum*** *p. S quam minime pingue* (*Agr. Orig.* 158.1). A preceding APP in the near context is likely a factor in the licensing of these phrase-initial APPs in Cato. More particularly, in the first two examples, the phrase-initial APP carries information that contrasts with that of the APP in the previous noun phrase, while the rest of the information in both noun phrases is constant. In the third example, the situation is reversed: it is the APPs that bear the constant information, while the nouns to which they are attached vary and carry contrastive focus. In all these cases, the word order seems to be shaped by the desire to highlight the contrasting information.

Pliny also places an APP at the beginning of the noun phrase in one passage, though without chiasmus: *mutat colores et Scytharum tarandrus, nec aliud*

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not mislead us into thinking that the elements following the article are equally "substantival"; we should take into consideration the fact that many of the postarticle items said to undergo substantivization in Greek, such as infinitives, participles, and adjectives, can often function as substantives, sometimes without an article, in other languages such as Latin and English. The same cannot be said of prepositional phrases.

*ex iis quae pilo vestiuntur nisi **in Indis lycaon**, cui iubata traditur cervix* (*HN* 8.123). In this case, *in Indis lycaon* is being compared with *Scytharum tarandrus*, but Pliny maintains a parallel rather than chiastic word order, and the parallelism helps to prime the reader's expectation that *in Indis* will be adnominal. Perhaps the immediately preceding APP (*aliud ex iis*) also helps to license the adnominal use of *in Indis*. We see similar contrasting information in a passage in Livy, *omissa inde **in Clusinos ira**, receptui canunt minantes Romanis* (5.36.8), where *in Clusinos* contrasts with the hostility against the Romans that the Gauls (who are the subject of *canunt*) begin to feel, although it is not explicitly stated in Livy's narrative.

A number of preposed APPs use the prepositions *ex* or *de*, often in a partitive sense: for example, *sed **ex numero tribunorum militum centurionumque nonnulli** sua voluntate apud eum remanserunt* (Caes. *B Civ.* 1.77.2) and *et quo id aequiore animo **de plebe multitudo** ferret, senes triumphales consularesque simul se cum illis palam dicere obituros, nec his corporibus, quibus non arma ferre, non tueri patriam possent, oneraturos inopiam armatorum* (Livy 5.39.13). These could perhaps be explained by their semantic similarity to genitives, which are often preposed. But we also find noun-phrase initial APPs with *de* used in other senses: *nisi quae me forte fugiunt, haec sunt fere **de animo sententiae*** (Cic. *Tusc.* 1.22); *atque ipse etiam taeterrima voce **de Laserpiciario mimo canticum** extorsit* (Petron. *Sat.* 35.6); and *aliquotiens et **de argento et heramento modica frustella** ibi invenit* (Egeria *Itinerarium*, 14.2). A few other prepositions very occasionally appear in noun-phrase intial positions, as in *mox celebratio annua ad praetorem translata cui **inter civis et peregrinos iurisdictio** evenisset* (Tac. *Ann.* 1.15); *aptatis etiam navibus **ad quascumque legiones** meditabatur **fugam*** (Suet. *Tib.* 65.2). In all these cases, the APPs carry some degree of focus, though not of the contrastive kind.

EXTRAPOSED APPs

In the last example cited above, it is remarkable that the APP not only precedes the rest of the noun phrase but is also separated from its noun by an intervening word that is not part of the noun phrase. Such cases are quite rare, but do occur. In only two other cases in this corpus does a "full," lexical word, as opposed to a "form" word such as a pronoun or a discourse adverb, intervene between the APP and its noun, where the APP is completely stranded, apart from any other element in the noun phrase: *neque multo post legati a Segeste venerunt **auxilium** orantes **adversus vim popularium** a quis circumsedebatur, validiore apud eos Arminio quoniam bellum suadebat* (Tac. *Ann.* 1.57),[23] and *sed liber ille ipsius **exhortationem** continet **ad philosophiam** et vocatur Hortensius* (August. *Conf.* 3.4.7). In these two cases, the noun appears to have been moved leftward, perhaps to receive focus.

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23. Some may prefer to construe *adversus vim popularium* as specifying something about *orantes* rather than about *auxilium*, but my own determination is that it is more sensible to assume that the prepositional phrase specifies the kind of help the envoys were seeking rather than their manner or intention in seeking it.

In two other cases, the APP is separated from the noun, but is accompanied by another modifier: *neque satis erat eum non pasci e piscinis, nisi etiam ipse eos pasceret ultro ac maiorem curam sibi haberet, ne eius esurirent mulli, quam ego habeo, ne **mei in Rosea** esuriant **asini**, et quidem utraque re, et cibo et potione, cum non paulo sumptuosius, quam ego, ministraret victum* (Varro *Rust*. 3.17.6) and **bellum** *ea tempestate* **nullum nisi adversus Germanos** *supererat* (Tac. *Ann*. 1.3). Here again, contrast plays a role. Varro wishes to contrast his asses (*asini*) with the mullets (*mulli*) of Hortensius, and he maintains parallel word order in both clauses in order to do so: *ne eius esurirent mulli . . . ne mei in Rosea esuriant asini*. The extraposition of *eius* in the first clause thus anticipates and licenses that of *mei in Rosea* in the second. For Tacitus, however, it is the noun that bears contrast, because with this sentence he changes subjects from domestic matters to matters of war; thus, *bellum* is a contrastive topic, while *nullum nisi adversus Germanos* is the focus, and *bellum* has been moved to the left of the temporal adverbial phrase, with the rest of the noun phrase left in situ.

In three other cases, an APP is separated, either alone or with other modifiers, from its noun by a nonlexical form word: **auctoribus** *quidem* **ad istam sententiam**, *quam vis obtineri, uti optimis possumus* (Cic. *Tusc*. 1.26); *alii Cn. Corneli fratris, qui tribunus militum priore anno fuerat triplexque stipendium equitibus dederat, gratia extractum ad tantum honorem credunt, alii* **orationem** *ipsum* **tempestivam de concordia ordinum patribus plebique gratam** *habuisse* (Livy 5.12.12); and *super veteres amicos ac familiares* **viginti** *sibi* **e numero principum civitatis** *depoposcerat velut consiliarios in negotiis publicis* (Suet. *Tib*. 55.1). In the cases of Cicero and Suetonius, the motivation to separate the noun from other elements in the noun phrase probably arises from the tendency of some form words to occupy second position in their clause ("Wackernagel's position"), rather than from any pragmatic or informational consideration.[24] In the example from Livy, the same may be the case, since the pronoun *ipsum* occupies second position in the *oratio obliqua*. *Orationem* does, however, contrast with the preceding material as an explanation of why Publius Licinius Calvus (named in the preceding portion of Livy's narrative, not quoted here) was elected military tribune, and the word may have been moved leftward to highlight the contrast.

In sum, the evidence shows that APPs are not usually preposed or separated from their nouns by full, lexical words, except for pragmatic reasons, such as to carry focus or to highlight contrasting information. In such cases, either the APP or the noun may be the carrier of the contrast.

The Role of Verbal Nouns in the Noun Phrase

As noted above, the idea that APPs are typically prohibited except when the noun to which they are attached is verbal in meaning seems to have con-

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24. See Adams 1994.

siderable currency.[25] This supposition appears to be founded on the idea that most Indo-European prepositions were originally used as adverbial elements,[26] that Latin prepositions have largely retained their tendency to modify verbal elements, and that prepositional phrases have thus made their way into the Latin noun phrase primarily by way of the nominalization of verb phrases (e.g., *Caesar in Italiam it* is nominalized as *Caesaris in Italiam iter*).

But since we have previously had no unbiased data on the frequency of the occurrence of APPs with either verbal or concrete nouns, we have been somewhat in the dark about the importance of verbal valence with respect to the licensing of APPs in Latin at any period. Is verbal valence of primary importance, with other instances being more or less exceptional or non-standard? Do earlier Latin writers restrict their use of APPs to verbal nouns, with the phenomenon spreading only later to concrete nouns?

Before we go further, I should make clear that the term *verbal noun* here does not refer simply to a morphological class of deverbal derivatives, since a great many such nouns have undergone semantic concretization, such as *legio* and *legatus* from *lego*. In addition, many deverbal abstracts are capable of being used in either concrete or abstract senses, depending upon context, for example, *unctio* as "ointment" or as "an act of anointing."[27] In many cases it is difficult to determine whether a given noun is being used to denote an action or not, and no really reliable syntactic or semantic tests are available. I have not used Rosén's syntactically based tests,[28] primarily because their results are so often counterintuitive—for example, they apparently lead her to identify the noun *semen* in the phrase *semen de cypresso* (Cato *Agr. Orig.* 17.1) as a verbal noun because it is accompanied by a prepositional continuation.[29] Needless to say, given that the topic of this article is adnominal

25. Greek has also been thought to be similarly restricted; e.g., Smyth 1920, §1657: "A noun joined by a preposition to its case without the help of a verb has a verbal meaning: ἀπὸ πασῶν ἀρχῶν ἐλευθερία *freedom from all rule* (Pl. *Laws* 698a)." But at §1019, Smyth also says, "The equivalents of an adjective are: a participle . . . ; a noun in apposition . . . ; an oblique case . . . ; an oblique case with a preposition (αἱ ἐν Ἀσίᾳ πόλεις *the cities in Asia*)."

26. "Die Praepositionen sind von Haus aus flexionslose Adverbia, wahrscheinlich ganz oder zum großen Teil erstarrte Kasusformen, die ursprünglich als selbständige Wörter im Satz mit freier Stellung weder zum Nomen noch zum Verbum in engerer Beziehung standen und erst sekundär mit Ausbildung der Kasusrektion in ein strafferes Verhältnis zu Nomina einerseits (adnominaler Gebrauch), durch begriffliche Einigung mit Verbalformen im Sinne von Komposita anderseits (adverbaler Gebrauch als Praeverb) ihre frühere Selbständigkeit verloren" (Hofmann-Szantyr 1965, 214–15 [§114]). So also Sihler (1995, 438): "It appears that the PIE forms directly ancestral to our prepositions were mainly like what is seen in *look up* (*the address*), that is, elements which altered the meaning of the action or state expressed by the verb. Such elements came to be reinterpreted as relating to the noun they are apparently in construction with."

27. Cf. Rosén 1981, 27–29.

28. Rosén 1981, 24–33. Her criteria are founded on a transformational view of the verbal noun phrase, holding that all truly verbal noun phrases are transformations of verb phrases, a view to which I do not subscribe. I incline rather to the view that verbal nouns are simply items in the lexicon and need not be seen in every case as the result of a process of transformation of an underlying verb phrase. See Chomsky 1970.

29. Rosén is well aware, however, that her criteria are often unreliable as identifiers of verbal nouns; as she says, "Our inventory of attestations therefore includes cases in which a concrete interpretation seems preferable or even imperative; we have not attempted to draw a priori limits between abstract and concrete 'senses' " (Rosén 1981, 24).

prepositional phrases, Rosén's criteria would indicate that the noun of every noun phrase in my corpus is prima facie an "action" noun—including such unlikely candidates as *corona*,[30] *Cerberus*,[31] *monachus*,[32] *clavis*,[33] and many others. In the context of this study, then, the term *verbal noun* means a noun that denotes an action in the context in which it is found.[34] The criteria for such identification are, unfortunately, primarily intuitive, based on judgments about the semantics and context of the passage in question. In general, I have tried to err on the side of verbality, attributing verbal valence to such nouns as *auctoritas* (= the wielding of authority) and *dux* (= one leading) when the context seems to call for it.

The data for APPs occurring with verbal nouns in the sample texts are summarized in table 4, with authors listed chronologically according to their date of birth.

No clear diachronic trend emerges from the data. Rather, what we see is a high degree of variability from author to author, with Tacitus being most remarkable for his strong tendency to use APPs with verbal nouns, followed by Livy, Caesar, Augustine, Pliny, and Tertullian. In the case of Tacitus, it seems quite probable that his usage is a consciously chosen element of style, or at least a consequence of stylistic choices he has made in the *Annales*.[35] His tendency is most pronounced in comparison with Cato and Varro, whose frequency of use of verbal nouns in APPs falls at the opposite end of the scale, and the same observation regarding choices of style probably applies to those authors, too. Just as Tactitus' prose style, or styles, are famously marked, so also is the style of the two agricultural writers famous for roughness, rudeness, and carelessness.[36]

The low frequency of occurrence of verbal APPs in Cato and Varro might seem to imply that their tendencies are somehow related to literary genre, namely, the agricultural handbook. But we also find low frequencies in the first-person travel narrative of Egeria and in the *Historiae* of Gregory of Tours.

30. *praenomen quoque imperatoris cognomenque patris patriae et **civicam in vestibulo coronam** recusavit* (Suet. *Tib*. 26.2).

31. *dic quaeso: num te illa terrent, **triceps apud inferos Cerberus**, Cocyti fremitus, travectio Acherontis?* (Cic. *Tusc*. 1.5).

32. *ecce et occurit presbyter veniens de monasterio suo, qui ipsi ecclesie deputabatur, senex integer et **monachus a prima vita** et, ut hic dicunt, ascitis et (quid plura?) qualis dignus est esse in eo loco* (Egeria *Itinerarum* 3.4).

33. *urceos fictiles II, urnales II, trullas ligneas II, **claves cum clostris in cellas** II, trutinam I, centumpondium inerctum I et pondera cetera* (Cato *Agr. Orig*. 13.3).

34. I have addressed the "verbality" of nouns here because that is the way the problem has traditionally been framed. However, the notion of verbality is probably less relevant for a deep study of the syntax of APPs (which I do not attempt) than is the more comprehensive one of argument structure, which applies not only to *nomina actionis* but to other kinds of "relational" nouns; see, e.g., Pinkster 1990, 73–75. Devine and Stephens (2006, 314–76) point out that deverbal nouns may encode the thematic roles of the verbs they are derived from in various ways, and that some "relational" nouns—i.e., those that display an argument structure—are not deverbal (and hence not verbal) at all.

35. Damon's observation (2003, 14) that abstract nouns are frequent in the *Historiae* is valid and relevant for the *Annales*, too; nearly all the abstract nouns she cites are verbal: *reverentia*, *arbitrium*, *seditio*, *adoptio*, *sermo*, etc. A high overall frequency of verbal abstracts could help account for Tacitus' high percentage of such nouns with APPs attached.

36. Green 1997, 427 n. 1.

TABLE 4. PERCENTAGE OF APPs OCCURRING WITH VERBAL HEAD NOUNS

Author	%
Cato (b. 234 B.C.E.)	0
Varro (b. 116 B.C.E.)	0
Cicero (b. 106 B.C.E.)	23
Caesar (b. 100 B.C.E.)	42
Livy (b. 59 B.C.E.)	48
Pliny (b. 23 C.E.)	32
Petronius (b. ? C.E.)	9
Tacitus (b. 55 C.E.)	66
Suetonius (b. 69 C.E.)	29
Tertullian (b. 160 C.E.)	32
Egeria (b. c. 340? C.E.)	6
Augustine (b. 354 C.E.)	46
Gregory (b. 538 C.E.)	16

Neither Gregory nor Egeria can be said to have good control of literary Latin, both of them using a quotidian variety of Latin native to their time and place, though this was influenced no doubt by their notions of literary, or "correct," Latin as well as by biblical Latin.[37] The fact that APPs with verbal nouns account for such a small percentage of all APPs in the samples taken from Cato, Varro, Egeria, and Gregory—even though nonverbal APPs occur at a fairly steady rate in those authors—more likely indicates that nonverbal APPs are a normal feature of everyday, spoken Latin, whereas APPs attached to verbal nouns are more typical of higher or more literary registers of Latin.[38]

The evidence from Petronius' *Satyrica* supports this hypothesis. Only one of the fourteen APPs that occur in the speeches of the freedmen during Trimalchio's dinner party is verbal: *videbis populi **rixam inter zelotypos et amasiunculos*** (*Sat.* 45.7). Instead, from these speeches we get a string of vivid, nonverbal prepositional expressions, such as *homo inter homines* (39.4), *lorus in aqua* (57.8), *hircus in ervilla* (57.11), *asinus in tegulis* (63.2), *caseum mollem e sapa* (66.7),[39] and *hepatia in catillis* (66.7). It seems inescapable that Petronius thought such expressions were typical of the speech of uneducated, lower-class speakers of Latin.[40]

37. On Egeria's Latin, cf. Väänänen's (1987) summary observation: "Egérie a composé son journal-épître au courant de son calame, en un latin sans apprêt sinon sans clichés ni réminiscences bibliques, et grevé de gaucheries de syntaxe et de style. C'est une langue composite qui relève d'un diasystème où se super-posent le fonds traditionel—défaillant certes—et un état innovateur ouvert au code oral, et qu'on peut qualifier de chrétien-protoroman" (p. 165).

38. It is not obvious or certain that verbal, abstract nouns are in general more prevalent in higher-register Latin (with the possible exception of Tacitus, as noted above). Helander (1977) has shown that the frequency of abstract nouns in a text does not bear a necessary relationship to the abstractness of the subject matter of that text. So it may be the case that the higher frequency of APPs in the more consciously literary authors is not directly related to any higher frequency of verbal, abstract nouns in their writings.

39. See below for futher discussion of this expression and others like it.

40. See n. 5 above.

Whatever the stylistic connections with regard to APPs occurring with verbal or nonverbal nouns, it does not appear that verbal valence is a decisive restricting factor on the distribution of APPs in Latin. Nor is there any apparent diachronic progress of APPs from verbal to nonverbal nouns in the period studied here. In fact it is quite clear that APPs conjoin readily with nonverbal nouns in our earliest written sources, indicating that their inclusion in noun phrases of all kinds began some time before the third century B.C.E.

DIACHRONIC DISTRIBUTION

I mentioned above my own implicit conjecture regarding the relatively low frequency of APPs in Latin, namely, that they might have been prohibited at some early stage of the language, when prepositions were not fully functional as such but were simply adverbial particles, and that they spread later into the noun phrase, becoming more frequent over time. Although we have just seen that no pattern emerges when we track the frequency of APPs occurring with verbal nouns, it seemed plausible to me that some diachronic trend for all APPs—not just those with verbal nouns—might emerge. And the rise in their frequency in post-Augustan authors proposed by Jäneke would seem to support this idea.

But when we look at the frequency of all APPs over time in the authors chosen for this study, no unambiguous picture emerges (see table 5).

Although we do see somewhat higher rates of APPs among some of the Augustan and post-Augustan authors (Livy, Pliny, Tacitus, Suetonius), those rates are not markedly different from those for two late Republican writers, Varro and Caesar. In fact, table 5 seems to show that the frequency of APPs diminishes after the Silver Age, with Augustine's *Confessiones* providing our lowest frequency of APPs (1.3 per 1,000 words), although his near contemporary, Egeria, displays a relatively high frequency. This finding, of course, does not support the expectation that the rate of APPs in later Latin should rise toward that of French and the other Romance languages. Since it is extremely unlikely that the variation in frequency of APPs found among all these authors is due to chance alone,[41] and since some later authors such as Augustine and Gregory show frequencies that are lower than those of earlier authors such as Cato and Cicero, it seems most reasonable to attribute these variations to style and register rather than to systematic changes in Latin syntax. The use of APPs was apparently most popular in the Silver Age, though not consistently so, with Petronius as the exception. The low frequency of occurrence of APPs that holds between Cato's early Latin and the early medieval Latin of Gregory is notable, however, in light of the rise in the overall use of prepositional phrases in the later authors.[42] Even though

41. $\chi^2 = 388.53$, *df* = 12, *P* < .001.
42. "The average number of prepositional phrases per length of text doubles from Archaic to Late Latin. The increase in prepositional usage would have been even more marked in speech" (Herman 2000, 60). In my samples, Gregory employs prepositions in all uses at double the rate of Cato, and Egeria's rate is about 2.5 times that of Cato.

TABLE 5. FREQUENCY OF ALL APPS PER 1,000 WORDS OF TEXT

Author	APPs/1,000 Words
Cato (b. 234 B.C.E.)	2.0
Varro (b. 116 B.C.E.)	2.4
Cicero (b. 106 B.C.E.)	1.9
Caesar (b. 100 B.C.E.)	2.4
Livy (b. 59 B.C.E.)	2.8
Pliny (b. 23 C.E.)	3.4
Petronius (b. ? C.E.)	2.3
Tacitus (b. 55 C.E.)	3.0
Suetonius (b. 69 C.E.)	3.6
Tertullian (b. 160 C.E.)	2.5
Egeria (b. c. 340? C.E.)	2.9
Augustine (b. 354 C.E.)	1.3
Gregory (b. 538 C.E.)	1.6

Gregory uses prepositional phrases (in all syntactic uses) more than twice as frequently as Cato, his rate of APPs is considerably lower than Cato's.

Literary genre does not seem to have a consistent effect on the overall frequency of APPs. The historians Caesar, Livy, and Tacitus show frequencies in the middle-to-high range, with Suetonius (history/biography) showing the highest frequency of all authors and Gregory showing the second-lowest. The four authors with the highest rates of occurrence are Suetonius, Pliny, Tacitus, and Egeria, and only Tacitus and Suetonius have generic affinities. The four with the lowest rates—Augustine, Gregory, Cicero, and Cato—all write in completely different genres. Nor does literary register predict rates of occurrence. Although writers of rather unpolished prose such as Cato, Petronius, and Gregory all display relatively low rates of occurrence, we find a similar rate in Cicero. And Egeria's "vulgar" Latin displays a higher rate that is more comparable to Tacitus' in the *Annales*.

DISTRIBUTION AMONG PREPOSITIONS

When we look at the distribution of APPs according to the prepositions that are used in them, we see, again, that the distribution of different prepositions used in the APPs varies, sometimes widely, from author to author over time, but no definite diachronic trends are apparent (see table 6). Yet one fact stands out quite clearly. APPs are formed disproportionately, at all periods, from a small group of prepositions: *de*, *ex*, *in*, *ad*, and *cum*. For every author, these few prepositions account for at least a plurality of APPs in the sample texts, and they usually make up a very substantial majority. This clustering both does and does not reflect the frequency distribution of all prepositional uses in the texts studied here. The five most frequently used adnominal prepositions rank among the six most used prepositions overall, but the frequency rankings of the prepositions differ significantly between adnominal uses and

TABLE 6: RAW OCCURRENCES OF APPS IN ALL SAMPLE TEXTS,
ARRANGED BY PREPOSITION AND BY AUTHOR

	Cato	Varro	Caesar	Cicero	Livy	Pliny	Petronius	Tacitus	Suetonius	Tertullian	Egeria	Augustine	Gregory	Total
cata												1		1
circa									1					1
contra						1								1
coram													1	1
in giro											1			1
intra										1				1
penes										1				1
ultra										1				1
iuxta											2			2
ob								2						2
per										1		1		2
propter						1						1		2
sub		1							1					2
super												2		2
supra											2			2
trans			1						1					2
ante				1	1						1			3
post				1					1	2				4
adversus				2		1		2	1					6
inter				2	1	3		1						7
ab			1	1	2			2				1	1	8
erga			1	1	1			3			2			8
apud		1		1	2			4				1		9
sine			1	7			1		1	1	1	1	1	14
ad	1	1	3	3	2	3		1	5	6	5	1		31
cum	6	3	2	3		2	5		4	2	2	1	1	31
in + acc.	12	2	5	2	5	1		10		4				41
in + abl.	6	6	1	2	3	7	5		3	3	7	1	1	45
de	7	6	1	4	6	1	3	4	7	2	22	1	7	71
ex	2	4	8	4	8	6	6	3	10	7	6	2	8	74

Note: The prepositions are listed in order of total frequency of occurrence, with the least frequent at the top. The authors are ordered chronologically from left to right. The values in the cells represent the actual number of APPs for each author and preposition that was found in the sample texts. This table contains the raw data, and, since sample sizes vary from author to author, the numbers displayed here do not accurately indicate the comparative frequency of APPs for each author.

TABLE 7. RANKINGS OF MOST FREQUENTLY USED PREPOSITIONS
IN ADNOMINAL USES AND OVERALL

Most Frequently Used Adnominal Prepositions	Most Frequently Used Prepositions Overall
ex (18%)	in + abl. (22%)
de (17%)	ad (14%)
in + abl. (15%)	in + acc. (9%)
in + acc. (10%)	de (8%)
ad (9%)	ex (7%)
cum (8%)	cum (6%)

Note: $\chi^2 = 133.931$; *df* = 5; *P* < .001. The chi-square test was performed on the raw numbers for greater precision. Percentages shown in this table are rounded and indicate what proportion of all prepositions in the total corpus each preposition accounts for; e.g., "*ex* (18%)" in the first column shows that APPs using *ex* make up 18% of all APPs gathered.

all other uses (see table 7).[43] These five prepositions make up more than three-quarters of all APPs for all authors in this study.

Different authors, however, are more or less adventurous in the range of prepositions they use in APPs. Cato, for example, rarely ventures outside the basic group of prepositions; Varro, Cicero, Petronius, Suetonius, and Gregory of Tours are similarly conservative. Gregory, in fact, is the most conservative of all our authors in that more than three-quarters of his APPs use either *ex* or *de*. Other authors are more freehanded. Tertullian is the most extravagant in the range of prepositions used in APPs, but whether this represents a brief, post–Silver Age fashion, Tertullian's sheer rhetorical exuberance, some linguistic artifact of Tertullian's Punic background, or some combination of these possibilities is simply not clear.

NONSTANDARD EXPRESSIONS

Some of the prepositional uses that appear in this corpus are rather foreign to the usual expressions found in Classical prose, particularly the use of *ex* in certain locutions of Cato, Varro, Petronius, and Gregory of Tours. Cato is sparing in his adnominal uses of *ex*, but it does turn up in an idiom that denotes a method of food preparation, in his famous encomium of cabbage (*Agr. Orig.* 157.7): *verum morbum articularium nulla res tam purgat, quam brassica cruda (si edes concisam et rutam et coriandrum concisam siccam et sirpicium inrasum) et **brassica ex aceto oxymeli** et sale sparsa.* This use of *ex* in a recipe turns up again in Varro, *ex iis evulsis ex alis pinnis et e cauda farciunt turundis hordeaceis partim admixtis farina lolleacia aut **semine***

43. The fact that *ex* and *de* account for a disproportional number of APPs when contrasted with all prepositional uses is clearly correlated with the fact that almost 13 percent of all prepositional phrases headed by *ex* are attributive, and just over 10 percent of prepositional phrases headed by *de* are attributive; for all prepositions considered in the aggregate, only about 4.5 percent are found in attributive uses. For the other frequently used prepositions, the figures show that just over 3 percent of *in* + ablative uses are attributive; 5 percent of prepositional phrases with *in* + accusative are attributive; just under 3 percent of prepositional phrases using *ad* are attributive; and nearly 7 percent of prepositional phrases using *cum* are attributive.

lini ex aqua dulci (*Rust*. 3.9.20), and also in the mouths of Petronius' freed-
men: *profuit mihi tamen malicorium et **taeda ex aceto*** (*Sat*. 47.2) and *in
summo habuimus **caseum mollem e sapa** et cocleas singulas et cordae frusta
et hepatia in catillis et ova pilleata et rapam et senape et catillum concacatum,
pax Palamedes* (66.7). J. N. Adams describes this use of *ex* thus:[44]

> The first example attested of this type is at Plaut. *Merc*. 139 "resinam ex melle Aegyptiam
> vorato," which is paraphrased by Ussing "in mel mersam et inde extractam." The *resina*
> is dipped in honey, then taken out and swallowed. *Ex* has some separative force. Since
> *mel* would continue to adhere to the *resina*, Ernout correctly translates the implication
> of the phrase as "avec du miel"; the expression was an idiomatic way of saying "swallow
> resin *with* honey" (to conceal the taste).

If Adams' analysis is correct, does it therefore follow that *ex* is not actually
adnominal here, but rather is somehow attached to some verbal element that
is implied but does not appear explicitly? The examples of this use that
Adams cites all modify some verbal element in the sentence; in the passage
he cites from Plautus, for example, *ex melle* should be construed with
vorato, and Adams cites a similar passage in Cato (*Agr. Orig.* 156.1): *crudam
(brassicam) si edes, in acetum intinguito . . . ante cenam esto crudam quantum
voles ex aceto*, where *ex aceto* should be construed with *esto* (though it could
also function as a *praedicativum*). But in the absence of an explicit verbal
form to which we might attach the prepositional phrase (as in the examples
I cited above), is it preferable to supply an underlying, latent verbal form,
or rather to assume that the idea of submersion and extraction has been
more or less lexicalized in this idiom? Since the use of *ex* in recipe formulas
was well established by Cato's time,[45] the latter option seems to be the more
parsimonious, as it does not require the introduction of additional syntactic
elements.[46]

In another idiomatic usage, Gregory of Tours uses *ex* in a way that pre-
figures later usage in Romance languages (and in English): *post cuius obitum
Albinus ex praefecto per Dinamium rectorem Provinciae extra regis con-
silium suscepit episcopatum* (*Hist*. 6.7), and *sed dum ad regem Childebertum
ambularet, cum **Iovino ex praefectum** [sic] a Gunthramno rege detineri iu-
betur* (*Hist*. 6.11). So also Egeria: *nam est iam **senior vir, vere satis religiosus
ex monacho et affabilis*** (*Itinerarium* 8.4) and *ubi cum pervenissem, fui ad
episcopum vere sanctum ex monacho, vidi etiam ibi ecclesiam valde pul-
chram in eadem civitate* (*Itinerarium* 23.1). The meaning of *ex* here is the
same as in modern English expressions like "ex-president" and "ex-wife." In
the case of titular expressions like *ex praefecto*, the usage eventually becomes
rather formulaic, and *ex* in this meaning is finally reduced to prefix status in

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44. Adams 1995, 438–39.
45. Ibid., 439.
46. Formulations like *brassica ex oxymeli* and *taeda ex aceto* seem somewhat analogous to modern prepo-
sitional recipe expressions like "apple pie à la mode" and "roast beef au jus," wherein the prepositional
phrase refers to the preparation or manner of serving the dish, but is not understood as being attached to
some underlying verbal element such as "served" or "prepared." In fact, among many American speakers
of English who lack French, "au jus" has been reanalyzed as a semantically semiopaque noun phrase, and
it is not uncommon to find "roast beef with au jus" on restaurant menus.

expressions such as *excubicularius* in the *Codex Iustinianus* and *expresbyter* in the writings of Gregory the Great.[47] That development naturally raises the question of whether *ex* has lost its prepositional status already in the writings of Egeria and Gregory of Tours, yet the fact that *ex* still assigns case in those authors (although Gregory is not sure which case to assign) provides strong evidence that it has not yet been reduced to the status of a prefix.

It also seems necessary to comment on the very frequent use of *de*, the descendants of which later become the most frequent adnominal prepositions in many Romance languages. In fact, it seems clear that in Egeria's *Itinerarium*, *de* encroaches upon semantic territory reserved for the genitive in Classical Latin:[48] for example, *cum ergo positum fuerit [lignum sanctum] in mensa, episcopus sedens de manibus suis* **summitates de ligno sancto** *premet, diacones autem, qui in giro stant, custodent* (*Itinerarium* 37.2) and **numerus autem vel ponderatio de ceriofalis vel cicindelis aut lucernis vel diverso ministerio** *numquid vel existimari aut scribi potest?* (*Itinerarium* 25.8). In the first example, where *summitates de ligno sancto* seems to mean "the ends of the sacred wood," any notion of source, separation, or partitivity earlier associated with *de* has almost completely vanished.[49] So also in the second example, where (as in the previous one) the APP with *de* would normally have been expressed with a genitive in Classical Latin.[50] But an overlap between *de* and the genitive occurs as early as Cato. At *De agricultura* 158.1, Cato writes, *sume tibi ollam, addito eo aquae sextarios sex et eo addito* **ungulam de perna**; *si ungulam non habebis, addito* **de perna frustum**, but at 162.1 in the same text he uses the genitive in a similar context: *cum pernas emeris,* **ungulas earum** *praecidito*. We might also note that APPs using *de* make up a plurality of APPs in both Egeria and Cato, indicating that the Romance use of *de*'s descendants as the primary adnominal prepositions may have some roots in the habits of everyday speech going back to our earliest Latin sources. This calls to mind Christian Lehmann's remark about the vulgar Latin of Claudius Terentianus: "We tend to associate Proto-Romance (or whatever we consider to be the basis for the Romance languages) with some time at the end of antiquity. . . . It is good to be aware that in the first years of the II. cent. A.D., the spoken Latin language in some respects resembled closely the Romance languages, in some points even more so than it resembled Classical Latin."[51] And what Lehmann says of the second century C.E. has some application to earlier periods as well.

In sum, Latin from Cato through Gregory permits the use of APPs in a fairly consistent way, with prepositional phrases functioning as nominal modifiers at every stage of the language, although they clearly rank quite low among the preferred noun modifiers in Latin. Clear stylistic differences

47. Väänänen 1973, 674.

48. See Nutting (1932, 282–85) for a discussion of semantic notions that may be expressed either by the genitive or by *de* in Classical Latin noun phrases.

49. Note also that the first instance of *de* in this example (*de manibus suis*) expresses a notion of instrumentality, remarked also by Väänänen (1987, 38).

50. Väänänen (1987, 37) comments, "On peut avoir recours au syntagme en *de* pour éviter le gén. d'une suite de termes compliqués."

51. Lehmann 1988, 23.

emerge among authors with respect to conjoining APPs with verbal nouns, with some authors—but not all—favoring such constructions, especially in the Augustan and Silver ages. But the conjoining of APPs with concrete nouns is a constant from Cato through Gregory and accounts for the majority of all APPs in every author except Tacitus. With respect to word order in the noun phrase, some authors show a preference for particular patterns, but the enclosure of the APP between other elements of the noun phrase is never a universal, established pattern, as has been claimed; to the contrary, in late Latin a tendency to keep the APP in final position seems to emerge. Noun-phrase-initial APPs are permitted, but very rare, and separation of the APP from its noun phrase, though permitted also, is also quite rare. Finally, at no stage of the written language examined in this study does the frequency of APPs rise toward that of modern langauges such as French and English, even though the overall use of prepositional phrases doubles in late, written Latin.[52]

University of North Carolina, Greensboro

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