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*Verborum ordo – ordo verborum*: the placement of the  
dependent genitive in Classical Latin

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## ABSTRACT

In this thesis I examine the placement of the dependent genitive relative to its head noun in Classical Latin prose. The corpus is drawn from the works of four first-century B.C. authors: Caesar, Cicero, Sallust and Varro. The thesis itself is split into two main sections, a qualitative analysis and a quantitative analysis.

The qualitative analysis discusses a number of factors that may influence genitive position, drawn from literature on the subject as well as my pilot studies. These factors are information structure, the genitive's grammatical function, discontinuity, lexical category, animacy, prepositions governing the head noun, reported speech, idioms, lexical items, and grammatical number of the genitive. This analysis examines individual instances of genitive position in context, providing examples and counter-examples of the ordering patterns found with each potential factor.

The qualitative analysis suggests that a number of these factors have an effect on genitive position, particularly information structure. These results are tested by the quantitative analysis. By performing a multivariate statistical analysis using the programme GoldVarb, the combined effects of multiple factors are determined and the statistically significant factors ranked in order of importance and strength of effect. The statistics show that information structure is the most important of the factors. Other significant influences are the presence of prepositions, the function of the genitive and its lexical category.

By combining the two types of analysis, qualitative and quantitative, this thesis shows in detail how the factors combine to influence word order, which of them are independent, which interact, which are important and which have little to no effect at

all, resulting in a better understanding of the data and the way that the contextual factors work together to produce the variant orders of the dependent genitive.

## INTRODUCTION

How best to begin a thesis on Latin word order? A friend helpfully suggested starting with an explosion, but there aren't any to be had, or gratuitous sex, but even though words have sex in Latin, this is not of much use when it comes to the order of the Classical Latin genitive. This train of thought led on, however, to random violence, and so the thesis begins with the heinous and bloodthirsty act of the dog biting the man.

In Latin, *canis momordit virum* means “the dog bit the man”. So does *virum momordit canis*, *canis virum momordit*, and all the other variations on the sentence. It is quite clear that Latin has far freer word order than English, so much so, in fact, that translating a sentence by first identifying the verb, then the subject, then the object, has been likened to playing syntactic hopscotch (Gries 1951:84). Despite its extraordinary flexibility, though, a number of studies over the years have shown that Latin word order is not as random as it seems, with most of the attention being given to information structure, the notion that an utterance is structured with the speaker's communicative intent in mind; see, for example, Panhuis 1982, Devine and Stephens 2006, Spevak 2010.

However, as Adams 1976:72 observes, little attention has been paid to the position of the dependent genitive and its head noun. In Classical Latin, this construction has extremely flexible word order, with the genitive being found both before and after its head noun with roughly equal frequency. As a result, determining the neutral word order for the genitive is not particularly easy, and there are a wide variety of views on the topic, ranging from free variation due to co-dominant orders (Elerick 1991, 1994), authorial preference (Feix 1934, Golla 1935), neutral GenN with NGen the result of

emphasis and contrast (Kühner and Stegmann 1912-14, Leumann, Hofmann and Szantyr 1965 for early Latin genitives), neutral NGen (Marouzeau 1922, Adams 1976, Pinkster 1990, Devine and Stephens 2006), or no neutral order for the genitive as a whole but different orders for different functions (Spevak 2010, Viti 2010).

In this thesis, I examine the Classical Latin genitive in a small selection of first-century B.C. prose authors, in an attempt to establish what patterns or rules there may be that determine the position of the genitive relative to its head noun. Two different types of analysis are used, the qualitative analysis in Chapter 3 and the quantitative analysis in Chapter 4. Most prior studies of genitive position have used a qualitative analysis, discussing a selection of examples and possible linguistic motivations for the orders they exhibit in detail, but there have been few quantitative analyses, and those that exist are for the most part very simple, providing no more than the figures for the distribution of noun + genitive and genitive + noun orders in their corpora. The quantitative analysis in this thesis goes further, providing a multivariate statistical analysis of genitive order, testing potential influences on genitive position for statistical significance (see Ch. 2) and comparing different combinations of these factors to determine which best fits the observed data.

By using both a qualitative and a quantitative analysis, I am able both to examine and discuss my data in depth and to compare the conclusions of the qualitative analysis with the results of the statistical analysis. The qualitative analysis can also provide the linguistic motivation for decisions made when determining which potential factors to test and how to test them in the statistics. In addition to potentially providing support for the qualitative analysis, the quantitative analysis indicates whether or not the patterns observed in the qualitative analysis are likely to be found

by chance, and so allows the findings to be more safely generalised beyond the corpus studied.

These two different analyses examine a variety of factors that might influence the word order of the genitive, ranging from information structure to the syntactic function of the genitive, the presence of a preposition governing the head noun to discontinuity, fixed expressions to the lexical category of the genitive. As it turns out, not all of the factors examined have an effect on word order, such as the animacy of the genitive (see Ch. 3 §5, Ch 4 §2.5), but even these factors can still tell us something about word order, or the corpus or an individual text.

Previous studies have shown that Latin genitive position is not as random as the near equal distribution of noun + genitive and genitive + noun orders makes it seem, but rather that it is determined by a number of different factors. This thesis does not just discuss these different factors, but also tests their combined effects as well as ranking the individual factors in order of significance as well as strength in the multivariate statistical analysis, resulting in a better understanding of the data and the way that the contextual factors, be they syntactic or pragmatic, lexical or typological, work together to give the variant word orders.

## CHAPTER ONE

### LITERATURE SURVEY

Latin word order has been a subject of dispute since antiquity. Even the Romans had trouble formulating rules for *compositio*, the arrangement of words in a sentence. Quintilian observes that *illa nimia quorundam fuit observatio, ut vocabula verbis, verba rursus adverbis, nomina adpositis et pronomibus essent priora: nam fit contra quoque frequenter non indecore* “the advice of some grammarians is too strict, namely that substantives come before verbs, verbs before adverbs, and nouns before adjectives and pronouns, for the reverse order may often be appropriate” *Inst.* 9.4.24. He also rejects *illud nimiae superstitionis, uti quaequae sint tempore, ea facere etiam ordine priora* “that unfounded belief that whatever events occur earlier in time, these will be placed earlier in the sentence” *Inst.* 9.4.25, and although he advocates verb-final clauses – *verbo sensum cludere multo, si compositio patiat, optimum est: in verbis enim sermonis vis est* “to end a sentence with a verb, if composition allows it, is by far the best: for in verbs the force of speech lies” – he concedes that this order will frequently give way to the demands of *compositio* and euphony (*Inst.* 9.4.26). Cicero too considers rhythm and euphony important factors to bear in mind when shaping an utterance: *eam coniunctionem, sicuti versum, numerose cadere et quadrare et perfici volumus* “like verse, we want the way in which the words are joined to be rhythmical, to fit together neatly and to be rounded off” *De Or.* 3.175. However, Cicero cautions that *versus in oratione si efficitur coniunctione verborum, vitium est* “if a verse is produced in oratory by the arrangement of the words, it is a fault” (*ibid.*).

The ancient theorists were largely concerned with overall word order – word order at sentence level – rather than the ordering of constituents within phrases. The closest we come to a discussion of word order within phrases is Quintilian’s mention and rejection of the grammarians’ views that nouns precede verbs, verbs adverbs, and nouns adjectives and pronouns (*Inst.* 9.4.24). Studies of word order at the phrase level had to wait nearly two thousand years, with the first guidelines for constituent arrangement laid down by Latin grammars.

### **1. GENERAL STUDIES**

In Mountford’s revised edition of Thomas Arnold’s *Latin Prose Composition*, basic orders for the writing of Latin prose are given, instructing pupils to note departures from these norms when reading Latin texts (1938:17-20). So, in sentences that lack emphasis or contrast, word order is subject-initial, verb-final. Direct and indirect objects precede the verb, genitives follow their governing noun, unless the noun is preceded by an attributive adjective, in which case genitives are interposed between adjective and noun. Adjectives tend to follow the nouns they modify, unless they denote size or quantity, or the noun they agree with is the head noun of a genitive expression. Numerals and demonstrative and interrogative pronouns precede the nouns they qualify. Phrases in apposition come directly after their head nouns, whilst adverbs and adverbial phrases precede the verbs they modify. Adverbs of time tend to supplant the subject in sentence-initial positions, whilst negative adverbs are always placed directly before the word they qualify. However, there are always exceptions to these rules, “[f]or the order in Latin is determined not only by general principles, but also by considerations of emphasis, clearness, sound, rhythm, and variety” (p. 22). As a result, translating passages often involves “playing hopscotch all over each

sentence” (Gries 1951:84), as the students search for the verb, the subject, the object, and then try to string all the pieces of the sentence into a coherent order. This strictly syntactical approach to Latin has led to its word order being called “a thing of whimsy” (Gries, 1951:84), a “bugaboo” (*ibid.*, p. 87), or even “unnatural and wholly without plan” (Robbins, 1951:78).

If Latin word order in general is vexing, trying to determine the order of the dependent genitive relative to its head noun is even worse. As mentioned above, the revised 1938 edition of Arnold’s *Latin Prose Composition* states that genitives normally follow their head nouns, but in Bradley’s 1881 edition the opposite view that the genitive usually precedes its head noun is given (1881:26). Feix 1934:26 and Golla 1935:18f. both assert that the order of the genitive is left to the discretion of the author, though they also list a number of factors – fixed expressions, intonation, avoidance of ambiguity, length of the genitive, and emphatic genitives – that have an effect on genitive position. Kühner and Stegmann 1914 II:610 state that the original position for genitives was before their governing nouns, though they also point out that this rule was broken even in early times, giving as examples phrases such as *tribunus plebis* and *orbis terrarum*, and note that even in non-formulaic phrases “werden die Genetive oft mit großer Freiheit nachgestellt”. Leumann, Hofmann and Szantyr agree that genitive + noun was the original order for possessive genitives, observing that in Old Latin genitives are postposed for emphasis (see further Rosenkranz 1933:137-9) but that later on, genitives are preposed for emphasis (1965:409). They also point out that for partitive genitives, postposition is the norm, though not the only order (p. 55). Gildersleeve and Lodge 1997:430, Hale and Buck 1903:335, Marouzeau 1922:124f., and Pinkster 1990:185, on the other hand, consider that the neutral position for dependent genitives is after their head nouns, whilst

Spevak 2010:267 and Viti 2010:93 argue that there is no neutral position for the genitive, but rather different positions for different functions. It is quite clear that there is no real consensus on word order for the genitive.

Adams 1976, in a study of Latin word order, observes that in statistical studies of the proportions of the variant orders noun + genitive (NGen) and genitive + noun (GenN) in Classical Latin, the two orders are found roughly as often as each other. Complicating the matter further is the fact that the same author may prefer one order in one work, but then use the reverse order more frequently in another work. Below is a table drawn up from some of the figures given in Adams 1976:

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3.32	437	57.8%	319	42.2%	<b>756</b>
ps.-Caes. <i>BH</i>	45	43.3%	59	56.7%	<b>104</b>
Cic. <i>Pis.</i> 1-50	133	55.2%	108	44.8%	<b>241</b>
Cic. <i>Rosc. Am.</i> 1-50	66	45.8%	78	54.2%	<b>144</b>
Petr. <i>Cena</i> narrative	65	59.1%	45	40.9%	<b>110</b>
Petr. <i>Cena</i> speeches	58	55.8%	46	44.2%	<b>104</b>
Suet. <i>Nero</i> 1-19	66	49.6%	67	50.4%	<b>133</b>
Tac. <i>Ann.</i> 14	311	59.5%	212	40.5%	<b>523</b>

**Table 1: distribution of NGen and GenN in Classical authors, from Adams 1976:77f.**

As the distribution of the orders is so confused, Adams rejects such simple statistics and turns instead to an analysis of Latin genitive position, listing five main determinants (pp. 78-82). These are (1) antithesis and emphasis, (2) an artificial literary preference for genitives to be enclosed between head nouns and their qualifying adjectives, (3) genitives equivalent to an adjective of quantity or size, (4) subjective and objective genitives, (5) variation and chiasmus. He also mentions a sixth factor, which is the survival of old formulae containing GenN order in Classical Latin. These factors are discussed briefly below.

Adams observes that when a genitive is part of an antithesis, it precedes the head noun, but when it is unmarked it follows. From this he argues that the order noun + genitive is “the basic or unmarked position”, whilst genitive + noun is “stylistically

marked” (p. 78). As a result, it is not just genitives in antithesis that precede their governing noun, but any genitive which carries stress or emphasis. If an author wishes to highlight a dependent genitive, it will be preposed (p. 80); see also Marouzeau 1922:125.

When the genitive depends upon a noun that is modified by an adjective, Adams notes that “it is almost the rule” that the genitive will be enclosed by the adjective and the head noun. Whether the pattern is adjective + genitive + noun or noun + genitive + adjective is determined by the adjective – if it is an adjective of the sort that usually precedes its noun, such as a quantifier, e.g. *omnia Aeduorum vectigalia* “all the taxes of the Aedui” Caes. *BG* 1.18.3, then the genitive will also precede the noun. Adams considers this to be “an artificial literary pattern” (p. 80); cf. Feix 1934:26f..

Just as genitival expressions containing adjectives of quantity or size like *omnia Aeduorum vectigalia* Caes. *BG* 1.18.3 tend to the order GenN, so too do genitives which are themselves equivalent to these adjectives. Adams compares the genitival expression *omnium mentis* with the adjectival *omnem exercitum*, both found at Caes. *BG*. 1.39.1, noting that “the genitive *omnium* is positioned according to the same principle as the adjective *omnem*” (p. 81).

The function of the genitive can also affect its position. If both a subjective and an objective genitive depend on the same governing noun, the subjective genitive precedes the noun and the objective follows, giving the order Gen<sub>subj</sub>NGen<sub>obj</sub>, e.g. *pro veteribus Helvetiorum iniuriis populi Romani* “on account of the old injuries done by the Helvetii to the Roman people” Caes. *BG* 1.30.2, which parallels sentence level subject + verb + object order. It is also possible for both genitives to either precede or follow the head noun, but in almost every case, the subjective genitive will be placed ahead of the objective, giving either NGen<sub>subj</sub>Gen<sub>obj</sub>, or more rarely Gen<sub>subj</sub>Gen<sub>obj</sub>N.

Adams also notes that on occasion, the subjective genitive may precede the noun even when there is no objective genitive to create ambiguity (p. 81).

The fifth of the main determinants of genitive position Adams lists is again aesthetically motivated, this time by the desire for variation. A genitive with the order NGen may be followed by one with the reverse order, resulting in the oratorical figure of chiasmus (p. 82). Last of all, Adams mentions old formulae which preserve the GenN order of Old Latin in Classical Latin (p. 82), amongst them patronymics, which take the form genitive + *filius*, legal expressions such as *iuris consultus* and *vitae necisque potestas*, weights and measures, e.g. *herbae Sabinae plantas tres* “three plants of Sabine herb” Cato Agr. 70, and other possible formulae, such as *solis occasu, hominum memoria, aquae ductus* (p. 75).

For Adams, it is the combination of these different factors that results in the apparent random variation between GenN and NGen in Classical Latin. If there is an underlying order in this period, it would appear to be NGen, in part because it is the default position for genitives that are not part of an antithesis or lack emphasis. Also, the “semi-literate” letters of Claudius Terentianus which date from the early second century A.D. show a definite preference for NGen, which Adams cites in support of his argument that GenN was “a prestige order” and a feature of the “artificial classical language” (p. 83). Thanks to its detailed look at a varied selection of influences on genitive position, as well as its focus on the rôle played by emphasis and contrast, this study remains important and relevant to the question of genitive word order in Classical Latin, and is frequently cited in articles on Latin genitive position.

Up to this point, the works surveyed have been studies of Latin word order in general, including Adams 1976 – the genitive makes up just one section of the article. These have also, for the most part, been conducted outside specific theoretical

frameworks. The grammars, for instance, base their statements upon observations, and although Adams 1976 is a typological study of Latin word order, his discussion of genitive position has little to do with typology and linguistic universals, but is rather a detailed examination of the data. However, the articles and books that follow in the rest of the literature survey look at Latin word order from three main perspectives – typology, information structure, and syntax.

## **2. TYPOLOGY**

In a typological study of Latin word order, Elerick 1991 draws a different conclusion from Adams 1976 on the neutral word order of the Classical Latin genitive. Examining the serialisation of head noun, dependent genitive and adjectival modifiers in Cicero's orations, he notes that the serialisations in his corpus obey Hawkins' rule that the combinations of orders genitive + noun/adjective + noun, noun + genitive/adjective + noun and noun + genitive/noun + adjective are common in prepositional languages, whilst the combination genitive + noun/noun + adjective is rare (Hawkins 1983:66). Elerick notes that in Latin, the serialisation of nouns, genitives and adjectives "is significantly constrained, principled though not rigid" (p. 315).

He also notes that the word order of the most frequently occurring serialisations can be explained in terms of the principle of Pre-emptive Markedness, posited in Elerick 1989. This principle states that a language will try to minimise complexity – if one complex, marked construction is present, the other constructions in the same phrase or even sentence will tend to be simple and unmarked (1989:561, 1991:315). Its chief significance here is that it provides a linguistic rather than statistical means of determining which of the two variant orders for both nouns and adjectives and nouns

and genitives is basic. When the genitive phrase contains an adjectival modifier for the head noun as well as an adjectival modifier of the genitive itself, “some ill-defined but nevertheless real complexity (length of string) condition” is met (1991:315). The most common order for adjectives under these conditions is preceding the noun, but for genitives, both GenN and NGen are found roughly as often as each other, leading Elerick to conclude that the two orders are indeed “co-dominant” (p. 319), with neither being a basic, underlying form. However, he notes that his data are drawn expressly from Cicero and so he makes no claims about Latin in general “beyond that which is entailed by the fact that his usage is highly representative of the language of the classical period” (p. 312).

Elerick 1994 reiterates the view that GenN and NGen are co-dominant, i.e. both orders are found equally as often, with neither one being more basic than the other. Once again he combines statistical evidence with a linguistic principle, this time the principle of Harmonic Phenotypic Linearization (p. 68), which is derived from Venneman’s Natural Serialization Principle. This principle states that in languages where the complement precedes the verb, operators will precede their operands, but in a language where the complement follows the verb, operands will precede their operators (Venneman 1974:10). Operators are modifiers, whilst the operands are the modified constituents. For example, adverbs and objects are the operators of the verb operand, and adjectives and genitives are operators of the head noun operand.

The principle of Harmonic Phenotypic Linearization discusses what Elerick calls phenotypic or “manifested” word order (1994:68) in terms of the typological concept of harmony, a notion derived from Greenberg’s (1963) word order universals, which refers to the distribution of particular combinations of word order patterns across languages. For example, Universal 5 states that “if a language has dominant SOV

order, and the genitive follows the governing noun, then the adjective likewise follows the noun” (Greenberg 1963:88). The harmonic and disharmonic orders predicted by this universal are diagrammed in Table 2 below:

	NGen	GenN
NAdj	3	3
AdjN	7	3

NGen is found with NAdj, but not AdjN; the combination of the orders NGen and NAdj is harmonic.

NGen is not found with AdjN; the combination of the orders AdjN and NGen is disharmonic.

NAdj is found with both variants of the genitive order; GenN is found with both variants of the adjective order; the combination of NAdj and GenN is disharmonic.

AdjN is only found with GenN order; the combination of the orders AdjN and GenN is harmonic.

**Table 2: Harmony patterns**

So when an implicational universal such as Universal 5 predicts that a variant order *x* for a particular construction occurs only with one specific variant order *y* of another construction, *x* is said to be harmonic with *y*. So NGen is harmonic with NAdj, because NGen is not found with AdjN, and AdjN is harmonic with GenN, because AdjN is not found with NGen. The variant order *x* of one construction is disharmonic with the variant order *y* of the other construction if the implicational universal predicts that they will not be found together, as is the case for NGen and AdjN order, as well as when it predicts that *x* is found with both variants *y* and *z* of the other construction. So GenN is disharmonic with NAdj because it is found with both NAdj and AdjN, and NAdj is itself disharmonic with GenN because it is found with both NGen and GenN. Drawing on this notion of typological harmony, Elerick’s principle of Harmonic Phenotypic Linearization predicts that languages with variable word order will favour harmonically ordered constituents over disharmonic orders.

In addition to verb-object order and noun-adjective order, Elerick also examines the order of the head noun and dependent genitive (1994:69f.). He looks first at the order of the dependent genitive and head noun in both Caesar and Livy when the head noun

is not governed by a preposition, and when a preposition governs the head noun. In both authors, the harmonic order preposition + noun + genitive occurs far more frequently than the disharmonic order preposition + genitive + noun (p. 69). He also re-examines his Cicero data for noun, adjective and genitive serialisation from 1991, and notes that in these phrases when the adjective modifies the genitive the harmonic orders Adj<sub>GEN</sub>GenN (AdjN + GenN) and NGenAdj<sub>GEN</sub> (NAdj + NGen) occur most often, whilst there are very few instances of disharmonic GenAdj<sub>GEN</sub>N (NAdj + GenN). However, there are nearly as many examples of disharmonic NAdj<sub>GEN</sub>Gen (AdjN + NGen) as there are of harmonic NGenAdj<sub>GEN</sub> (NAdj + NGen). Beyond mentioning that this disharmonic combination of AdjN + NGen orders contains the “dominant A[dj]N order” and occurs less frequently than harmonic AdjN + GenN, Elerick does not explain its prevalence. Instead he once again concludes that NGen and GenN are “co-dominant” in Classical Latin (p. 70), without considering the possibility that NGen itself may also be a dominant order, as it is found in two of the three most frequent noun, adjective and genitive serialisations.

Elerick also uses the principle of Harmonic Phenotypic Linearization to motivate a change from GenN to NGen order in Latin (pp. 71f.), using the data from the prepositions, rather than from the adjectives, as he says the change in adjective order from pre-head to post-head occurred more slowly (p. 72). He suggests that NGen may have gained ground on GenN initially in polysyllabic or compound genitives, both of which are heavy and so, in accordance with Hawkins’ Heaviness Principle (1983:90f.), which states that heavy, i.e. long or complex, constituents occur to the right of their head, would move to the end of the phrase or even clause. Once NGen was common enough an order, the principle of Harmonic Phenotypic Linearization led to an increase in the proportion of prepositions relative to postpositions, which led

in turn to NGen order becoming more and more common, again thanks to the principle, until at last it replaced GenN order entirely. The logic may seem a little circular at first glance, but the process as Elerick describes it is essentially a feedback loop, a well-known example of which is the warming of the earth's atmosphere and the melting of the polar ice caps: as the atmosphere warms, so more of the ice caps melt, leaving less ice behind to reflect the sun's rays, which means that more heat is trapped within the atmosphere, and so more ice melts.

Whilst the mechanics of the shift from GenN to NGen, once the change has been set in motion, makes sense, the motivation for its start raises a few questions. The impression given by phrases such as “[t]he appearance of NGen as an alternate order” (p. 71) is that at some point in the history of early Latin the Heaviness Principle did not apply and all genitives, regardless of length or complexity, were found before their head nouns. Why then did the Heaviness Principle start to affect word order? Elerick provides no explanation for this. Perhaps the Heaviness Principle was in competition with some other influence on word order in early Latin, such as a preference for modifier-modified order, which restricted the use of the Heaviness Principle at first, or perhaps it was not the Heaviness Principle that triggered the shift, but information structure. Rosenkranz 1933:137-139 argues that in Old Latin postposed genitives are emphatic, e.g. *aedem Castoris* CIL I<sup>2</sup> 1506, where the god's name is highlighted by postposition, or contrastive, e.g. *tribunus militum* contrasts with *tribunus plebis*; see also Adams 1976:75f.. It is quite possible that these emphatic postposed genitives had a hand in the switch from GenN to NGen order. In both of his articles discussed here, Elerick tends to focus on typology to the exclusion of all other potential explanations, ignoring the possibility that no single one factor determines word order.

Whereas Adams 1976 considers NGen to already have become the basic order in Classical Latin, Elerick 1994 sees the statistical “co-dominance” of GenN and NGen in Classical Latin rather as a step of the process of language change leading from GenN to NGen. Both, though, are agreed that the variation between the two orders is the result of linguistic principles at work, rather than the language having free word order, or leaving the position of the genitive to the discretion of the author, *pace* Feix 1934:26, Golla 1935:18f..

### 3. INFORMATION STRUCTURE

One of the oldest approaches to explaining Latin word order has been that of information structure, which considers utterances, written or spoken, to be arranged in accordance with their communicative intent. In other words, it is the information that is to be conveyed that determines the structure of the utterance. Quintilian, for example, mentions that the end of a sentence often contains more significant information, and discusses an example from Cicero’s *Philippics* to make his point:

Saepe tamen est vehemens aliquis sensus in verbo, quod si in media parte sententiae latet, transire intentionem et obscurari circumiacentibus solet, in clausula positum adsignatur auditori et infigitur, quale illud est Ciceronis: ‘ut tibi necesse esset in conspectu populi Romani vomere postridie’. Transfer hoc ultimum: minus valebit. Nam totius ductus hic est quasi mucro, ut per se foeda vomendi necessitas iam nihil ultra exspectantibus hanc quoque adiceret deformitatem, ut cibus teneri non posset postridie.

However, there is often a powerful significance in a single word; if this is then concealed in the middle of a sentence, it tends to escape attention and be overshadowed by its surroundings, whereas if it is placed at the end it is impressed upon the hearer and fixed in his mind, as in Cicero’s “so that you were obliged to vomit in the sight of the Roman people *the day after*.” Move the last word and it will lose its force. This is the sharp end of the whole passage, as it were: Antony’s need to vomit, disgusting in itself, acquires the further hideousness – not expected by the audience – that he could not keep his food down *the day after*.

*Inst.* 9.4.29-30<sup>1</sup>

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<sup>1</sup> Translation by Donald Russell (2001:177).

The influence of information structure on the arrangement of the constituents of a phrase or clause in Latin is recognised by Weil (1887 translation): “Words are the signs of ideas; to treat of the order of words is, then, in a measure, to treat of the order of ideas” (p. 11). For Weil, this is the most important factor influencing Latin word order. Rosenkranz 1933:137-9 attributes variation in genitive position in Old Latin to information structure. He notes that time and again genitives following their head nouns are either emphatic, e.g. *apud aedem Duelonai* “at the temple of Bellona” S.C. de Bacch., where the name of the goddess is thrown into relief by postposition, *ad vinas Anchariorum* “to the vineyards of the Ancharii” 408.5 Diehl 1930, where the course of an aqueduct is described in terms of the landmark properties of certain people, whose names follow the head noun and carry emphasis, or contrastive, e.g. *aedilis plebis* and *aedilis curulis*.

Although both Feix 1934:26 and Golla 1935:18f. consider the order of the dependent genitive and head noun to be at the discretion of the writer, they do note that emphasis is one of the factors that can affect the genitive’s position. Adams 1976 also considers information structure in the form of antithesis and emphasis to be a motivating factor of genitive word order; as in Feix 1934 and Golla 1935 it is just one of several influences. De Jong 1983 also discusses word order of head nouns and their modifiers in Latin in terms of information structure, or “pragmatics” in the terminology of the Dutch tradition of Functional Grammar. Whilst he does not distinguish between the genitive and other modifiers of the noun, he states that “[p]ostposition has been recognized as the neutral order”, and that pre-head modifiers are marked (p. 131).

De Jong argues there are four pragmatic conditions that lead to anteposition of modifiers within the noun phrase. These are (1) contrast, (2) topic, (3) referential

unity, and (4) context reference. Of all these, the most influential is contrast, which occurs when two terms which share some property but also differ in some way are connected (p. 132). For example, in the contrasting *e suis finibus in Helvetiorum fines* “from their territory into that of the Helvetii” Caes. *BG.* 1.28.4 the contrasted modifiers share a head noun *fines* in common, but differ in their references (pp. 132f.).

A modifier can also precede its head noun if it carries Topic status. In Functional Grammar, Topic is a pragmatic function which presents the entity about which something is being said (S. Dik 1978:19). De Jong notes that not only do Topic modifiers precede their head noun, they also are frequently found earlier in the sentence, e.g. *Gallorum alacer ac promptus est animus* “the temperament of the Gauls is keen and brave” Caes. *BG* 3.19.6, where the genitive *Gallorum* is also the Topic, and is placed at the very start of the clause (1983:136), a position which is considered to be reserved in Functional Grammar for “special purposes, including the placement of constituents with Topic or Focus function” (S. Dik 1989:348). One of the modifiers that often carries this function is the demonstrative pronoun in the genitive, as pronominals are anaphoric, referring back to something that has been mentioned earlier (De Jong 1983:139).

Referential unity, the third of the factors causing modifiers to precede their head nouns, is De Jong’s term for a noun phrase with a head noun that “refers to a collective” and a modifier which “specifies the parts of which it is made up”, e.g. *Sueborum gens* “the people of the Suebi” Caes. *BG* 4.1.3 (p. 137). De Jong points out that although examples of genitive + *gens/manus* are partitive genitives as well, it is not their syntactic function that causes them to be preposed, but their referential unity. Partitive genitives found with *pars*, *quisque* and *plerique* do not share the meaning of

the noun phrase as a whole – the noun phrase lacks referential unity, and the genitives follow their head noun (p. 137). De Jong also suggests that referential unity explains the fixed order modifier + *numerus* found in idiomatic expressions such as *desertorum ac proditorum numero* “in the number of deserters and traitors”, “as deserters and traitors” Caes. *BG* 6.23.8 (p. 137), as well as contributing to the tendency for the genitives *vestrum* and *nostrum* to follow their head noun (p. 138). Cf. Devine and Stephens 2006 who state that Latin genitive constructions with GenN order frequently refer to “a single concept or subkind” (p. 389), as well as S. Bakker’s preposed metonymic genitives in Greek (2009:52).

The last of the factors De Jong discusses is context reference, where the noun phrase “refers back to a fact known to the hearer or reader by previous mention in the context” (p. 138). Again, the modifier precedes its head noun, e.g. *illi ... reverti se in suas sedes simulaverunt et ... rursus reverterunt atque ... inscios inopinantesque Menapios oppresserunt qui de Germanorum discessu per exploratores certiores facti* “they (the Germans) pretended to return to their homes and ... suddenly returned and ... caught the uninformed and unwary Menapii by surprise, as they had been informed about the Germans’ departure by their scouts” Caes. *BG*. 4.4.6, where the genitive *Germanorum* refers back to *illi*, *se* and *suas*.

De Jong also discusses the difference in meaning or communicative intent of preposed and postposed modifiers. When modifiers follow their head noun, the reference and sense of the phrase is determined by the references of the head noun and modifier (p. 132), but when the modifiers precede, this is a signal that either the reference of the phrase is somehow different, as in the case of referential unity, or that the modifier itself carries either contrast or topic function (p. 139). He makes no distinction between the different types of modifiers found in noun phrases because he

believes that they obey the same rules of information structure, though he does note that certain types of modifiers may be more frequently affected by certain rules, as in the case of the pronominal genitives mentioned above (p. 139).

Spevak 2010 also examines Latin word order “from a pragmatic point of view”, again within the framework of Functional Grammar (2010:11). She starts at the sentence level and works down to phrasal level from there, looking in particular at the role of Topic and Focus. Topic, as defined above, refers to the entity with which the utterance is concerned, whilst the Focus is “relatively the most important or salient information” (S. Dik 1978:19).

At the sentence level, Spevak finds that Topic and Focus determine order, with Topic being put in initial position, whilst Focus is more mobile (2010:283f.); cf. Salvi 2005, where he blends functional and formal grammar by positing the existence of two functional projections Topic and Focus at the left periphery of the Latin clause. At the level of the noun phrase, with regard to the ordering nouns and their dependent genitives, information structure again determines the sequence of the constituents. Spevak notes that “statistics show no clear preference” for the order of the head noun and dependent genitive (p. 265), and that even in the case of fixed expressions, the genitive may be preposed, as in *senatus consultum*, or postposed, as in *tribunus plebis*, according to the expression (p. 266). However, the fact that fixed expressions come in different orders does not provide convincing proof that there is no neutral order for the Latin genitive, for the simple reason that fixed expressions may reflect the influence of different factors determining word order. See further Ch. 3 §8.

Spevak questions whether there is even a “normal” order for genitive phrases (p. 266), noting that Dryer 2005:350 points out that there are languages, such as English, where both NGen and GenN orders exist “with neither order dominant”. However,

Spevak states that from a pragmatic approach “tendencies” for genitive position can be determined, with Focused genitives often following and genitives which are Topics preceding their head nouns (2010:267). These tendencies hold both when multiple genitives depend upon the same head noun and when the genitive phrase is complex, i.e. the head noun and/or the dependent genitive has one or more modifiers (pp. 268-71). So, like Elerick 1991, 1994, Spevak does not consider one order to be basic and unmarked, but that there is nevertheless principled and predictable variation. The notion that there is no one neutral order for the genitive but different orders for different types and functions of the genitive is interesting, and one which I will return to in Ch. 3.

Viti 2010 provides yet another look at the motivations of the word order in the Latin genitive. Adopting a “functional pragmatic approach”, she begins by examining examples of NGen order in archaic Latin, noting that it is largely plural or collective genitives that are postposed, such as *tribunus plebis*, *magister equitum*, *orbis terrarum*, *cultus deorum* (p. 81). Other postposed genitives include “abstract substantives” (p. 81) and gerunds. Both plural, collective, and abstract nouns, she states, usually have generic rather than individual referents, which leads to her hypothesis that NGen is the order for generic or non-specific genitives (pp. 81f.).

She tests the hypothesis on Caesar *BG* 1-7, by looking at the word order of all genitive phrases with non-pronominal genitives. Her corpus includes formulaic genitives with fixed word order, such as *tribunus militum*, as she says that there is “in principle” no reason why the reverse order should not be found (p. 82). However, formulaic genitives are best excluded from studies of word order variation, precisely because they tend to be found in one particular order with the reverse order hardly

ever found, if it is found at all, and can thus bias the results; see further Ch. 3 §8 and §10.

The most frequent order for the non-pronominal genitives in Caesar *BG* 1-7 is NGen; Viti also observes that there is “[a]n interesting correlation ... between the order of a genitive phrase and the grammatical number of the genitive noun”, with preposed genitives usually being singular, and postposed genitives more usually being plural (p. 83), with the higher frequency of GenN in the singular being statistically significant in both *BG* 1 and *BG* 7 (p. 84).

There are exceptions to this trend of preposed singulars and postposed plurals, though, but upon examination, she states that singular genitives found NGen are usually non-specific collective nouns, or non-human (p. 84). As for the plural genitives found GenN, these are found with quantifiers, intensifiers or contrastive expressions (p. 85), all of which Viti considers “triggers for ... genitive fronting” as they “contribute to the presentation of the genitive referent as more specific, peculiar and worthy of attention” (p. 87); cf. Adams 1976, De Jong 1983 above. Like De Jong, Viti believes that contrast is the most powerful of these triggers, followed by the presence of an intensifier such as *ingens*, *multus* (Adams 1976 calls these expressions of size), and last of all the presence of a quantifier such as *tres*, *omnes* (2010:87).

Turning to the instances of genitive order that she considers to be “[p]rototypical”, she observes that postposed plural genitives consistently refer to “non-human (i.e. animal or inanimate) concrete (i.e. non-abstract) items” (p. 88). For these genitives, NGen is the normal order, and they precede the head noun only when emphatic or contrastive. Typical GenN orders, on the other hand, are “consistently associated with referential possessive relations such as kinship” (p. 89), specifically patronymics, and thus tend to have human referents. She also discusses the placement of non-referential

genitives, which do not refer to individuals, but rather to some property of the head noun, e.g. *pater familias*, and says that in Latin these are usually postposed genitives which form part of formulaic phrases with a fixed word order (p. 91).

Viti concludes that the order of the genitive is determined by “the functional competition between a discursive principle and a cognitive principle” (p. 92). The discursive principle simply means that dependent genitives depend on a head noun, so a head noun must be present. When the genitive precedes the head noun, it means that a head noun must of necessity follow it, which provides a motivation for the statement of Devine and Stephens 2006 that GenN order occurs with “predictable, well-established” noun phrases (Viti 2010:93); see further below. The cognitive principle refers to a mixture of information structure and language processing – information that is presented as salient is placed somewhere to attract attention (such as preposed genitives) whilst information that is found “in the middle of a discourse [is] perceived and retrieved with more difficulty” (p. 93). For Viti a salient piece of information is “human, agentive, volitional” (p. 93), so these sorts of genitives precede the head noun, whilst inanimates follow. Similarly to Spevak 2010, Viti considers that there is no basic word order for the genitive as a whole, but rather that there are basic word orders for the genitive in each of its different functional domains (p. 93). However, although Viti presents some interesting ideas, the study is ultimately flawed by the inclusion of the fixed expressions, and in fact it is likely that the grammatical number of the nominal genitive actually has little to do with its order; see further Ch. 3 §10.

#### 4. SYNTAX

Syntactic studies of Latin word order have been few and far between, thanks to its flexibility and the fact that any syntactic approach to Latin almost inevitably results in “playing hopscotch all over each sentence” (Gries 1951:84). In fact, Panhuis 1984:156 goes so far as to claim that “[f]rom a syntactic point of view, word order in Latin is indeed almost free”. Nevertheless, there have been some attempts to describe it in grammatical terms.

One of the earliest and most influential grammatical discussions of Latin word order can be found in Marouzeau’s three volume work *L’ordre des mots dans la phrase latine*. Marouzeau 1922:3 feels that Weil 1887 goes too far in attributing word order to the flow of ideas, and points out that syntactic relationships are involved in determining word order. Within syntactic groups, such as those formed by nouns and adjectives or nominals and participles, a change of the order of the constituents “peut modifier le sens ou la valeur de l’un des termes du groupe” (p. 8). In the case of Latin noun phrases, a constituent may achieve prominence through preposition or fronting within its construction (see de Jong 1983:131, Devine and Stephens 2006:26, 380, 386; cf. Bakker 2009:38 on Greek word order). Marouzeau also states that the neutral order for the genitive is NGen (1922:124).

Since the development of Generative Grammar, attempts to describe Latin word order in terms of its syntax have operated within the generative framework, starting with Lakoff 1968. She proposes that Latin’s underlying deep structure can be described by the same phrase structure rules as that of English, and that in both languages the transformational rules determining the movements of constituents from their positions in deep structure are the same (pp. 74f., 100, 156). However, Latin word order is very much more flexible than that of English, so to account for this

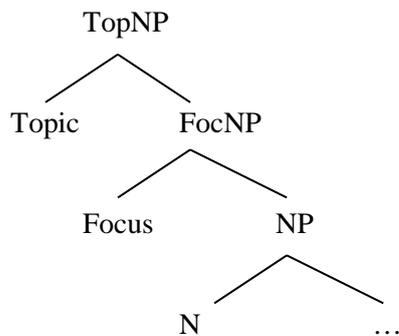
freedom, Lakoff claims that Latin has a scrambling rule that applies to sentences after the transformational rules, shuffling the words around freely (p. 95). However, as Ostafin 1986 points out, Lakoff's scrambling rule "assumes that surface word order in Latin is essentially random" (p. 31). The apparent syntactic freedom of Latin word order, Ostafin argues, is rather the result of Latin having more movement rules and more places available for constituents to move to than do languages with relatively fixed orders (p. 239).

Despite his focus being on Latin syntax, Ostafin touches briefly on the suggestion that pragmatics may be involved in the movement of constituents: "these movements result in the emphasis of the moved constituents" (p. 233). Ostafin does not develop upon this point, but this particular line of approach, viewing Latin as a syntactically principled language whose multiple variant word orders are pragmatically motivated, is a promising one. For all their use, the pragmatic terms of Functional Grammar are at times "rather vague" and prone to being "loosely interpreted" (Siewierska 1991:174). Incorporating them into a Generative Grammar framework, though, provides them with a more precise definition, describing them in terms of their formal structure as well as their function. On the other hand, the strictly syntactical approach benefits from the inclusion of pragmatic functions, as not every transformation that occurs *en route* from logical to phonetic form is driven by purely grammatical constraints. Utterances, after all, are intended to communicate information, and, as pragmatic factors shape how the message is presented, they are obviously significant in determining the final form of an utterance.

One of the most comprehensive accounts of genitive word order is provided by Devine and Stephens 2006, who combine pragmatics with generative syntax, as well as semantics and prosody. Although they discuss a broad range of constructions in

detail, their aim is not “broad coverage of the subject matter”, but instead the clarification of “theoretically significant issues” (p. 8). As a result, their approach to each grammatical construction involves close analysis of the patterns associated with a small selection of words, followed by an integration of these patterns into a theoretical framework.

They propose that Latin is a discourse configurational language, with the structure of a sentence determined by pragmatic properties, specifically the properties of topic and focus (p. 26); see also Ledgeway 2012:183-92. In an approach which uses a similar mixture of generative grammar and information structure, Salvi 2005 posits two positions for the functions of topic and focus at the start of the clause, but here Devine and Stephens go one step further and assume that there are similar positions at the start of each phrase. For example, they structure a Latin noun phrase as follows:



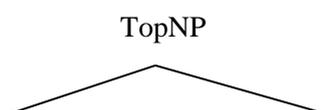
**Figure 1: Latin noun phrase (Devine and Stephens 2006)**

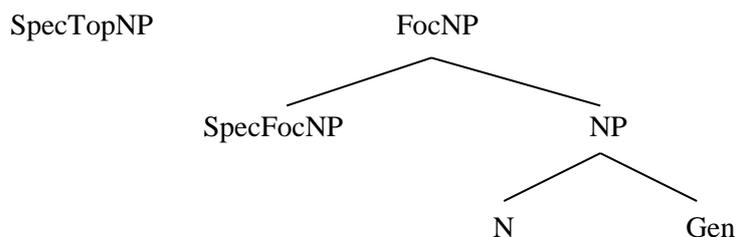
Devine and Stephens argue that Latin has a basic underlying word order, which is hierarchical and syntactically structured (p. 83). Exceptions to this order are motivated by communicative intent. Because of the presence of a neutral word order and an underlying hierarchical structure, they suggest that specifier syntax (as in X-bar theory), with attendant argument raising, is the most efficient way of diagramming Classical Latin (pp. 87f.). So, for the noun phrase, the arguments of the head noun – adjectives and genitives, for the most part – originate as complements following the noun (p. 387). If these arguments carry the pragmatic functions of topic

and focus, they will move to the relevant specifier positions, or projections, Topic and Focus in Figure 1 above, from which they c-command the noun phrase NP, i.e. the first branching node TopNP or FocNP that dominates them also dominates the noun phrase NP. These projections are named for their pragmatic function, with the recursive TopNP found to the left of FocNP; cf. Salvi 2005 on Topic and Focus projections in the left periphery of clauses.

Devine and Stephens provide four different analyses of the genitive order. These are (1) a minimal structure theory, which reduces the number of projections in the noun phrase to a simple head and its complement, (2) a maximal structure analysis, which has “multiple pragmatically dedicated positions” in addition to the head and specifier, (3) a functional theory, which retains some but not all of the pragmatic positions of the maximal theory, and (4) a prosodic theory, which argues that phonology rather than information structure is the motivation for Latin’s variable word order (p. 380).

In their first three analyses of the different genitive orders, Devine and Stephens reject the minimal structure because it is so simple that it does not have enough positions to be “a half-way decent interface between pragmatic meaning and syntactic structure” (p. 384). The maximal structure theory has its own drawbacks, as according to it, the neutral NGen order involves the raising of the head noun itself to either the Topic or Focus projection of the noun phrase, whilst in the marked GenN order, where the genitive raises to SpecFocNP, the head noun must remain in the base NP projection (p. 385). This has the unfortunate effect of making the marked order GenN structurally simpler than the unmarked order NGen. The functional theory gets around this by stipulating that the head noun should be raised to “a topic-like position”, which forces pre-head genitives to raise beyond it (p. 385).





**Figure 2: NP with genitive argument after Devine and Stephens (2006:382-85)**

Aside from the considerations of topic and focus, another possible motivation for genitive raising has to do with “conceptual individuation” (p. 388) – does the genitive construction express one single concept or are the genitive and noun two separate concepts? Premodifier genitives would seem to occur when the construction is felt to express one single concept, e.g. *mortis metus*, while postmodifier genitives are individual, independent items of information; cf. De Jong 1983 on referential unity above. Further, if the relationship between possessor and possessed is predictable, the genitive case possessor is more likely to be a premodifier (p. 389); cf. Viti 2010 above. For example, the relationship “son/daughter of” is more predictable than “uncle of”, and so we find *Quinti filiam* but *avunculus adolescentis* (pp. 352f.)

Devine and Stephens’ fourth and briefest analysis of genitive word order is the suggestion that genitive raising may be triggered by prosody, which is in turn based upon pragmatic factors. When strong focus falls upon the genitive in its original complement position, this leads to an iambic rhythm which conflicts with the natural trochaic cadences of Latin. As a result, the genitive moves across the noun and so the stress pattern reverts to a trochee (pp. 389-91). However, the notion that prosody determines genitive position is hard to prove given the lack of native speakers of Latin, as we have no way of telling if pragmatic focus really did combine with phonetic stress.

Devine and Stephens’ treatment of Latin word order is valuable as it acknowledges the relevance of both syntax and information structure. By combining both the formal,

syntactically based approach and the functional, pragmatically based approach, instead of examining Latin in the light of only one of the two, it is possible to describe even Latin's flexible word order in a more systematic and rigorous manner.

## 5. CONCLUSION

There have been a variety of approaches to the puzzle that is Latin genitive word order, ranging from general observations to typology, information structure to formal syntax, and even prosody. Whilst a number of these studies focus only on one particular potential influence of Latin genitive order, e.g. Elerick 1991, 1994, Spevak 2010, Viti 2010, others recognise that it is likely that a combination of different factors determine the position of the genitive, see Adams 1976, Devine and Stephens 2006. With such an array of works out there, it might be thought that there is not much more that needs to be said about the order of the genitive.

However, as pointed in both the introduction as well as Ch. 1 §1 above there is no consensus on the neutral order of the Classical Latin genitive, with arguments made for neutral GenN (Kühner and Stegmann 1914, Leumann, Hofmann and Szantyr 1965 for early Latin), neutral NGen (Marouzeau 1922:124, Adams 1976, Devine and Stephens 2006), and both co-dominant (Elerick 1991, 1994). In fact the two most recent works treating this subject argue that there *is* no basic order for the genitive, but specific orders for specific functions of the genitive (Spevak 2010, Viti 2010).

For all their varied approaches and differing opinions on genitive position, though, these works do have one thing in common. They are all of them qualitative analyses, which for the most part avoid statistics beyond simple distributions of the proportions of NGen and GenN in the corpus studied. As qualitative analyses are essentially detailed discussions and interpretations of a selection of examples and counter-

examples of the constructions under consideration, they can be subjective, with the outcome of the analysis depending on the particular interpretation of the data. A quantitative analysis, dealing with numbers, is less vulnerable to subjective explanations, as it is rather harder to assert a particular order is dominant under certain circumstances in the face of numbers that show that the reverse order is more likely to be found. This is not to say that statistics are infallible, nor that they cannot be manipulated, since the input for any statistical analysis is the result of subjective decisions made about the data set. Nonetheless, statistics remain a useful means of analysis to which the qualitative analysis can be compared, with possibly the quantitative analysis's biggest advantage being its ability to calculate the statistical significance of the results (see Ch. 2 §3.3.2), which allows the findings of the quantitative analysis to be safely generalised beyond the corpus studied.

In this thesis, I examine my corpus of first-century B.C. prose authors by means of both a qualitative analysis and a quantitative analysis, in the form of a multivariate statistical analysis. Whilst the qualitative analysis allows me to discuss individual examples of genitive word order and the motivation behind it in great detail, the multivariate analysis shows how the factors believed to influence genitive position work in combination with each other, which ones are truly significant and which interact with each other, and enables me to plot their relative importance. In this way, it supplements the qualitative analysis and as a result it gives a better understanding of the data and the contextual factors, be they pragmatic or syntactic, which lead to the apparent flexibility and freedom of Latin word order.

## CHAPTER TWO

### METHODOLOGY

Despite the variation in Latin word order, the literature survey has made it clear that this variation is unlikely to be free, or random, even in the case of the genitive. In Classical Latin authors the dependent genitive is found both preceding and following its head noun, in near equal proportions. My intention in this thesis is to determine which order, if any, is the basic order, and what factors determine or at the very least influence the variation in order. In this chapter I shall discuss how I went about doing so.

#### **1. CORPUS**

Frequently, studies on Latin word order draw data from a variety of authors spread over a hundred or so years, e.g. Devine and Stephens 2006 include examples from Cato the Elder (234-149 B.C.), as well as Columella (A.D. 4 – ca. A.D. 70) and Petronius (ca. A.D. 27 – A.D. 66), a range of more than two hundred years. This has the potential to be misleading, as language changes over time. It is debatable to what extent literary Latin varied over the three hundred year period from Plautus to Suetonius, but nevertheless I have chosen to focus on Classical Latin prose in the first century B.C. in order to minimise the potential effects of language change.

My corpus is drawn from the works of four authors who were all born within thirty years of each other: Varro (116-27 B.C.), Cicero (106-43 B.C.), Caesar (100-44 B.C.) and Sallust (86-35 B.C.). I chose these four not just because they were contemporaries, but also because they all have extant prose works which are complete and not fragmentary. There are some drawbacks to my selection, though. For one thing, each

of the authors was born in a different part of Italy, so even if the effects of language change have been minimised, there may be regional variation in their Latin, though in the language used in literary works this is unlikely. Also, their works may be prose, but fall into different genres – reworked notes on a military campaign, elaborate and rhetorical histories, personal correspondence, public orations, and a didactic treatise on farming. How much of an effect can genre have on the order of a particular grammatical construction? It is hard to say, but different styles were appropriate to different circumstances or genres (Cic. *De Orat.* 3.211, Gotoff 1979:35, Adams 2005:73), so the possibility that word order can be affected by genre and the style or register associated with it cannot be ruled out.

The works included in the corpus are Caesar *De Bello Gallico* 1-3 (commentary), Cicero *Epistulae ad Atticum* 1-3 (personal correspondence) and *In Catilinam* 1-2 (public orations), Sallust *De Coniuratione Catilinae* and *De Bello Iugurthino* (histories), and Varro *De Re Rustica* (didactic treatise).

The corpus is summarised in the table below:

Caesar	Cicero	Sallust	Varro
100-44 B.C.	106-43 B.C.	86-53 B.C.	116-27 B.C.
Rome	Arpinum	Amiternum	Reate
<i>Bellum Gallicum</i> 1-3	<i>Epistulae ad Atticum</i> 1-3 <i>In Catilinam</i> 1-2	<i>De Coniuratione Catilinae</i> <i>De Bello Iugurthino</i>	<i>De Re Rustica</i>
commentary	letters, orations	histories	didactic
765 genitives	880 genitives	1290 genitives	777 genitives

**Table 1: Corpus summary**

## 1.1 Discussion of authors

At this point a discussion of the individual authors selected for the corpus is useful, both in terms of explaining my motivation for choosing them, and giving background information on them, their styles of writing, and their particular works.

### 1.1.1 Caesar

Gaius Julius Caesar, born in Rome in July 100 BC, was one of the most famous and successful Roman generals. In 58 BC, he began a series of military campaigns in Gaul, which culminated in the siege of Alesia in 52 BC and the capitulation of Vercingetorix, chief of the Arverni. These campaigns he documented in a series of commentaries, *De Bello Gallico*.

One of the most immediately noticeable features of Caesar's style in these commentaries is its simplicity and clarity. Cicero praised him for it, calling the commentaries *nudi ... recti et venusti, omni ornatu orationis tamquam veste detracta* "plain ... direct and elegant, stripped naked of all oratorical embellishment" *Brutus* 262. Adams 1976:94 notes in passing the regularity of his word order, pointing out he uses object + verb order far more frequently than the reverse in *BG* 1.1-15, and Panhuis 1982:5 states that he is free of "belletristic ambitions", the sort of language one might expect of a man famous for his military exploits.

However, Caesar was not always a notable general, and in fact in the early part of his political career "it was his oratory which first brought him to public notice" (Clarke 1996:ix). Caesar's works are not utterly devoid of rhetorical polish. Torigian 1998:45 describes him as "a consummate orator and rhetorician" who "would surely call upon all his rhetorical skills" for the composition of his *commentarii*. Hall 1998:15f. notes that he has a "strict but sophisticated control of periodic structures" and in places his language approaches "Livy's colour, pace, flow and drama"; cf. Dominik 2007:334.

A brief look at an excerpt from *BG* 3 illustrates both facets of Caesar's style, the rhetorical and the simple:

erant hae difficultates belli gerendi, quas supra ostendimus, sed multa Caesarem tamen ad id bellum incitabant: iniuriae retentorum equitum Romanorum, rebellio facta post deditionem, defectio datis obsidionibus, tot civitatum coniuratio, in primis, ne hac parte neglecta reliquae nationes sibi idem licere arbitrarentur. itaque cum intellegeret omnes fere Gallos novi rebus studere et ad bellum mobiliter celeriterque excitari, omnes autem homines natura libertati studere et condicionem servitutis odisse, priusquam plures civitates conspirarent, partiendum sibi ac latius distribuendum exercitum putavit.

These were the difficulties of waging war, which we have shown above. However, many reasons urged Caesar to battle: the unjust detention of Roman knights, the uprising following the surrender, desertion even though hostages had been handed over, the conspiracy of so many states, and first and foremost, the fact that if the actions in this region were to be ignored, the other nations would think that they too could do the same. So, since he knew that almost all the Gauls have a passion for revolution and are easily and swiftly stirred to war, moreover that all humans by nature desire liberty and hate the condition of servitude, he thought that the army should be divided up and stationed far and wide before more states joined in.

Caes. *BG* 3.10

The passage is straightforward, starting with a catalogue of the many considerations that encouraged Caesar's campaign against the Veneti. When this list is broken down, the careful design that has gone into its making becomes apparent, with the causes – *rebellio*, *defectio* and *coniuratio* – placed either at the beginning of their phrase or the end, the two most significant positions in a Latin clause, see Quintilian 9.4.29, Arnold 1938:18. The final cause is the lengthiest, forming a sort of crescendo, which is marked by the phrase *in primis*. The use of this phrase also highlights the fact that Caesar has his priorities in order. The catalogue of causes is followed up with an *efikōw*-type argument, i.e. an argument from likelihood. First he appeals to his own firsthand experience of the Gallic temperament – undeniably warlike – and then makes the sweeping assertion that all people desire freedom and hate the state of slavery. As a result, it was only reasonable that he should dispose his army in such a way as to confine the uprising before it had a chance to spread. Note the dual alliteration of “*priusquam plures civitates conspirarent*”, echoed by “*partiendum*” and “*putavit*” a little later.

On the other hand, Caesar's word order is fairly regular and simple. The clauses are almost uniformly verb-final, and the subjects are generally found at the start of their clauses. There is a definite pattern to the arrangement of the words within clauses, though it is not fixed and is flexible enough for Caesar to manipulate when it suits him. It is this that gives the impression of simplicity and clarity, whilst the polished but discreet rhetoric livens the style, resulting in commentaries that are indeed *recti et venusti* "direct and elegant" Cic. *Brutus* 262.

### 1.1.2 Cicero

Cicero is a close contemporary of Caesar's, just six years older than him. However, in terms of background, they are very different. Caesar was born in Rome to a patrician family, whilst Cicero, born in rural Arpinum, was a *novus homo*, the first man in his family to attain the consulship. Moreover, Cicero did not wish to pursue a military career, as Marius, the other *novus homo* from Arpinum, had, but turned instead to oratory and the law courts (Shackleton Bailey 1971:9), where he proved himself to be a brilliant speaker.

His style is described by Tacitus as *vehementior et plenior et valentior* "vigorous and full and powerful" *Dial.* 25.4, though his contemporaries Calvus and Brutus accused his work of being *solutum et enervem ... fractum atque elumbem* "loose and effeminate ... feeble and weak" *Dial.* 18.6. Like Caesar, he is a master of periodic sentences, "a feature of Ciceronian style and an aspect of his technique that he brought to quintessential perfection" (Gotoff 1979:56). He also makes use of prose rhythms in his speeches, and has a particular fondness for cretics and trochees; see Nisbet 1990:350f., Dyck 2008:245.

Cicero is one of the most prolific authors from the first century BC, at least in terms of what has survived the last two thousand years. In addition to his political and forensic oratory, there are books of philosophy, books on rhetoric, and several volumes of private correspondence. From his multitude of works, I have chosen to look at the first three books of his private letters to his friend Atticus as well as the first two Catilinarian orations. The other authors in the corpus provide an example of one genre each, making it impossible to tell how much of the difference in genitive position is due to personal preference and how much to the demands and expectations of each particular genre. In the case of Cicero, however, by examining two of his works representing very different genres, I can control the variable *Author*, and see how much of an effect genre has on the order of the genitive by comparing the patterns in the letters and the orations.

The first Catilinarian oration, denouncing Catiline before the Senate and urging him to leave Rome, is “a masterpiece of concentrated innuendo and vituperation” which uses “a limited stock of themes and images, skillfully interwoven and subtly varied” (Dyck 2008:61). It is composed in the *figura gravis* (Gotoff 1979:56), the high style *quae constat ex verborum gravium levi et ornata constructione* “which comprises a fluent and elegant arrangement of impressive words” *Rhet. ad Her.* 4.11, a choice of style which helps Cicero convey the urgency and gravity of the situation. The second oration, by contrast, is delivered before the people following Catiline’s departure. The language it uses is “simpler and non-technical”, in places repetitive and even redundant, e.g. *si omissis his rebus ... si his rebus omissis* *Cic. Cat.* 2.25 (Dyck 2008:12, 158). Together with the third oration and the *Pro Rabirio Perduellionis Reo*, Dyck 2008:12 considers this speech “the pinnacle of [Cicero’s] excursion into *popularis* rhetoric”.

The *Epistulae ad Atticum*, by contrast, are purely private correspondence between Cicero and his friend Atticus. Covering the years between 68 and 44 B.C., they are personal, informal, chatty, their subject matter ranging from Cicero's inflamed eyes to the birth of his son Marcus, from his row with his brother and nephew to the political machinations of the triumvirs. The letters are confidential, meant for Atticus's eyes only – Cicero describes one as *epistula quam nolo aliis legi* “a letter which I do not want anyone else to read” *Att.* 1.16.8 – and were “written without any idea of future publication” (Shackleton Bailey 1999:1). As a result, there is no audience who needs to be impressed by the author's verbal virtuosity – after all, he is writing to someone *cum quo a condiscipulatu vivebat coniunctissime* “with whom he was best of friends from their school days” *Nepos Att.* 5.3. That is not to say that Cicero entirely forgoes elegant style in his correspondence. When writing to Atticus from exile, claiming that his distress at his plight has robbed him of *omnis partis mentis* “my whole mind” *Att.* 3.7.3, he still manages to include an example of polyptoton with *neminem* and *nemini*, when he states *hoc adfirmo, neminem unquam tanta calamitate esse adfectum, nemini mortem magis optandam fuisse* “this I maintain, that no-one was ever afflicted with a greater calamity, no-one had better reason for seeking death” *Att.* 3.7.2. Even when writing to a close friend, a master orator like Cicero is unlikely to forget the tricks of his trade, especially when they allow him to play up his plight.

Nevertheless, the letters are definitely not examples of sophisticated rhetoric, nor are they supposed to be. For instance, Cicero uses the adjective *bellus* “good”, on occasion, e.g. *homines belli* “good men” *Att.* 1.1.2, *valde bella est* “it really is good” *Att.* 4.6.4, as well as the adverb *belle*, e.g. *posita ita belle est* “it has been placed so perfectly” *Att.* 1.1.5, *fecisse non belle* “he did not act well” *Att.* 5.17.6. This adjective is the vernacular equivalent of *bonus*, derived from its diminutive.

Another example of the informal style Cicero uses in the letters can be seen in narrative pieces describing senatorial circuses or mayhem in the streets, where he does not even use full sentences.

itaque a. d. III Id. Nov. cum Sacra via descenderem, insecutus est me cum suis.  
*clamor, lapides, fustes, gladii; et haec improvisa omnia.*

So, on 4 November as I was going down the Via Sacra, he fell upon me with his men. *Shouts, stones, cudgels, swords; and all without any warning.*

Cic. Att. 4.3.3, italics added

The passage captures the speed and confusion of the attack – there is no time for lengthy descriptions, just a rapid, almost breathless concatenation of details. The fragmented sentences are vivid, but they are also informal in their brevity and simplicity.

The letters to Atticus and the Catilinarian orations provide examples of two very different genres of writing, one relaxed and casual, the other deliberate and formal, each phrase carefully chosen and shaped for the maximum effect. Both, however, exhibit Cicero's engaging and vivid style which helped him to the consulship and into history.

### 1.1.3 Sallust

The youngest of the authors in my corpus, Sallust, like Cicero, was a *novus homo*, being the first of his family to hold political office. Born outside Rome, in the Sabine town of Amiternum, he was *popularis* in his leanings and hostile towards Cicero. During the Civil War he fought on Caesar's side, and was afterwards appointed governor of Africa Province. Upon his return to Rome he was prosecuted for extortion and corruption during his tenure as governor, but was acquitted and retired from political life, turning his attention instead to landscaping and the writing of history.

Sallust's histories are usually hailed as innovative and a turning point in Latin historiography from dry annals, "sadly lacking in prose style" (Ramsey 2007:7; see also Cic. *De Or.* 2.51, 2.54, *Brutus* 228), to a literary form in its own right (Ramsey 2007:8, Comber and Balmaceda 2009:4). Quintilian considers him to be a better historian than Livy and the equal of Thucydides (*Inst. Orat.* 2.5.19, 10.1.101). Ancient authors considered history to be a dignified genre, see Quintilian 10.1.102, which required both polish and simplicity. His style is similar to that of Thucydides in its use of "ellipses", "brevity" and "compressed diction" (Kirchner 2007:183), and he is fond of antitheses and chiasmus (Büchner 1982:277). He is also a noted archaiser, see Syme 1964:261, a practice which lends his histories "Würde und altertümliche Kraft" (Büchner 1982:276), though it was criticised by some of his contemporaries – Suetonius records the scathing comment of Pompey's freedman Lenaeus that Sallust was *priscorum Catonisque verborum ineruditissimum furem* "a most unlearned thief of the words of the ancients and of Cato" *Gramm.* 15. In addition to archaising, though, he also makes use of innovative forms and grammatical constructions, for instance extending the use of the partitive genitive to following adjectives which do not refer to a quantity, which is also a Graecism, see Syme 1964:264, Büchner 1982:276, Calboli 2009:78.

Yet another hallmark of his style is its *inconcinnitas*, its unpredictability and abruptness, and a lack of "harmony in grammatical structures" (Comber and Balmaceda 2009:5). He switches the word order in idiomatic expressions e.g. Sall. *Cat.* 14.2 *alienum aes* for the standard *aes alienum*, prefers paratactical sentences to the periods practiced by Cicero and Caesar, and makes frequent use of asyndeton, stringing sentences together without any connecting particles (Ramsay 2007:12f.). As a result, his style has been characterised as "anti-Ciceronian" (Syme 1964:257).

Only two of his works survive in full, the monographs dealing with the Catilinarian conspiracy and the war with Jugurtha. The third major work, the *Historiae*, only survives in fragments. Cicero writes that a good historical monograph, dealing as it does with *virī saepe excellentis ancipites variique casus* “the uncertain and varying fortunes of an outstanding man”, will contain *admirationem, expectationem, laetitiam, molestiam, spem, timorem* “surprise, anticipation, joy, uneasiness, hope and fear” (Cic. *Fam.* 5.12.5), all of which can be found in Sallust’s *De Coniuratione Catilinae* and *De Bello Iugurthino*. Both works examine the corruption and moral decline of Rome, and describe and analyse the “individuals and groups, which constitute the factors that move history” (Comber and Balmaceda 2009:5), painting vivid portraits of them as flawed characters. In these works, Sallust defends the rôle of the historian, arguing that it is just as valuable as the great deeds that histories record (*Cat.* 3.1-2, 8.2-4, *Iug.* 4.4), as the memory of these deeds serves as inspiration for noble men to achieve similar glory and renown (*Iug.* 4.6). As a result, the aim of his histories is not an accurate recording of events, but rather a critique of Roman society and a condemnation of the behaviour of its great men, all wrapped up in a vigorous and unique style.

#### 1.1.4 Varro

Last but not eldest of the authors in my corpus is Marcus Terentius Varro, born in the Sabine town of Reate. He wrote extensively on a variety of subjects, but only two of his many works now remain, the fragmentary *De Lingua Latina*, and the complete *De Re Rustica*, an agricultural treatise in three books.

The *De Re Rustica* discusses several different divisions of farming. The first book looks at the location and layout of a farm and the cultivation of crops, the second is

concerned with the rearing of large livestock – ranching, one might say – and the third discusses homesteading, and the rearing of smaller animals such as doves, dormice, snails and fish. The books are written in the guise of conversations between Varro and his friends, a format used by Cicero in a number of his own technical works, see Cic. *De re publica*, *De Legibus*, *De Natura Deorum*, *Brutus*, with a history that dates back to Plato and Xenophon’s Socratic dialogues.

Although Quintilian praises Varro for his erudition, calling him *vir Romanorum eruditissimus* “the most learned man of the Romans”, he does not consider him a great prose stylist, observing that *plus tamen scientiae conlaturus quam eloquentiae* “he has contributed more to knowledge than eloquence” 10.1.95. The grammarian Remmius Palaemon passed an even more disparaging judgement upon Varro’s style, as Suetonius *Gramm.* 23 reports that he called him a pig. This view has held over two thousand years, with Norden 1898.1:194f. describing the *De Lingua Latina* as one of the worst examples of Latin style, and Laughton 1960:1 says that “the clumsiness and complexity of a Varronian period ... [heightens] admiration for the clarity and elegance of Caesar and of Cicero”.

Heurgon 1978:xliv, however, has a markedly different view, considering that “[l]e sérieux de sa vocation agronomique, l’authenticité de son ambition d’être utile, la masse énorme des descriptions et des préceptes qu’il avait à mettre en forme, ne s’opposaient pas chez Varron au désir de faire oeuvre littéraire”. For Heurgon, after Dahlmann 1935, the dialogue format is one of the principal merits of the work, as “Varron en a fait une comédie animée d’entrées en scène imprévues, de nouvelles venues du dehors, voir de coups de théâtre” (1978:xliv), pointing out the appropriateness of the nicknames of the participants – Stolo or *Twig* talks about grafting branches in the first book, Scrofa or *Sow* is the expert on pigs, and Vaccia or

*Cow* on cattle in the second, and in the third book, which discusses, amongst other topics, birds, the speakers include *Merula* (*Blackbird*), *Pavo* (*Peacock*), *Pica* (*Magpie*) and *Passer* (*Sparrow*) – and the way the characters tease each other and exchange pleasantries. The conversation in the third book, for instance, is continually interrupted by events happening in the *Comitia*, including a case of electoral fraud. These little interruptions help to break up the didactic sections of the books, often providing humorous vignettes.

Laughton 1960:2 and Heurgon 1978:1 both note that for all his roughness of style, his *anacolutha* and rambling periods, there are also examples of rhetorical artifice in Varro's works, "un étrange amalgame" as Heurgon puts it. Laughton suggests that Varro was not actually averse to *concinntas*, but simply writes at speed, using antithesis or parallelism if it occurs to him, but not bothering to seek it out deliberately (1960: 2); cf. Varro's own words *otium si essem consecutus, Fundania, commodius tibi haec scriberem quae nunc ut potero exponam, cogitans esse properandum* "if I had the leisure, Fundania, I would write this book for you in a more pleasing style than that which I now set forth however I can, being aware that I must hasten" *Rust.* 1.1. For Varro, the content was more important than the form, so earning him his reputation as a scholar rather than a writer.

## 2. QUALITATIVE ANALYSIS

In linguistics, a qualitative analysis is an in-depth description of the features in a corpus that have been selected for study. Such analyses have formed the mainstay of studies on Latin word order, e.g. Adams 1994a on the position of *esse* in Classical Latin, De Sutter 1986 on word order in the noun phrase based on Cato's *De Agri*

*Cultura*, Devine and Stephens 2006 on Latin word order, Panhuis 1982 on word order and information structure, Spevak 2010 on word order in Latin prose.

Qualitative analyses are very useful, because they describe and discuss individual examples and counter-examples of the linguistic features studied. Because they go into great detail, fine-grained distinctions in the data can be made, and material that is anomalous or cannot be easily classified can be discussed in depth. As a result, the qualitative analysis can be used to develop hypotheses about the features under scrutiny.

The qualitative analysis' focus on actual examples is one of its main strengths. At the same time, though, it should be noted that in order to achieve such a close and detailed description and interpretation of the data, the corpus selected for analysis is often small, which makes it difficult to be certain that the patterns observed can be attributed to more than just chance, or an unnoticed bias in the corpus. Since qualitative analyses are not numeric, the information gathered cannot be tested for statistical significance, and so the chance explanation cannot be ruled out.

Also, qualitative analyses are subjective to an extent. They are frequently performed within the scope of one or another theoretical framework, which can lead to bias in the interpretation of the data. For example, Panhuis 1982 argues that Latin word order is determined by information structure, in particular the Functional Sentence Perspective (FSP); Spevak 2008, however, argues on the basis of a comparison between Latin and Czech, the language in which the FSP was first developed, that Latin does not in fact adhere to the rules of the FSP.

I have conducted a qualitative analysis of my corpus because of the detailed and rich interpretative power such an analysis can provide. I have attempted to remain theory-neutral in my descriptions of the data, though possible explanations and

interpretations of the data have been offered with reference to or in terms of a number of different theories and approaches. I have also used the qualitative analysis to draw up hypotheses regarding the influence of different features on the word order of the head noun and dependent genitive, in order to test them by means of a quantitative analysis.

### **3. QUANTITATIVE ANALYSIS**

A quantitative or statistical analysis is a natural complement to the qualitative analysis. It counts the frequency with which particular linguistic features are found in a corpus, and, as the data it provides is numeric, it can be used to calculate the statistical significance of the findings. Whilst a qualitative analysis usually focuses on a relatively small number of examples of the features under scrutiny, a quantitative analysis takes its data from a much larger corpus.

In the course of testing hypotheses about the data, a quantitative analysis develops models of the data, which are used to determine whether or not the findings can easily be attributed to chance. Between these tests for statistical significance and the increased sample size, the results of a quantitative analysis may be applied to a larger population with more confidence than those of a qualitative analysis. Also, because the data is numeric, a quantitative analysis should be less subjective and open to interpretation than a qualitative analysis.

On the other hand, precisely because it converts linguistic features into numbers, a quantitative analysis has to classify and categorise the features being studied in a way that a qualitative analysis does not. As a result many of the fine-grained distinctions made in a qualitative analysis are lost, and anomalous examples, ambiguities, and features that are hard to classify, which would have been discussed in detail in a

qualitative analysis, are generally ignored or bundled up in a miscellaneous group. To an extent, a quantitative analysis is a simplification of the data, and it is partly for this reason that quantitative analyses have been dismissed as inaccurate and not very useful in the study of Latin word order (Adams 1976:77).

There have been very few quantitative analyses of Latin word order, and those that have been performed are generally inadequate in two respects. Firstly, they rarely go beyond showing the relative frequencies of the variant orders, so do not even attempt to develop models of the data, nor to test for statistical significance, e.g. Feix 1934:26 and Elerick 1991, 1994, who list the frequency figures and no more. Exceptions to this are De Melo 2010 and Viti 2010. Secondly, most quantitative analyses of Latin word order have had extremely small sample sizes, often with little more than a hundred examples of the particular construction – noun and modifier order, verb-object order, order of gapping, or within discontinuous phrases, etc – being studied. For example, Elerick 1991 examines 237 examples of noun phrases consisting of a head noun, dependent genitive and adjective, but just 52 examples of noun phrases consisting of a head noun, dependent genitive and two adjectives, whilst Elerick 1994 examines just 53 examples of the order of head nouns and their dependent genitive gerundives with an object, 106 examples of gerundives governed by prepositions, 158 examples of noun and adjective order in Livy, and 346 examples of noun and genitive order drawn from both Livy and Caesar.

It is true that statistics this simple do not mean very much by themselves, as they only show the relative proportions of the variants without trying to model possible relationships between the variants and other features of the construction. Even in more complex quantitative analyses, it should be borne in mind that statistics are not sensitive to linguistic rules, nor to the context of an utterance. They are a means of

crunching data and converting it to probabilities, a way of testing hypotheses for significance. The results of a statistical analysis will depend upon the way the researcher has formulated the data that goes into it.

Despite this, a quantitative analysis can complement a qualitative analysis very well. Where the qualitative analysis is closely focused on a handful of examples which explain the specific patterns and behaviours found in a small sample, the quantitative analysis is drawn from a much larger corpus and, thanks to the significance testing, provides a model of the data that can be more comfortably generalised beyond its original sample. On the other hand, the simplification of the data in the quantitative analysis is balanced out by the detailed description and discussion of the qualitative analysis, which can be used to develop hypotheses that the quantitative analysis can test. As each of these two types of analysis enhances and adds to the other, I have performed a statistical variationist analysis on my data to test the findings of the qualitative analysis.

### **3.1 Variationist analysis**

As the name implies, variationist analysis is concerned with the study of variation in language. Variation occurs when a linguistic feature alternates between two or more forms; the feature which alternates is called the variable, and the different forms it takes are called variants. In the case of the variable word order of the Latin genitive, there are only two possible variants, namely noun + genitive order and genitive + noun order. Both these orders happen to be found roughly as often as each other, which may make it seem as though there is no reason for choosing one over the other. This impression of random variation is not helped by the fact that even “[i]n individual authors the incidence of the two orders is likely to vary from work to

work” (Adams 1976:77). However, variationist analysis is founded on the notion that variation is not random, but is rule-governed and predictable (Tagliamonte 2006:129).

If the alternation between variants is systematic, it should be possible to predict the relative frequency with which each variant occurs. For example, imagine there are two variants, A and B, and three different sets of conditions, *x*, *y* and *z*. Overall, A occurs 100 times and B 110 times, which does not reveal much about the selection of either variant. Their distribution for each of the conditions is given below:

	CONDITION X	CONDITION Y	CONDITION Z	TOTAL
VARIANT A	<b>60</b>	<b>25</b>	<b>15</b>	<b>100</b>
VARIANT B	<b>20</b>	<b>50</b>	<b>40</b>	<b>110</b>
TOTAL	<b>80</b>	<b>75</b>	<b>55</b>	

**Table 3.1a: Distribution of variants A and B**

This frequency distribution tells us much more about the choice of variant and the circumstances under which each is most likely to be found. For example, we can see that variant A most often occurs in conjunction with condition *x*, whilst B is more frequently found when either condition *y* or condition *z* is met. From the figures in Table 3.1a, we can also calculate the proportions of A and B for each of the conditions:

	CONDITION X	CONDITION Y	CONDITION Z
VARIANT A	<b>0.75</b>	<b>0.33</b>	<b>0.37</b>
VARIANT B	<b>0.25</b>	<b>0.67</b>	<b>0.63</b>

**Table 3.1b: Proportions of variants A and B**

The proportions allow us to predict the probability *p* that one or the other variant will occur in conjunction with a certain condition. Probability as used here is a statistical term referring to how likely an event is to occur measured as the ratio between the number of times the event occurs and the number of all possible outcomes. As a ratio, it will fall between 0 and 1, i.e.  $0 \leq p \leq 1$ . Probability is not quite the same as a proportion, as the probability is a prediction, whilst a proportion refers to the frequency of the event occurring within a particular data set.

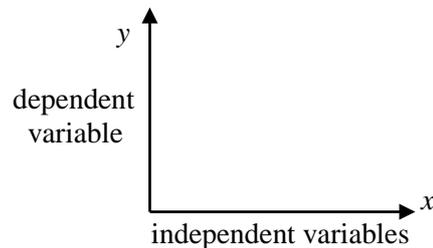
In a statistical analysis of this data set, the variable with variants A and B is called the dependent variable, because the choice of variant depends on the presence of a certain set of conditions. The separate conditions  $x$ ,  $y$  and  $z$  which determine the outcome are the independent variables, so called because they are assumed to be independent of each other so that a change in one independent variable has no effect on the rest. In language, however, this is rarely the case, and the independent variables are rather those variables which are controlled or manipulated in the experiment.

Before performing the statistical analysis, it is necessary to formulate a rule predicting the outcome of the dependent variable. This rule is the hypothesis that will be tested in the statistical analysis, and the variant that it predicts is called the application value, because it is the result of the application of the hypothesised rule. The other variant is known as the non-application value. The probabilities that the analysis calculates will be the probabilities of the application value occurring with each of the independent variables; the analysis does not calculate the probabilities of the non-application value, though were the choice of application and non-application value to be switched, the resultant analysis would be complementary to the first.

There are many different ways of calculating probability and testing hypotheses. I have used GoldVarb X, a statistics programme specifically designed for language data (Tagliamonte 2006:139, Bayley 2002:124), which, together with VARBRUL, its counterpart for the Windows operating system, uses a form of hypothesis testing known as logistic regression.

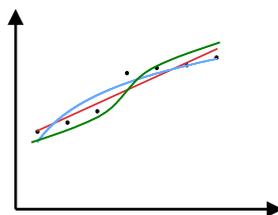
### 3.2 Logistic regression

Regression analysis is a way of modelling the relationship between the dependent variable and one or more independent variables. The model can be represented as a graph, with the dependent variable plotted on the y-axis, and the independent variables on the x-axis.



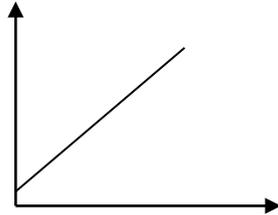
**Figure 1: x and y axes**

Visualising the data as a graph makes it easier to understand the process of hypothesis testing and the term model fit. In the graph below, the black dots are the data points, the actual observed values of the dependent variable for each of the independent variables, whilst the coloured lines are three possible models of the data. The straight red line is a linear model, represented by the equation  $y = mx + c$ , the pale blue line is a logarithmic model, represented by the equation  $y = \log_a x$ , and the S-shaped green line is a logistic model, represented by the equation  $y = 1 \div (1 + e^{-x})$ , where  $e$  is a mathematical constant of approximately 2.71828 known as Euler's number. The model that most accurately predicts the observed values will be the model with the best fit. In the case of this graph, the model with the best fit is the logistic model.



**Figure 2: model types, model fit**

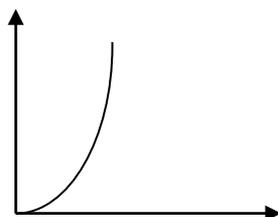
The simplest type of regression analysis is linear regression, where the relationship between the dependent and independent variables can be modelled as a straight line  $y = mx + c$ , where  $m$  is the slope of the line and  $c$  is the y-intercept, i.e. the value of  $y$  when  $x = 0$ .



**Figure 3: Linear model**

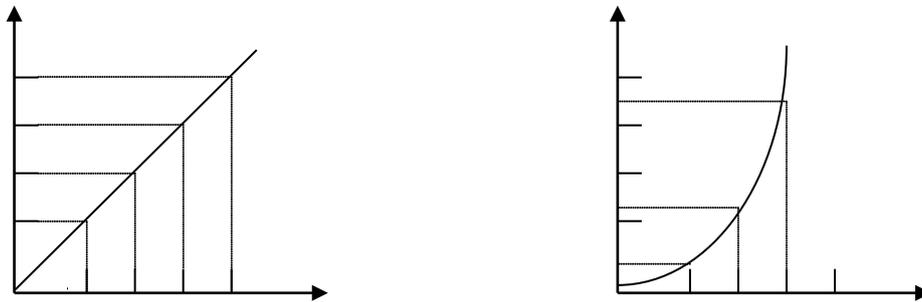
A statistical analysis predicts probabilities of the dependent variable, which must have values between 0 and 1. Values greater than 1 and smaller than 0 are nonsensical and cannot be interpreted, as an event cannot occur more often than all the time ( $p = 1$ ), nor less often than never ( $p = 0$ ). The chief drawback of linear regression models is that they may predict values for the dependent variable that fall outside this range, particularly when there are multiple independent variables. A linear model which deals with the independent variables by simply adding their values together will soon fall outside the range of acceptable values for probabilities.

One way around this problem is to multiply the independent variables together. As long as the values for the independent variables fall between 0 and 1, which the values of proportions do, then the multiplicative model itself will fall between 0 and 1. A multiplicative model looks as follows:



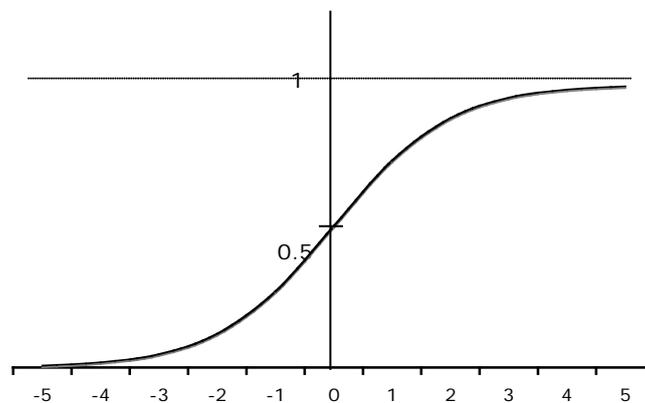
**Figure 4: multiplicative model**

Despite solving the range issue, the multiplicative model too has shortcomings. As the model is non-linear, the relationship it predicts between  $x$  and  $y$  is asymmetrical, i.e. a constant change in the value of  $x$  will result in the value of  $y$  changing by a different amount according to how close the value of  $x$  is to 0 or 1.



**Figure 5: symmetrical vs asymmetrical models**

So whilst linear models are symmetrical, they predict nonsensical probabilities outside the range of 0 and 1, whereas multiplicative models stay within the range but are asymmetrical. Are there any models that can both be symmetrical and remain within the range  $0 \leq p \leq 1$ ? The answer is yes; a model that uses logarithmic functions to plot the relationship between the dependent and independent variables meets both criteria. One such model is the logistic regression analysis, which uses the logistic function graphed below:

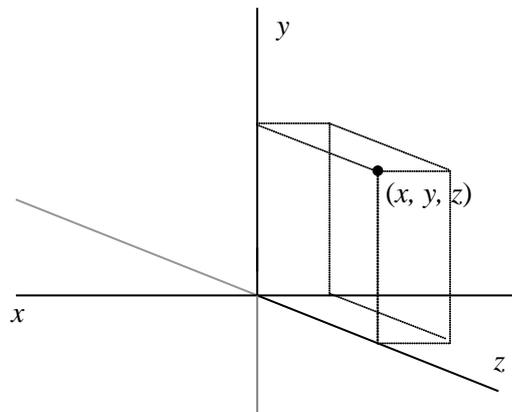


**Figure 6: Logistic function**

The  $y$ -values of the logistic function are bounded by asymptotes at 0 and 1, with an intercept at 0.5, which means that all  $y$ -values predicted by the logistic function will fall in the range  $0 < y < 1$ , and thus will have the correct values for probabilities, which have the range  $0 \leq p \leq 1$ . Note that because of the asymptotes, logistic regression cannot be used to predict the probability of categorical variables, i.e. variables that have proportions of either 0 (never occur, never an option) or 1 (always occur, only option), and are thus not variable. The logistic is also symmetrical around the  $y$ -intercept,  $x = 0, y = 0.5$ , as a change in the  $x$ -value of a specific size in either direction from  $x = 0$  will result in the same change in the value of  $y$  for both increasing and decreasing  $x$ -values. For example, a point with  $x$ -value -2 has the  $y$ -value 0.119, whilst the point with  $x$ -value 2 has the  $y$ -value 0.881. This means that when  $x = \pm 2$  the  $y$ -value is 0.381 bigger or smaller than the  $y$ -intercept of 0.5, depending on whether  $x$  is positive or negative.

Turning from the mathematics of the graph to what it represents, the  $y$ -values are the probabilities of the application value at each  $x$ -value, where the  $x$ -values are the different independent variables. However, the independent variables are discrete categories, such as noun and pronoun, or genitive of quality and objective genitive, rather than continuous numbers which can be easily plotted from smallest to largest on the  $x$ -axis. Because the independent variables are categorical, there is nothing which inherently predisposes them to be ranked in any particular order on the  $x$ -axis. Instead, they are arranged according to their individual  $y$ -values, with independent variables that have a smaller  $y$ -value – a lower probability – being placed further to the left on the  $x$ -axis, and variables that have a higher  $y$ -value being placed further to the right. This results in the S-shaped logistic function.

When two groups of independent variables rather than just one are involved, the model becomes three-dimensional, with the second group of independent variables being plotted on the  $z$ -axis (Figure 7 below). The  $y$ -values are calculated from both the  $x$ - and  $z$ -values. With each new group of independent variables the model gains another dimension, making it increasingly complex to diagram graphically.



**Figure 7: three-dimensional model**

The logistic regression model is also known as the log-linear model, and is the analysis used by GoldVarb, the statistics programme I have used on my data. In GoldVarb the independent variables  $x_1, x_2 \dots x_n$  and  $z_1, z_2 \dots z_n$  plotted on the  $x$ - and  $z$ -axes represent variants, or factors, of the variables, or factor groups,  $X$  and  $Z$ .

### **3.3 GoldVarb**

GoldVarb is a statistics programme first developed in the 1970s to handle linguistic variation (Tagliamonte 2006:128). It uses the log-linear model of regression analysis to calculate probabilities of the application value for multiple independent variables, and estimates the best possible model of the data using a process called stepwise regression. It also tests the model for statistical significance, or the likelihood that the results can be attributed to chance, as well as how well it fits the data.

### *3.3.1 Model fit*

Model fit refers to the accuracy with which a model predicts the observed data. In Figure 2 in Ch. 2 §3.2 above, three different types of models were shown for the data, with the logistic function corresponding most closely to the data points. The fit of the model can be calculated as well as graphed. For logistic models, this is done using the log-likelihood, i.e. the logarithm of the probability that the model will predict the observed data.

Because the log-likelihood is calculated from probabilities, which lie in the range  $0 < p < 1$ , the log-likelihood will always be negative. Models with a good fit – that is to say, models where the difference between the predictions and observations is small – will have a larger log-likelihood, i.e. closer to 0. Models with a poor fit, with a greater difference between predictions and observations, will have a lower log-likelihood.

### *3.3.2 Statistical significance*

Whilst it is necessary to have a model that fits the data well, it is also important to know whether the model is statistically significant. Statistical significance measures the probability of obtaining results similar to those predicted by the model when the observed distribution of the data is due to chance. The hypothesis that the distribution of the data is random is called the null hypothesis, whilst the hypothesis that the data distribution is predictable and can be modelled is called the research hypothesis. If the null hypothesis is refuted, then the research hypothesis is more plausible.

Statistical significance is calculated with the null hypothesis as the application value, with the significance figure representing the probability of similar results being obtained were the null hypothesis true. When this probability is above a certain value

selected by the researcher, usually 0.05 or 0.01, then the risk that the results may be attributed to chance is deemed too high for the research hypothesis to be supported. This set probability value is called the criterion level. When the criterion level is 0.05, the researcher is prepared to accept models that run the risk of providing a false positive 5% of the time when the null hypothesis is true; when the criterion level is 0.01, the risk of a false positive is just 1%.

### *3.3.3 Stepwise regression*

GoldVarb typically has to deal with multiple independent variables clustered into different groups, called factor groups. As statistical analysis prefers to describe the data in terms of the simplest possible model, it is necessary to test each of these factor groups and each combination of these factor groups for model fit and statistical significance, to see which combination provides the best explanation of the data. GoldVarb does this by means of stepwise regression.

Stepwise regression consists of two stages, stepping up and stepping down. A stepping up analysis begins with the simplest possible model – no factor groups considered at all – and then adds factor groups one at a time, comparing the model fit and statistical significance of each new model with the one before. The stepping up analysis stops once it has found a model that cannot be improved upon.

Stepping down works the opposite way. The analysis begins with the most complex model possible, with every factor group included, and takes factor groups away one at a time, again comparing the model fit and statistical significance of each new model with the one preceding it. The stepping down analysis stops once no more factor groups can be discarded without significantly altering the log-likelihood of the model for the worse.

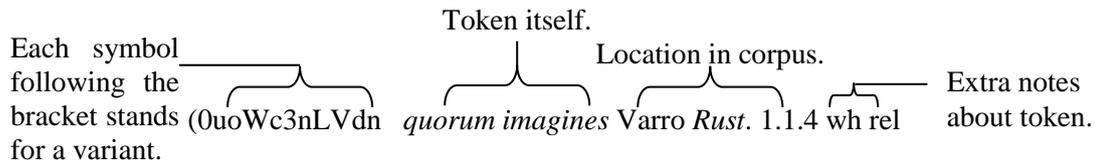
The best stepping up and stepping down runs should be identical, from the factor groups included to the probabilities assigned to each of the factors within the groups, from the input (the probability that the hypothesised rule will apply) to the log-likelihood. If they differ, chances are that some of the factor groups interact with each other, or are different ways of testing the same thing. These factor groups will either have to be collapsed together, or one set may need to be discarded. Interaction is discussed in more detail in Ch 4 below.

Further reading on the statistical theory behind GoldVarb can be found in Paolillo 2002.

#### *3.3.4 Performing a GoldVarb analysis*

A GoldVarb analysis involves several stages, from the collecting and coding of the data to the variable rule analysis itself. Tagliamonte 2006 discusses in detail how to conduct a variationist analysis using GoldVarb, from collecting data and formulating hypotheses through to running the analysis and interpreting the results. In this section, I provide a simplified overview of the process.

First of all, it is necessary to note all the instances, or tokens, of the variable under investigation, specifying for each token which variant it exhibits (the dependent variable, assigned the symbols 0 for genitive + noun order and 1 for noun + genitive order in my data), as well as the other contextual factors present (the independent variables or factor groups). This stage is called coding the data; see further Ch. 4 §1. All that is needed to run an analysis is the coded string, but it is helpful to include the token itself as well as its location, and any other information that the researcher may wish to have at hand. So, for example, *quorum imagines* “whose likenesses” Varro *Rust.* 1.1.4 is coded as:



**Figure 8: Coded token**

Once the data has been collected and coded in a token file, an application value must be selected for the data from the dependent variables. I chose 1, the code for the order noun + genitive, as my application value. Once this has been done, GoldVarb performs a series of logistic regression analyses, using stepwise regression to select the analysis that best fits the data.

A typical GoldVarb analysis is given below:

----- Level # 4 -----

Run # 17, 116 cells:

Convergence at Iteration 6

Input 0.571

Group # 1 -- u: 0.573, G: 0.148, N: 0.823, b: 0.445

Group # 2 -- s: 0.418, m: 0.491, o: 0.522, g: 0.468, p: 0.587, d: 0.658, q: 0.408

Group # 3 -- N: 0.524, P: 0.337

Group # 4 -- c: 0.498, d: 0.523

Log likelihood = -2139.171 Significance = 0.211

Run # 18, 197 cells:

Convergence at Iteration 6

Input 0.568

Group # 1 -- u: 0.574, G: 0.147, N: 0.823, b: 0.442

Group # 2 -- s: 0.417, m: 0.491, o: 0.519, g: 0.468, p: 0.590, d: 0.658, q: 0.406

Group # 3 -- N: 0.523, P: 0.337

Group # 5 -- l: 0.513, s: 0.497, h: 0.516, c: 0.454, d: 0.510

Log likelihood = -2136.520 Significance = 0.150

Run # 19, 86 cells:

Convergence at Iteration 6

Input 0.569

Group # 1 -- u: 0.573, G: 0.148, N: 0.827, b: 0.444

Group # 2 -- s: 0.413, m: 0.491, o: 0.525, g: 0.464, p: 0.592, d: 0.662, q: 0.416

Group # 3 -- N: 0.523, P: 0.339

Group # 6 -- n: 0.484, p: 0.555

Log likelihood = -2134.955 Significance = 0.003

Add Group # 6 with factors np

**Figure 9: Single GoldVarb run**

The example above is taken from the stepping up runs, at level four. At each level, GoldVarb compares models, or runs, with different factor groups, increasing the number of factor groups in each model by one with each level. So at level one, only one factor group is tested at a time, at level two, two factor groups are tested simultaneously, at level three, three factors groups, and so on. Here, in level four, combinations of four factor groups are being tested simultaneously. At the end of each level, the factor group that has had the biggest effect on the log likelihood of the model is added to the model. This means that for the level four example above, three factor groups have already been added to the model, one at level one, the second at level two, and the third at level three. These are groups 1, 2 and 3, whilst groups 4, 5 and 6 are tested for their effect on the model.

Because GoldVarb is dealing with multiple factor groups, with at least two factors per group, plus the dependent variable, the likelihood of the model cannot be calculated accurately, but instead must be estimated. In order to maximise the accuracy of the estimate, the programme makes not just one estimate of the likelihood but a whole series of estimates. These estimations are the iterations referred to in the second line of each run, whilst convergence is the point at which estimation stops, as the difference in value between one estimate of the likelihood and the next has become almost negligible. This means that the likelihood of the model is approaching its maximum; see further Paolillo 2002:170-73. In the case of run 19, convergence occurred in the sixth iteration.

Sometimes, though, models take many more estimates to converge, as the changes in likelihood between one estimate and the next are still relatively large. GoldVarb stops estimating the model's likelihood at the twentieth iteration. If there has been no convergence by the twentieth iteration, then it is likely that there is some form of

interaction amongst the factors that is preventing the programme from approaching the maximum likelihood of the model. As a result, the reliability of the model's results cannot be guaranteed, and in these cases, it is best to work out what has caused the interaction and find some linguistically sound way of removing or recoding it.

The input, also known as the corrected mean, is a probability. It is the average probability that the application value, in this case the order NGen, will be found. The value of 0.569 in run 19 means that NGen is found roughly 57% of the time. It is relative to this value that the factor weights, which are themselves probabilities, will favour or disfavour NGen order.

The groups found in each run are the factor groups, the independent variables. Within each group there are a number of individual factors, each represented by a letter or number. So in group 1, there are four individual factors  $u$ ,  $G$ ,  $N$  and  $b$ . Each of these factors is assigned a value, or factor weight, which is the probability of the application value occurring. Factor weights closer to 1 are said to favour the application value, whilst those closer to 0 disfavour it. So in group 1,  $N$ 's factor weight of 0.827 favours the application value strongly, whilst  $G$ 's factor weight of 0.148 disfavors it. Since I chose NGen to be my application value, this means that the order NGen is much more likely to occur with factor  $N$  and much less likely to occur with factor  $G$ .

The log likelihood and significance of each run are given after the factor weights for each group. The log likelihoods indicate how well the model fits the data, with a value closer to 0 indicating a better fit; see Ch. 2 §3.3.1 above. They do not have much value as an absolute measurement; instead, model fit is determined through comparison of the log likelihoods of different runs. So the run with the best fit in level four is determined by comparing the log likelihoods of the three runs. The log

likelihood of run 17 is -2139.171, for run 18 it is -2136.520 and for run 19 it is -2134.955. Run 19 has the highest log likelihood, and so it has the best fit of the three models in level four. As a result, it is run 19's fourth factor group, group 6, that is added to the model.

In addition to having a better log likelihood, run 19 also has a better significance value of 0.003, compared to the values of 0.211 and 0.150 for runs 17 and 18 respectively. In fact, the probability that results like those found in run 19 will be found when the null hypothesis is true is extremely low, making it highly unlikely that the patterns observed here are due to chance, and it is hardly surprising that run 19 was overall the best stepping up run of the variable rule analysis performed on this data set; see further Ch. 4 §4.1.

#### **4. CONCLUSION**

Qualitative and quantitative analyses both have their strengths and their shortcomings. Qualitative analyses are rich with details, and can discuss individual quirks within the data at length, but they do not test for statistical significance. Quantitative analyses, whilst simplifying the data, draw on much larger samples, and their results, having been tested for statistical significance and model fit, can be more widely applied.

I have used both types of analysis in my discussion of word order in the Latin genitive, as I feel that they complement each other, the detailed discussion of the qualitative analysis providing the hypotheses which the quantitative analysis tests. GoldVarb has been a convenient programme for the statistical analysis, as it is simple to use, it calculates the best fitting and most probable model, and its output is presented as probabilities, rather than logits.

## CHAPTER THREE

### QUALITATIVE ANALYSIS

In the genitive construction in Classical Latin prose, the two variant orders noun + genitive (NGen) and genitive + noun (GenN) are found in roughly equal proportions. So, in Books 1-3 of Cicero's *Epistulae ad Atticum*, the ratio of NGen:GenN is 367:301, and statistics for the genitive construction in his contemporaries also show each order occurring nearly as often as the other (see Table 1 below). Complicating the situation is the fact that the same author can show a preference for one order in one work, but then use the reverse order more frequently in another work, as is the case when sections 1-50 of Cicero's *Pro Roscio Amerino* (GenN is preferred by 78:66) and *In Pisonem* (NGen is preferred by 133:108) are compared (Adams 1976:77f.).

When these figures are taken at face value, it is small wonder that some have claimed that there is no basic order for the genitive construction in Classical Latin (Elerick 1994:70). However, the more usual view is that NGen is the default order in Classical Latin, see Marouzeau 1922:124, Adams 1976:78, J. de Jong 1983, Pinkster 1990:185, Devine and Stephens 2006:378. The marked GenN order has been considered the result of a variety of different factors, some stylistic, some syntactic, some pragmatic. In this chapter, I discuss a number of factors that might influence word order within the genitive construction.

At this point, I should clarify that I make a distinction between the terms *genitive construction* and *genitive*. By the phrase *genitive construction*, I mean the combination of a head noun and its dependent genitive. By the word *genitive* alone, I

mean the constituent(s) in the genitive. Also, by *head noun*, I mean both nouns and certain adjectives, such as *plus* “more”, *plenus* “full”.

In Table 1 below I give the proportions of NGen:GenN in each of the works in my corpus.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	432	53.7%	373	46.3%	<b>805</b>
Cic. <i>Att.</i> 1-3	367	54.9%	301	45.1%	<b>668</b>
Cic. <i>Cat.</i> 1-2	145	51.6%	136	48.4%	<b>281</b>
Sall. <i>Cat.</i>	242	56.4%	187	43.6%	<b>429</b>
Sall. <i>Iug.</i>	523	57.9%	380	42.1%	<b>903</b>
Varro <i>Rust.</i>	420	50.7%	409	49.3%	<b>829</b>

**Table 1: distribution of NGen and GenN**

I performed a pilot study on word order in Cicero’s *Epistulae ad Atticum* 1.16-19 and *In Catilinam* 1, which, along with reading the literature on the subject of word order in Latin, and in other, similarly “free” languages, enabled me to come up with several possible influences on word order of the genitive construction. These are: (1) information structure, (2) grammatical function of the genitive, (3) discontinuity, (4) lexical category of the genitive, (5) animacy, both of the genitive and the head noun, and (6) the presence of prepositions. Other possible influences include (7) the distinction between narrative and dialogue, though in my corpus Sallust is the only author in whose work there are sufficiently lengthy stretches of speech for this potential factor group to be worth investigating. Genre and author may also have some (limited) bearing on word order at the level of the phrase, as comparisons between authors show. There are also some minor but interesting differences between Cicero’s informal correspondence and his speeches, which will be discussed in more detail in the sections below. Other factors possibly influencing word order are (8) idiomatic phrases, (9) individual lexical items, and (10) the number of the genitive, i.e. whether it is singular or plural, which each receive their own separate sections towards the end of the chapter.

## 1. INFORMATION STRUCTURE

It is necessary at the outset of this section to point out that I will be using the terms *information structure* and *pragmatics* interchangeably. By both of these expressions, I mean a way of looking at language in terms of the communicative intent of each utterance, and the way in which these utterances are structured in order to convey that message. This is the sense in which the term *pragmatics* is used by people working in the Dutch tradition of Functional Grammar; other linguists may prefer the term *information structure* instead. I use pragmatics in the Dutch sense due to the important work done on Latin word order in the Functional Grammar framework, e.g. J. de Jong 1983, 1989, 1994, Halla-aho 2009, Spevak 2010.

This pragmatic approach to Latin word order is not a new one, dating back to Weil's nineteenth century work on word order (see Ch. 1 above). In recent years, it has become possibly the most prolific approach, with a number of monographs seeking to explain Latin word order in terms of information structure either by itself, e.g. Panhuis 1982, 1984, Spevak 2010, or in combination with other factors, e.g. Devine and Stephens 2006.

However, when it comes to explaining the word order patterns seen in the genitive construction, Devine and Stephens 2006:314 observe that

[g]iven two possible serial orders, Arg[ument]-Head and Head-Arg[ument], we should have liked to establish a simple descriptive rule correlating pragmatic value with serial position. It turns out that this is impossible. In both orders, focus can be on either the first word or the second word or on both words (separately or broadly).

As pragmatics alone fails to provide a straightforward solution, they consider other possible factors, but these too fail to provide a simple and clear-cut set of rules determining genitive word order. Devine and Stephens (*ibid.*) note that there were

no immediately obvious rules for the order of nominal arguments and adjuncts relative to the head, at least no rules that are expressible in terms of

the familiar syntactic categories. For instance, it is not the case that objective genitives always [sic] follow the noun and subjective genitives always precede the noun; or that possessive genitives always precede the noun and partitive genitives always follow the noun; or that deverbal nouns always take a genitive to the left and relational nouns always take a genitive to the right ... In fact it is typically the case that within each category of genitive we investigated we found that different words had different distributions ... [We can't] say that word order in noun phrases is random. The data analysis tells us explicitly that it isn't random: it varies according to lexical item.

According to a lexical analysis, the difference in order between *iudicum genus* “the kind of jury” Cic. *Att.* 1.16.2 and *inopiam iudicum* “the poverty of the jury” Cic. *Att.* 1.16.2 can be attributed to the semantic properties of *genus* and *inopia*. However, whilst individual lexical items may show a preference for certain orders (see further Ch. 3 §9 below), what then of *Hortensi consilio* “Hortensius’ plan” Cic. *Att.* 1.16.2 and *consilium Hortensi* “the plan of Hortensius” Cic. *Att.* 1.16.3, or *pacis spes* and *spe pacis* “hope of peace” Sall. *Iug.* 65.4? The differences here cannot plausibly be attributed to differences in lexical items. Instead, I suggest that they result from the principles of information structure.

Even though pragmatics has been the most productive approach to Latin word order, it does have two major drawbacks. Firstly, the terms used are notoriously difficult to define, as shall be seen below. Second, establishing pragmatic function can be a highly subjective business, as it involves reconstructing authorial intent – and in the case of Cicero and his contemporaries, the intent of someone who has been dead for two thousand years.

On the other hand, the advantage of this approach is that it takes into account the fact that Latin utterances, like those of any other language, are not composed in a vacuum, but with the purpose of communicating information to an audience, and that each utterance is embedded in the context of what has gone before and what is still to come. Cf. Walker 1918:2: “[n]either Caesar nor Cicero has left us a single completely

detached sentence; that is, a sentence not connected with some other thought already expressed or in his mind”. In other words, the structure of a Latin sentence is influenced by the information that the speaker or writer wishes to communicate.

Two of the more commonly mentioned pragmatic functions are emphasis and contrast, though as Siewierska 1991:180 notes emphasis in particular “has proved to be notoriously difficult to categorize”. This is at least in part because the assignment of emphasis to constituents is highly subjective. As Dover 1960:33 observes, “individuals may disagree on the location of ‘emphasis’ in a given passage ... and an individual may disagree with himself on different occasions”. However, Helma Dik 1997:57 asserts that, thanks to the upsurge of interest in pragmatics, “we are now equipped with a better theoretical apparatus to handle many finer distinctions formerly subsumed under the term ‘emphasis’”. She goes on to suggest that emphasis be replaced with the Functional Grammar notion of Focus, defined by Simon Dik as that pragmatic function which “presents what is relatively the most important or salient information in the given setting” (1978:19). This does not entirely solve the problems of clarity of terminology, being “rather vague” and prone to being “loosely interpreted” as Siewierska 1991:174 observes.

Jan de Jong’s solution to the problem of defining emphasis does not involve conflating it with Focus. Instead, he distinguishes between Topic and Focus on the one hand, and emphasis and contrast on the other. Topic and Focus, as he defines them, establish relationships between the clauses making up the discourse, by giving new information (Focus function) about a specific entity (Topic function). Emphasis and contrast, however, reflect which part of the speaker or writer’s utterance is to be considered most important, i.e. “[e]mphasis is a means by which the Speaker aims at getting his personal evaluation of the information across to the Hearer” (de Jong

1989:528). For example, in de Jong's analysis, *anceps oppidanos malum urgebat* "the townsmen were pressed by a double danger" Curt. 5.3.11 contains a Topic constituent, *oppidanos* "the townsmen", and a Focus *anceps malum urgebat* "a double danger pressed". However, the adjective *anceps* is separated from its head noun *malum* as it is emphatic, stressing the fact that "not just one danger threatens the townsmen, which would have been bad enough, but two" (de Jong 1989:532). The separation of the adjective makes it apparent that emphasis and Focus in de Jong's terms are distinct pragmatic functions. Nevertheless, this does not avoid the problem of subjectivity in determining when a constituent is emphatic.

In her 2009 study of Greek word order within the noun phrase (NP), Stéphanie Bakker does not object to H. Dik's equation of "the non-theoretical term emphasis" with "the more well-founded term focus" (p. 32). However, she feels that Focus "is only relevant at the level of the sentence, not at the level of the NP" (p. 29f.), on the grounds that "[i]f the essential characteristic of a focal element is not that it provides new information, but that it establishes a 'new relation' between this information and the *remainder of the proposition*, the information structure *within* the NP cannot be described in terms of focus" (p. 30). Instead, she analyses word order within the NP in terms of saliency, which she defines with respect to information status and value. In other words, the most salient constituent of an NP will either be the most informative element or will be the element considered most relevant or important by the speaker or writer (p. 300). Bakker proposes a saliency principle similar to the rules derived by H. Dik 1997:76, also for word order in Greek noun phrases: the more salient a constituent is, the further to the left of the NP it will be expressed (Bakker 2009:300).

Like H. Dik, Spevak 2010 is also working in the Functional Grammar framework. However, she does not conflate Focus and emphasis, considering them instead to be

two completely separate types of pragmatic marking. Focus is a “pragmatic function” whilst emphasis is a “pragmatic feature”, which Spevak defines as “prominence given to a constituent bearing a pragmatic function” (n. 29, p. 45). As a result, emphasis can coincide with Focus, though it can also be assigned to a constituent that has no pragmatic function (p. 47).

Neither Bakker’s term saliency nor the Functional Grammar term Focus can coincide with Topic, defined as “the entity ‘about’ which the predication predicates something in the given setting” (S. Dik 1978:19). If something is assigned Topic function, it cannot carry Focus function simultaneously, and vice versa, though the distinction between the two “does not ... constitute a strict dichotomy” (Siewierska, 1991:174). Bakker also makes a distinction between saliency and topicalisation, noting that in her corpus topicalisation occurs only with genitival modifiers (2009:68).

Working within a generative grammar framework, Salvi 2004, 2005 too separates Topic and Focus, giving them separate functional projections, though his definitions of these terms differ from those of Functional Grammar. For Salvi, Topic, or Frame, constituents are those “che delimitano il dominio di validità di una predicazione” whilst Focus constituents have the function of providing new information “non ricostruibile dal contesto” (2004:42). He includes a further subcategory of Focus, namely contrastive Focus, which he defines as “l’elemento che in una situazione viene scelto a esclusione di altri” (*ibid.*). Whilst these functional definitions allow room for subjective interpretations of which elements are Topic and which Focus, Salvi also provides some formal criteria for identifying these constituents. Topics may be introduced by the preposition *de* “about”, “concerning”, e.g. *de Aufidiano nomine nihil te hortor* “In the matter of Aufidius’s debt, I put no pressure upon you” Cic.

*Fam.* 16.19, whilst focal constituents may be *wh*-interrogatives, e.g. *quid me ista res consolatur in tantis tenebris et quasi parietinis rei publicae?* “What consolation is that to me, amidst this oppressive gloom, and what I may call the crumbling walls of the Republic?” *Cic. Fam.* 4.3.2, or quantifiers, e.g. *nihil te omnino fefellit* “nothing whatever escaped your notice” *Cic. Fam.* 9.2.2 (2004:49f., 2005:437f.).

Lastly, there is also Quirk et al.’s definition of focus, which can refer to new or contrastive information, and is further highlighted (in English at least) by prosody (1985:1361, 1365f.). Compare the sentences “I am painting my LIVING room blue” and “I am painting my living room BLUE”, where the focus is rendered in small caps. The first sentence stresses that it is the living room and not some other room, such as the bathroom, that is being painted, whilst the second sentence stresses the colour that the room is being painted (1985:1365). This focus is capable of coinciding with topics, as in the sentence “Here comes John. I will give HIM the job”, where *him* is given information (topic) but also contrastive and thus focal, as it is only John who will receive the job (Adams 1994a:19). This definition of focus comes closest of all to my definition of emphasis.

I define *emphasis* as pragmatic marking which is found when one element of a phrase is more important, relevant or informative than the other elements in the same phrase. This has an important consequence for the scope of this particular pragmatic function, limiting it to within the phrase. It is intraphrasal, as prominence is determined by the relationship between the constituents within the construction. For example, in the sentence “This horse is named Amber for her red coat”, the adjective *red* is emphatic, as it is the colour of Amber’s coat that is significant, not her coat by itself. *Contrast*, on the other hand, I define as pragmatic marking which occurs when one element of a phrase is in an antithesis (implicit or explicit) with another element

of either the same or another phrase. The two elements do not need to be fulfilling the same syntactic function, nor even be the same part of speech (cf. S. Bakker 2009:38-40). All that is required is that they have some (semantic) property in common, but differ in another (after J. de Jong 1983:132). Once again, the definition has consequences for the scope of this function. Whereas emphasis as I define it is an intraphrasal function, contrast may also be an interphrasal function, occurring between elements in two or more constructions. For example, in the sentence “Amber is a small horse but she has a big jump”, the adjectives *small* and *big* are in a contrastive relationship, comparing the size (or lack thereof) of the horse to the size of the obstacles the horse can jump.

Turning now to the effects of information structure on word order, the situation is as follows: there are two orders, NGen and GenN, and four ways in which pragmatic marking can be manifested within the genitive construction, these being a marked (i.e. emphatic or contrastive) head noun with an unmarked genitive, an unmarked noun with a marked dependent genitive, a marked noun and genitive, or an unmarked noun and genitive. All four types of pragmatic marking can occur in either order.

Despite the fact that both orders are available for all four types of pragmatic marking, it does not necessarily follow that GenN and NGen will occur with equal frequency in each type of pragmatic marking. In fact, as I shall show below, the relative frequency of the two orders differs in each of the four types. So, when the noun is marked, NGen is found most frequently, but when the genitive is marked, GenN is most often found. When both are marked, the order is rather more fluid, varying from author to author, and when neither is marked, NGen is most often found.

One final cautionary note is that it is not merely defining the terms emphasis and contrast that is difficult. Actually assigning emphasis and contrast, however one

chooses to define them, to one particular constituent is a subjective business, and prone to bias. For example, I found more examples of contrastive nouns following their dependent genitives than I did of emphatic nouns. This may be partly due to the fact that contrastive nouns are usually marked out by explicit antitheses, whilst emphatic nouns tend not to be formally marked and so are easier to miss. On the other hand, I may also be overlooking emphatic nouns following their dependent genitive because I expect them to precede their genitive, in accordance with the results of my pilot study (see Ch. 3 p. 63 above). As a result, the likelihood of anyone else making all the same decisions as I have after reading the same set of texts is slim. However, I believe that even though the results are unlikely to be identical, their overall distribution would still be similar.

### 1.1 Marked nouns

The table below shows the frequency distribution of the orders noun + genitive and genitive + noun in all six works when the noun carries emphasis or contrast. Although both orders are found, it is immediately clear that NGen occurs far more frequently.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	29	85.3%	5	14.7%	<b>34</b>
Cic. <i>Att.</i> 1-3	46	90.2%	5	9.8%	<b>51</b>
Cic. <i>Cat.</i> 1-2	13	76.5%	4	23.5%	<b>17</b>
Sall. <i>Cat.</i>	7	77.8%	2	22.2%	<b>9</b>
Sall. <i>Iug.</i>	32	71.1%	13	28.9%	<b>45</b>
Varro <i>Rust.</i>	82	88.2%	11	11.8%	<b>93</b>

**Table 1.1: distribution of NGen and GenN when noun is marked**

When the noun is emphatic, it is generally found before its dependent genitive:

- (1) me vero teste producto credo te ex acclamatione Clodi advocatorum audisse quae *consurrectio iudicum* facta sit, ut me circumsteterint, ut aperta iugula sua pro meo capite P. Clodio ostentarint.

When I myself was called as a witness, you must have heard from the shouts of Clodius' supporters how *the jury rose in a body* [what an uprising of the jurors occurred] and surrounded me, pointing to their bare throats as if offering their lives to P. Clodius in exchange for mine.

Cic. Att. 1.16.4<sup>2</sup>

- (2) postea vero quam Hortensius excogitavit ut legem de religione Fufius tribunus pl. ferret, in qua nihil aliud a consulari rogatione differebat nisi iudicum genus (in eo autem erant omnia), pugnavitque ut id ita fieret, quod et sibi et aliis persuaserat nullis illum iudicibus effugere posse, contraxi vela perspiciens inopiam iudicum neque dixi quicquam pro testimonio nisi quod erat ita notum atque testatum ut non possem praeterire.

Itaque si causam quaeris absolutionis, ut iam  $\text{pr}\acute{\upsilon}\omega\ \tau\acute{\upsilon}\ \text{pr}\acute{\omicron}\text{teron}$  revertar, *egestas iudicum* fuit et turpitude.

But then Hortensius conceived the idea of getting Fufius to propose a law on the sacrilege differing from the consular bill only in respect of the constitution of the jury, on which however everything turned, and worked hard for its acceptance because he had persuaded himself and others that no jury on earth could acquit Clodius. I saw we had got a jury of paupers, and drew in my horns, saying nothing in evidence but what was so generally known and attested that I could not leave it out.

If therefore you want to know the reason for the verdict of not guilty (to come back from cart to horse), it was *the needy and disreputable quality of the jury ...*

Cic. Att. 1.16.2

- (3) sin opportunior fugae collis quam campi fuerat, ea vero consueti Numidarum equi facile inter virgulta evadere, nostros *asperitas et insolentia loci* retinebat.

But if the hill was better suited to flight than the plain, there the Numidians' horses, being accustomed to the ground, easily made their escape through the branches, whilst *the rough and unfamiliar terrain* hindered ours.

Sall. Jug. 50.6

In (1) the unanimous action of the jury as they rise in a body to defend Cicero is considered remarkable, so remarkable, in fact, that Cicero claims the howls of outrage it drew from Clodius' supporters were so loud that even the absent Atticus should have heard them. He goes on to compare this action with the tributes paid by previous juries, one Athenian and one Roman, to Plato's successor Xenocrates and Metellus

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<sup>2</sup> All translations of the letters to Atticus given in the examples are by Shackleton Bailey 1965. All Varro translations are by Hooper and Ash 2006. All other translations, unless otherwise specified, are my own. Further, in the examples throughout the chapter, an italicised phrase, such as "*consurrectio iudicum*" in ex. (1), is the genitive construction under scrutiny, whilst an underlined phrase or word, e.g. "inopiam iudicum" in ex. (2), is one that is considered in some way significant for the analysis and so is marked out for the reader's ease of reference.

Numidicus respectively, and concludes that *multo haec ... nostra res maior* “this was a far grander gesture” *Att.* 1.16.4. The comparison makes it quite clear that the actions of the juries are more important than the fact that it was juries who offered these tributes. Consequently in the phrase *consurrectio iudicum* it is the noun *consurrectio* that is emphasised.

In example (2), Cicero is answering Atticus’ question as to why Clodius was acquitted. He blames it on the quality of the jury, laying particular emphasis on the fact that the jurors were needy. As the letter subsequently makes clear, it was this *egestas* “extreme poverty”, “want” that proved the jury’s undoing, as a good number of the jurors accepted bribes to acquit Clodius (*Att.* 1.16.5). Also, note that although both the jury and the poverty of its members (*inopiam*) have been mentioned before, it is specifically the needy quality of the jury that led to the acquittal, and so *egestas* is emphatic.

In (3), Sallust is describing the hit-and-run tactics employed by the Numidian horsemen at the battle of Muthul and the difficulty the Romans have responding to them. When hard-pressed, the Numidian cavalry retreat, taking either to the plain or to a hill covered in low-growing olive and myrtle trees (*Iug.* 48.3, 50.5-6). On the plain, they are highly mobile, and are not massed together but are instead *quam maxume divorsi* “scattered far and wide” *Iug.* 50.5, but when they retreat to the hill, the pursuing Roman cavalry is unable to catch them thanks to the difficulty of the terrain. The fact that the ground is rough and unfamiliar (*asperitas et insolentia*) to the Romans is enough to check them; *loci* is not as important as its qualities, and consequently *asperitas et insolentia* are marked.

Although most emphatic nouns are found before the genitive, there are a few instances where they follow it:

- (4) Ad hoc mulieres, quibus *rei publicae magnitudine* belli timor insolitus incesserat, afflictare sese, manus supplices ad caelum tendere, miserari parvos liberos ...

The women also, seized by the terror of war, from which *the vastness of the republic* had shielded them, were greatly distressed, and raised their hands heavenwards in entreaty, bewailed the fate of their small children ...

Sall. *Cat.* 31.3

Here, the women of Rome are reacting to the news that Catiline is preparing a coup d'état, with the backing of Manlius' army in Etruria. In the immediately preceding paragraphs, Sallust has described the senate's response to the conspiracy, including the passing of the *senatus consultum ultimum de re publica defendenda* (29.2-3), the dispatch of troops to the areas of Italy where Catiline has supporters (30.4-5), the dispersal of the gladiators (30.7) and the setting of night time watches throughout the city (30.7). Rome is clearly on a war footing, and Sallust makes full use of the opportunity for drama with his description of the women's behaviour. As Vretska 1976:384 notes, "[w]iewohl die Einzelzüge topisch sind, hebt sich die Kunst der Darstellung ins Dichterische", citing Xen. *Cyr.* 3.3.67 as an earlier example of a similar scene. In fact, he goes on to observe that their reaction is more in keeping with the conquest of a small city than with a potential threat to Rome (*ibid.*). However, Sallust explains that they have been protected from the dangers of warfare for so long that they have become quite unaccustomed to them. Thanks to Rome's expanding power, few countries dare challenge it, and wars now take place far away, in distant lands neighbouring the provinces, see Vretska 1976:385, Ramsey 2007:145. Sallust stresses that it is specifically the size of the state and the extent of its power, its *magnitudo*, that has been crucial in removing the perils of warfare from the immediate vicinity of the city, and so *magnitudine* is emphatic.

Contrastive nouns are also regularly found before their dependent genitive:

- (5) etenim post profectionem tuam primus, ut opinor, introitus fuit fabulae Clodianae, in qua ego nactus, ut mihi videbar, locum resecandae libidinis et coërcendae iuventutis vehemens flavi et omnis profudi viris animi atque ingeni mei, non *odio* adductus *alicuius* sed *spe non corrigendae sed sanandae civitatis*.

I believe it was after you left that the Clodian drama came on to the stage. I thought I saw there a chance to cut back licence and teach the young folk a lesson. So I played *fortissimo*, put my whole heart and brain into the effort, not from *any personal animus* [not led by dislike of anyone] but in *the hope*, I won't say of reforming our society, but at least of healing its wounds.

Cic. Att. 1.18.2

- (6) ... etiam frumenti inopia temptabatur, quia Numidae *pabulo pecoris* magis quam arvo student ...

He was even threatened with a lack of grain, since the Numidians prefer *pastures for grazing* to agriculture ...

Sall. Jug. 73.3-4

- (7) Non enim solum ea uligo *lanam* corrumpit *ovium*, sed etiam ungulas, ac scabras fieri cogit.

For the moisture of the ground injures not only *the fleece of the sheep* but their hoofs as well, and causes them to become scabby.

Varro Rust. 2.2.7

In (5) the head nouns *odium* and *spes* precede their genitives here as two opposing motivations that Cicero wishes to contrast with each other. His actions of *resecandae libidinis et coërcendae iuventutis* “cutting back licence and teaching the young folk a lesson” are not motivated by animosity for the unruly younger generation, which included such troublemakers as Clodius, Curio and Antony, but by the hope of minimising the damage caused by their wild behaviour. The contrast between *odium* and *spes* is highlighted by the *non ... sed* construction, which makes it very clear that these two motivations are in antithesis with each other. Note that in *spes non corrigendae sed sanandae civitatis* the gerundives are contrasted with each other as well, which makes this particular phrase an example of a genitive construction where both the head noun and the dependent genitives are marked (see further Ch. 3 §1.3 below).

In (6) there is a contrast between the uses to which the Numidians put their fields, namely grazing and the cultivation of crops. The word used for the animal feed, *pabulum*, can sometimes be used to refer to human food, but this is largely a poetic use, and in Classical prose, it is usually taken to refer to fodder for livestock (cf. Varro, Cato). Whilst the genitive *pecoris* “of livestock” does serve to reinforce the reading of *pabulum* as food for animals, it is not strictly necessary, and is presumably included simply to make the contrast between the two nouns *pabulum* and *arvum* obvious and straightforward. So the genitive is almost tail information, tacked on to ensure an unambiguous reading, whilst the head noun carries pragmatic marking.

Example (7) is another instance where the antithesis is marked out by a *non ... sed* construction. At this point, Atticus is discussing the location and cleanliness of the sheepfold. A damp fold will be bad for the health of the sheep, and is specifically detrimental to their wool and their hooves. There is an opposition between the two different parts of the sheep’s bodies which suffer from damp, and the *non solum ... sed etiam* “not only ... but also” construction emphasises that both fleece and hooves can be damaged.

Again, GenN order can be found when the noun is contrastive. Once more, it is not as common as NGen order, but it is more common than when the noun is emphatic. This, though, may be due to the fact that contrastive nouns are easier to spot than emphatic ones, as they are often marked out by obvious antithetical constructions, e.g. *non ... sed*, as in (8) below, or are obviously supposed to contrast with some other element, as in (9) below.

- (8) Tu velim quae nostrae Academiae parasti quam primum mittas. mire quam *illius loci* non modo *usus* sed etiam *cogitatio* delectat.

Please send the things you have got for my Academy as soon as possible. *The very thought of the place*, let alone *the actual use of it*, gives me enormous pleasure.

Cic. Att. 1.11.3

- (9) Patres conscripti, Micipsa pater meus moriens mihi praecepit uti *regni Numidiae* tantummodo *procurationem* existumarem meam, ceterum ius et imperium eius penes vos esse ...

Conscript fathers, on his deathbed my father Micipsa bade me consider myself to have only *the care of the kingdom of Numidia*, whilst its laws and rule were to be in your hands.

Sall. Jug. 14.1

In (8) Cicero mentions how much he appreciates his Academy, one of the two gymnasia in his Tusculan villa (Shackleton Bailey 1965:282), emphasising the depth of his delight when he says that he does not even need to use it to feel pleased – he merely needs to think about it. There is an obvious opposition between *usus* “use” and *cogitatio* “thought”, which is made even clearer by the *non modo ... sed etiam* construction.

In his speech to the senate in (9), Adherbal contrasts the spheres of power that he and Rome have over Numidia. The genitive *regni Numidiae* is common to *procuratio* “care” and *ius et imperium* “laws and rule”, since the *eius* dependent upon *ius et imperium* is an anaphoric pronoun referring back to *regni Numidiae*. So *procuratio* and *ius et imperium* are the contrasted powers that each group has over Numidia, with *tantummodo* “only” highlighting the antithesis.

It is apparent that NGen is the most common order for pragmatically marked nouns, though not the only order. It is interesting to note that in examples (8) and (9) the genitives *illius loci* and *regni Numidiae* are topical, since they are the things under discussion, though neither of them is contrastive or emphatic. Both of them are found at the start of their clauses, as is predicted by Salvi’s 2005 analysis of sentence

structure in Latin, and are separated from their head nouns by the adverbial phrases *non modo* and *tantummodo*. It would seem that since *illius loci* and *regni Numidiae* are the topics of their clauses they are fronted, regardless of their pragmatic marking within the genitive construction. This suggests that information structure on the sentence level overrides information structure within phrases; cf. Devine and Stephens 2006:386, 525-31 on pragmatic motivations for hyperbaton in Latin, S. Bakker 2009:66ff. on pragmatic word ordering patterns in Greek.

## 1.2 Marked genitives

When the genitive carries pragmatic marking and the head noun none, the most frequently found order is GenN, as the table below shows.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	28	28.3%	71	71.7%	<b>99</b>
Cic. <i>Att.</i> 1-3	15	14.4%	89	85.6%	<b>104</b>
Cic. <i>Cat.</i> 1-2	6	10.5%	51	89.5%	<b>57</b>
Sall. <i>Cat.</i>	13	21.3%	48	78.7%	<b>61</b>
Sall. <i>Iug.</i>	21	21.9%	75	78.1%	<b>96</b>
Varro <i>Rust.</i>	37	19.2%	156	80.8%	<b>193</b>

**Table 1.2: distribution of NGen and GenN when genitive is marked**

Just as emphatic nouns usually preceded unemphatic, non-contrastive genitives, so emphatic genitives are most often found preceding unmarked nouns:

- (10) Caesar obsidibus acceptis primis civitatis atque *ipsius Galbae regis duobus filiis* armisque omnibus ex oppido traditis in deditionem Suessiones accepit exercitumque in Bellovacos ducit.

Upon receiving as hostages the leading men of the state and *the two sons of king Galba himself*, as well as all the weapons from the town, Caesar received the surrender of the Suessiones and led the army against the Bellovaci.

Caes. *BG* 2.13.1

- (11) Surgit pulchellus puer, obicit mihi me ad Baias fuisse. falsum, sed tamen ‘quid? hoc simile est’ inquam ‘quasi in operto dicas fuisse?’ ‘quid’ inquit ‘homini Arpinati cum aquis calidis?’ ‘narra’ inquam ‘patrono tuo, qui *Arpinatis aquas* concupivit’ (nosti enim Marianas).

Our little Beauty gets on his feet and accuses me of having been at Baiae – not true, but anyhow, “Well,” I reply, “is that like saying I intruded on the

Mysteries?” “What business has an Arpinum man with the waters?” “Tell that to your counsel,” I retorted; “he was keen enough to get *certain of them that belonged to an Arpinum man*” (you know Marius’ place of course).

Cic. Att. 1.16.10

In (10) Caesar lays out the terms under which the Suessiones surrendered, including the standard practice of handing over hostages from amongst the prominent families. However, he makes a special point of noting that amongst these noble hostages were the sons of the king of the Suessiones, using the emphatic adjective *ipse* with the preposed genitive *Galbae regis* to underscore the unusual fact that the king had included his own children among the hostages.

In (11), Cicero rebuts Clodius, who has scornfully asked what a man from rural Arpinum has to do with the hot springs at the notorious coastal resort of Baiae, by pointing out that the villa that Curio the Elder, who presumably spoke in Clodius’ defence at his Bona Dea trial (Shackleton Bailey 1965:321), owned at Baiae had previously belonged to Marius, another native of Arpinum. Cicero emphasises the fact that Marius was a countrified Arpinate for two reasons, firstly because he too comes from Arpinum and thus it is an attribute they have in common, and secondly because he wishes to show that hailing from Arpinum does not preclude a man from having a sought-after villa at Baiae.

Genitives can also be preposed for other reasons. J. de Jong 1983:137 mentions that when the genitive and head noun refers to “the same class of persons as the phrase as a whole does” or when the head noun refers to some whole and the genitive specifies the parts that comprise it, the genitive is found before its head noun, see Ch. 1 §3 above. This he calls “referential unity”; cf. Devine and Stephens’ claim that a genitive construction with a prehead genitive can often be read as referring to “a single concept or subkind” (2006:389). In her discussion of Greek word order, S. Bakker broadens the definition and the applicability of this concept somewhat, so that

anteposition of genitives is not found simply in those referring to people, but whenever “the NP in its totality metonymically refers to the ‘referent’ of the genitive” (2009:52). As a result, this “metonymic genitive” (*ibid.*) is considered salient, in Bakker’s terms, and is preposed. Although Bakker’s work is on Greek, the example below shows quite clearly that her broader definition of referential unity can also be applied to Latin:

- (12) *quin mihi nunc te absente non solum consilium, quo tu excellis, sed etiam sermonis communicatio, quae mihi suavissima tecum solet esse, maxime deest – quid dicam? in publicane re ... an in forensi labore ... an in ipsis domesticis negotiis, in quibus ego cum antea tum vero post discessum fratris te sermonesque nostros desidero? postremo non labor meus non requies, non negotium non otium, non forenses res non domesticae, <non publicae> non privatae carere diutius tuo suavissimo atque amantissimo consilio ac sermone possunt.*

Indeed at the present time I badly miss in your absence not only your excellent advice but also *our habitual exchange of talk*, which is such a delight to me. I don’t know whether I miss it more in public affairs ... or in my court work ... or in my own private concerns, in which I have felt the want of you and of our talks together more especially since my brother’s departure. In short, whether working or resting, in business or in leisure, in professional or domestic affairs, in public life or private, I cannot for any length of time do without your affectionate advice and the delight of your conversation.

Cic. Att. 1.17.6

In this particular phrase, *sermonis communicatio*, the two nouns *sermo* “talk”, “conversation” and *communicatio* “an imparting”, “a communicating” are very similar in meaning, which may suggest that the NP as a whole refers to “speech” or “talk”. This interpretation is supported by the repetition of *sermo* by itself twice again in the sentences following. Also, it is clear from the sequence of antitheses *non labor meus non requies ... <non publicae> non privatae* that Cicero is using a dignified, considered style, including the little rhetorical flourish *vidi enim, vidi* earlier (Att. 1.17.6.1), a phrase which is found in the *Pro Caelio* at 59.3, in a digression on the death of Metellus Celer marked by a tone of “funereal gloom and most elaborate periods” (Austin 1959:119). Furthermore, at this point in the letter, Cicero, trying to smooth over a rift between Atticus and Quintus, stresses the fact that he himself has

never found fault with Atticus and has always valued his friendship. He is searching for exactly the right words, and his tone is accordingly more formal and careful.

Bearing all of this in mind, it seems that *sermonis communicatio* is indeed an elaborate periphrasis for *sermo*, and that since the genitive is the most informative part of the NP, it is also pragmatically salient.

Emphatic genitives rarely follow the noun, though examples may be found:

- (13) Certe, inquit Merula; nam ibi vidi *greges magnos anserum, gallinarum, columbarum, gruum, pavonum, nec non glirium, piscium, aprorum, ceterae venationis.*

“You are quite right,” said Merula; “for I have seen there *large flocks of geese, chickens, pigeons, cranes, and peafowl, not to speak of numbers of dormice, fish, boars, and other game.*”

Varro *Rust.* 3.2.14

Varro and his companions have been discussing the profits to be had from homesteading as opposed to large-scale farming, holding up Marcus Seius as a highly successful example of the former. He is so successful, in fact, that Appius Claudius claims he earns more revenue from just one villa than others do from an entire farm, and Merula backs him up by listing the animals Seius raises. The catalogue underscores Merula and Appius’s point that even a small villa can be profitable if managed correctly, and it is not so much the size of the flocks that is important here as the sheer variety of animals that can be farmed. However, as all these genitives are members of a list, they are grouped together, making a list so long and complex that it does not precede the head noun, and so the order NGen results, even though the genitives are emphatic. See exx. (77), (163) and (180) below for further discussion of lists and the word order patterns associated with them.

There are also contrastive genitives, which, like the emphatic genitives, are most often found before the noun:

- (14) horum primo circiter milia XV Rhenum transisse; posteaquam agros et cultum et copias Gallorum homines feri ac barbari adamassent, traductos plures; nunc esse in Gallia *ad C et XX milium numerum*.

At first around fifteen thousand of the Germans had crossed the Rhine; afterwards, when the savage and barbaric people had come to appreciate the lands and culture and wealth of the Gauls, they brought more of their kinsmen across, so that now there were *one hundred and twenty thousand of them* in Gaul.

Caes. *BG* 31.5

- (15) ... neque ego inter me atque te quicquam interesse umquam duxi praeter voluntatem institutae vitae, quod me ambitio quaedam ad *honorum studium*, te autem alia minime reprehendenda ratio ad honestum otium duxit.

... I have never felt any difference between us except in the modes of life we have chosen. What may be called ambition has led me *to seek political advancement*, while another and entirely justifiable way of thinking has led you to an honourable independence.

Cic. *Att.* 1.17.5

- (16) Memorare possum quibus in locis maxumas hostium copias populus Romanus parva manu fuderit, quas urbis natura munitas pugnando ceperit, ni ea res longius nos ab incepto traheret.

Sed profecto fortuna in omni re dominatur; ea res cunctas ex lubidine magis quam ex vero celebrat obscuratque. *Atheniensium res gestae*, sicut ego aestumo, satis amplae magnificaeque fuere, verum aliquanto minores tamen quam fama feruntur. Sed quia provenere ibi scriptorum magna ingenia, per terrarum orbem Atheniensium facta pro maxumis celebrantur. Ita eorum qui fecere virtus tanta habetur quantum eam verbis potuere extollere praeclara ingenia. At populo Romano numquam ea copia fuit ...

I can remember where the Roman people, with a small force, routed great hosts of enemies, and which cities, fortified by nature, they seized in battle, except such matters take us far afield from our original subject.

But truly fortune is the mistress of each affair; she celebrates or hides all things more on a whim than according to their validity. *The deeds of the Athenians*, so I believe, were certainly great and magnificent, but were somewhat less impressive than their fame suggests. But since highly talented writers lived there, throughout the world the deeds of the Athenians are regarded as the greatest. So the valour of those doers of deeds is as great as brilliant minds can make them with words. But the Roman people have never had that opportunity ...

Sall. *Cat.* 7.7-8.2

- (17) At ille sese in loca saltuosa et natura munita receperat ibique cogebat exercitum numero hominum ampliorem, sed hebetem infirmumque, agri ac pecoris magis quam *belli cultorem*.

He withdrew into wooded regions, naturally defensible, and there he mustered an army, larger in number of troops, but stupid and weak, more suited to growing crops and raising cattle than to *war*.

Sall. *Iug.* 54.3

In (14) Caesar compares the number of Germans currently living in Gaul with the number of the original German immigrants – one hundred and twenty thousand now as opposed to fifteen thousand. Since it is the figures that he is interested in, the noun *numerum* is of little importance, and is in fact redundant, as *C et XX milium* is clearly a number. As a result, the genitive is metonymic as well as contrastive.

In (15) Cicero contrasts the modes of life he and Atticus have chosen, namely public and political (*honos*), and private and independent (*otium*). Shackleton Bailey's translation captures the distinction neatly, turning the head noun *studium* "desire", "enthusiasm" into a verb "to seek", making it quite clear that it is *honos* and *otium* that are being contrasted, not *studium* and *otium*. Furthermore, *honos* and *otium* have antithetical meanings, with *honos* referring to public office and *otium* "the freedom to live as one pleases, without the ties of public office or employment" (Shackleton Bailey 1965:327). Also, like *sermonis* and *C et XX milium* in examples (12) and (14) above, *honorum* is arguably a metonymic genitive, as the NP refers to the referent of the genitive *honorum*, not the head noun *studium*. At any rate, there is a contrast, and the contrastive genitive is preposed.

In (16), Sallust has been discussing the history and achievements of the Romans, and now switches to talk about fortune, fame and the importance of historians, using the Athenians as an example to illustrate his point. Since the Athenians are a new topic, *Atheniensium* carries emphasis. They are also in a contrastive relationship with *populus Romanus*: the Athenians had great writers to extol their deeds, whereas the Romans have not had that luxury. *Res gestae* is not contrastive, though, and is in fact old information, since Sallust has just been talking about the achievements of the Romans, referring to them as *res*.

In example (17), three genitives depend on the noun *cultorem*, these being *agri*, *pecoris* and *belli*, describing the three different things that Jugurtha's new soldiers can "cultivate". His new army is formed from farmers and herdsmen rather than soldiers, and *belli* contrasts with the fields and the flocks. The antithesis is made explicit by the use of *magis quam* "rather than". Sallust also makes use of the rhetorical figure of syllepsis, by applying *cultor* "cultivator" to the concrete nouns *ager* and *pecus*, with which it would be expected to go, as well as to the abstract *bellum*. The unusual construction *belli cultor* draws further attention to this particular contrastive genitive.

It is once again possible, though rare, for contrastive genitives to follow their head noun, as in the example below:

- (18) Namque illi quos ante Catilina dimiserat inconsulte ac veluti per dementia cuncta simul agebant: nocturnis consiliis, armorum atque telorum portationibus, festinando agitando omnia *plus timoris quam periculi* effecerant.

For the men that Catiline had sent ahead were doing everything at once, indiscreetly and as if mad: by their night time councils, their stockpiling of arms and weapons, by rushing and agitating everything they were a cause *more of fear than of actual danger*.

Sall. *Cat.* 42.2

The conspirators should have been causing very real danger, but thanks to their indiscretion their actions were noticeable and so they led to awareness and fear, losing the element of surprise that would have made them dangerous. The results of their actions are contrasted, both the actual (*timor*) and the intended (*periculum*) depending on *plus*. The comparison is made explicit by the use of (*plus*) *quam* "more than".

So when the genitive carries emphasis or contrast, it is often found before the head noun. Taken together with the findings of the previous section, there are grounds for considering that information structure does indeed affect word order within the genitive construction, as emphatic and contrastive constituents generally precede unmarked constituents within the same phrase. This agrees with the view that Latin is

a discourse configurational language; cf. Panhuis 1982, de Jong 1983, 1986, 1989, 1994, Devine and Stephens 2006, Spevak 2010.

### 1.3 Both noun and genitive marked

In the sections above we have seen how a difference in pragmatic value between the constituents of the genitive construction affects the order. What happens, though, when both the head noun and its dependent genitive carry pragmatic marking?

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	18	60%	12	40%	<b>30</b>
Cic. <i>Att.</i> 1-3	32	51.6%	30	48.4%	<b>62</b>
Cic. <i>Cat.</i> 1-2	13	52%	12	48%	<b>25</b>
Sall. <i>Cat.</i>	4	26.7%	11	73.3%	<b>15</b>
Sall. <i>Iug.</i>	28	50%	28	50%	<b>56</b>
Varro <i>Rust.</i>	9	40.9%	13	59.1%	<b>22</b>

**Table 1.3: distribution of NGen and GenN when both noun and genitive are marked**

It is quite evident from Table 1.3 that when both noun and genitive are marked, the order of the constituents in the genitive phrase is much more fluid than it is when only one of the constituents is marked. In Cicero and in Sall. *Iug.* the two orders occur (roughly) as often as each other, whilst in Caesar NGen is found most frequently and in Varro and Sall. *Cat.* the reverse holds.

In order to see what is going on, it is necessary to look at examples in context:

- (19) Quibus rebus cognitis, cum ad has suspiciones certissimae res accederent, quod per fines Sequanorum Helvetios traduxisset, quod obsides inter eos dandos curasset, quod ea omnia non modo *iniussu suo et civitatis*, sed etiam inscientibus ipsis fecisset, quod a magistratu Haeduorum accusaretur, satis esse causae arbitrabatur, quare in eum aut ipse animadverteret aut civitatem animadvertere iuberet.

Upon learning these things, and since certain matters added to these suspicions – the fact that Dumnorix had led the Helvetii through the territory of the Sequani, because he had ensured that they had exchanged hostages amongst themselves, because he had done all these things not only *without orders from either Caesar or his own state*, but even without their knowledge, because he had been accused by a magistrate of the Aedui – Caesar judged there to be sufficient cause for him to either punish Dumnorix himself or to order the Aedui to punish him.

Caes. *BG* 1.19.1

- (20) quid tandem te impedit? mosne maiorum? at persaepe etiam privati in hac re publica perniciosos cives morte multarunt. an leges quae de civium Romanorum supplicio rogatae sunt? at numquam in hac urbe qui a re publica defecerunt civium iura tenuerunt. an *invidiam posteritatis* times? praeclaram vero populo Romano refert gratiam qui te, hominem per te cognitum, nulla commendatione maiorum tam mature ad summum imperium per omnes honorum gradus extulit, si propter invidiam aut alicuius periculi metum salutem civium tuorum neglegis. sed si quis est invidiae metus, non est vehementius severitatis ac fortitudinis invidia quam inertiae ac nequitiae pertimescenda. an, cum bello vastabitur Italia, vexabuntur urbes, tecta ardebunt, tum te non existimas invidiae incendio conflagraturum?

So what still holds you back? The customs of the ancestors? But often in this state even private individuals have put dangerous citizens to death. Or is it the laws concerning the punishment of Roman citizens which have been passed? But never in this city have those who have deserted the republic held the rights of citizens. Or do you fear *the hatred of posterity*? You'll certainly show a marvelous gratitude to the Roman people who elevated you, a man only known for your own deeds, with no ancestors to commend you, so swiftly to the height of power through all the steps of office, if you neglect the safety of your fellow citizens because of hatred or fear of any other danger. But if you are afraid of unpopularity, it is not the unpopularity incurred by severity and resolve that you should fear, but rather that which comes from inaction and idleness. Or, when Italy is laid waste by war, the cities in turmoil, houses aflame, do you not think that you will be consumed by a blaze of hatred then?

Cat. 1.28-29

- (21) Omnis homines qui sese student praestare ceteris animalibus summa ope niti decet ne vitam silentio transeant, veluti pecora quae natura prona atque ventri oboedientia finxit. Sed nostra omnis vis in animo et corpore sita est: *animi imperio, corporis servitio* magis utimur; alterum nobis cum dis, alterum cum beluis commune est ... Sed diu magnum inter mortalis certamen fuit vine corporis an virtute animi res militaris magis procederet ... Igitur initio reges – nam in terris nomen imperi id primum fuit – divorsi pars ingenium, alii corpus exercebant ... Sed multi mortales, dediti ventri atque somno, indocti incultique vitam sicuti peregrinantes transiere; quibus profecto contra naturam corpus voluptati, anima oneri fuit.

All men who desire to be greater than the other animals ought to strive their utmost to ensure that they do not pass through life in obscurity, just like animals which by nature are tractable and obedient to their stomachs. But all our strength lies in our mind and our body: we use *our mind to rule* and *the body* more to *serve*; the former we have in common with the gods, the latter with the beasts ... But for a long time it has been a matter of debate among men whether military affairs prosper more from strength of body or from excellence of mind ... So in the beginning kings (for that was the first title commonly given to people in power) took different courses, part training their minds, others their bodies ... But many people, given over to their appetites and sloth, ignorant and unsophisticated as they are, pass through life as if travellers. Indeed to them, contrary to nature, the body is a pleasure and the mind a burden.

Sall. Cat. 1.1-2.8

- (22) Nam saepe ego audivi Q. Maximus, P. Scipionem, <alios> praeterea civitatis nostrae praeclaros viros solitos ita dicere, quom maiorum imagines intuerentur, vehementissime sibi animum ad virtutem accendi. Scilicet non ceram illam

neque figuram tantam vim in sese habere, sed *memoria rerum gestarum* eam flammam egregiis viris in pectore crescere neque prius sedari quam virtus eorum famam atque gloriam adaequaverit.

For I have often heard that Q. Maximus, P. Scipio and other outstanding men of our state were accustomed to say that when they looked upon the images of their ancestors, their minds were greatly inflamed by the desire to pursue excellence. Of course, they did not mean that the wax or the likeness had such power over them, but that the *memory of deeds* kindles that flame that burns in the breasts of good men nor does it subside before their own excellence has equalled the fame and glory of their forebears.

Sall. *Iug.* 4.6

In (19) *iniussu* contrasts with *inscientes*, a relationship highlighted by *non modo ... sed etiam*. On the other hand, the dependent genitive *civitatis* is opposed to the possessive adjective *suus*: Dumnorix had acted not just without Caesar's permission but also without that of his own state. Both head noun and genitive are marked, so there is no difference in information status or value to motivate the order. This suggests that NGen may very well be the basic order. It may be possible, though, that contrast between two elements that are not part of the same phrase (*iniussu* versus *inscientes*) is stronger than contrast between two elements within the same phrase (*civitas* versus *suus*).

In example (20), *invidiam* is a topic, presenting the third of the three considerations that may be holding Cicero back from executing Catiline. Together with the *an* marking this as a new question, as opposed to an answer to the previous question, it signals a switch from one consideration to the next. The word *invidia* occurs a further four times in the following three sentences – the concept of unpopularity is undeniably central to the argument at this point. It should also be noted that *invidia* contrasts with the *mos maiorum* and the *leges* that may also be staying Cicero's hand. There can be no doubt that the head noun carries pragmatic marking – in this case, both emphasis and contrast.

On the other hand, *posteritatis* itself is one of a series of contrasts, in this case, contrasting generations. The first of the three possible fears has to do with the *maiores*, the second to do with current legislation, and this, the third, with *posteritas*, the future generations. Thus the genitive *posteritatis* is also pragmatically marked. However, it is possible that because the head noun *invidia* is topical it is found in topic position in its clause and so precedes the genitive, even though both are pragmatically marked. This would mean that ordering at the level of the clause takes precedence over ordering at the level of the noun phrase.

In example (21) Sallust advises his readers on how people should live: governed by the mind, ruling the body. The grammatical parallelism of the phrases *animi imperio* “by the rule of the mind” and *corporis servitio* “by the service of the body”, with their identical word order genitive + head noun, and their function as objects of *utor*, makes the antithesis immediately obvious. Further, *animus* and *corpus*, and *imperium* and *servitium* are self-evidently pairs of opposites, and it is clear that both genitives and head nouns carry contrast. There is no pragmatic difference between the two and in this example the resultant word order is GenN.

Just a little further on in the text, though, the contrast between mind and body is repeatedly mentioned. There is the question whether strength or a quick mind is more useful in feats of arms (*Cat.* 1.5), the different qualities different monarchs valued (*Cat.* 2.1), and the attitude of the lazy and the ignorant to their bodies and souls (*Cat.* 2.8). Sallust further develops the opposition of the body and the mind into a contrast between doers of deeds and writers of history (*Cat.* 3.1-2), a theme which reoccurs in a modified form at *Cat.* 8, where he attributes the fame of the deeds of the Athenians to their writers. It is quite clear then that the contrast between *animus* and *corpus* is important, as it is the main subject of discussion in the opening chapters of Sall. *Cat.*

This makes *animus* and *corpus* topical, and as a result they are found in topic position before the head nouns *imperium* and *servitium*, just as the topical *invidia* preceded its pragmatically marked genitive in (20). It could be argued that in the sentence *animi imperio, corporis servitio magis utimur* “we use our minds to rule and our bodies to serve” *corporis* is not in the topic position, since that is found at the start of the clause. However, I break the sentence down into two clauses, *animi imperio* with a gapped verb *utimur* and *corporis servitio magis utimur*, and so consider *corporis* to be found at the start of its own clause.

In (22) Fabius Maximus and Scipio Africanus were the sort of men who were inspired by their ancestors to great deeds. They were not content with the trappings of famous ancestors, but the memories of their deeds were the driving force behind their own achievements. The entirety of *memoria rerum gestarum* is contrasted with *ceram* and *figuram* and *maiorum imagines* as the motivation.

Although a glance at the figures in Table 1.3 above gives the impression that when both the head noun and its dependent genitives carry emphasis or contrast the order of the constituents is somewhat freer, an analysis of the examples in their original context shows that this is not the case. Instead, sentence-level pragmatic functions can influence the word order within the phrase, even when both constituents have equal pragmatic marking. If one constituent is topical, it will be found in the topic position at the start of the sentence and so will automatically precede the other, non-topical constituent; see Ch. 3 §3 on discontinuity below for further discussion. However, in instances where both noun and genitive are emphatic or contrastive, but carry no sentence-level pragmatic function, the order is NGen. The significance of this will be discussed in the section below.

## 1.4 No pragmatic marking

In the sections above, constituents carrying emphasis and contrast were shown to generally precede unemphatic and non-contrastive ones. The sentence-level function of topic, when applied to a constituent within the genitive construction, also leads to said constituent preceding others, regardless of their pragmatic marking relative to the other constituents within the genitive construction. I turn now to instances of the genitive construction where neither the head noun nor its dependent genitive is pragmatically marked. Since pragmatic marking has an effect on word order, in instances when neither constituent is marked the resultant order is unmotivated, and so stands a good chance of being the natural or basic word order for the construction. This, however, assumes that there is no interaction with other factors that might influence word order.

In the selected texts, the most frequently occurring order when neither the noun nor dependent genitive is emphatic or contrastive is NGen. This is in accordance with the findings of Marouzeau 1922, Adams 1976, de Jong 1983, Pinkster 1990, and Devine and Stephens 2006.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	328	54.3%	276	45.7%	<b>604</b>
Cic. <i>Att.</i> 1-3	245	61.7%	152	38.3%	<b>397</b>
Cic. <i>Cat.</i> 1-2	104	62.3%	63	37.7%	<b>167</b>
Sall. <i>Cat.</i>	212	63.5%	122	36.5%	<b>334</b>
Sall. <i>Iug.</i>	421	62.5%	253	37.5%	<b>674</b>
Varro <i>Rust.</i>	279	59.5%	190	40.5%	<b>469</b>

**Table 1.4: distribution of NGen and GenN when neither noun nor genitive is marked**

However GenN order is also found fairly often. Examples of both orders follow:

- (23) Caesari cum id nuntiatum esset eos per provinciam nostram iter facere conari, maturat ab urbe proficisci et quam maximis potest itineribus in Galliam ulteriorem contendit et ad Gen<a>vam pervenit ... ubi de *eius adventu* Helvetii certiores facti sunt, legatos ad eum mittunt, nobilissimos civitatis, cuius legationis Nammeius et Verucloetius principem locum obtinebant, qui dicerent sibi esse in animo sine ullo maleficio iter per provinciam facere, propterea quod aliud iter haberent nullum; rogare ut eius voluntate id sibi facere liceat.

When Caesar learned that the Helvetii were attempting to force a passage through our province, he swiftly left the city and hastened by great journeys to Further Gaul, and reached Geneva ... When the Helvetii were informed of *his arrival*, they sent as ambassadors to him the noblest men of the state, in which embassy Nammeius and Verucloetius held the chief place, who said that they wished, in good faith, to make a journey through the province, as they had no other route. They asked if he might allow them this by his own free will.

Caes. *BG.* 1.7.1-3

- (24) Ego in octogenas hirtas oves singulos pastores constitui, Atticus in centenas. *greges ovium* si magni sunt, quos miliarios faciunt quidam, facilius de summa hominum detrahere possis, quam de minoribus ...

My own practice is to have a herdsman to every eighty wool-bearing sheep, while Atticus has one to every hundred. If *flocks of sheep* are very large (and some people have as many as 1000) you can decrease the number of shepherds more easily than you can in smaller flocks ...

Varro *Rust.* 2.10.11

- (25) Itaque si causam quaeris absolutionis, ut iam *prŭw tŭ prōteron* revertar, egestas iudicum fuit et turpitudine. id autem ut accideret commissum est *Hortensi consilio*, qui, dum veritus est ne Fufius ei legi intercederet quae ex senatus consulto ferebatur, non vidit illud, satius esse illum in infamia relinqui ac sordibus quam infirmo iudico committi, sed ductus odio properavit rem deducere in iudicium, cum illum plumbeo gladio iugulatum iri tamen diceret.

Sed iudicum si quaeris quale fuerit, incredibili exitu, sic uti nunc ex eventu ab aliis, a me tamen ex ipso initio *consilium Hortensi* reprehendatur.

If therefore you want to know the reason for the verdict of not guilty (to come back from cart to horse), it was the needy and disreputable quality of the jury, and *that* was due to *Hortensius' miscalculation*. Afraid that Fufius might veto the law proposed under the senatorial decree, he failed to see how much better it would have been to leave Clodius under the stigma of an impending trial than to commit him to an unreliable tribunal. His hatred made him impatient to bring the case to court. He said that a sword of lead would be sharp enough to cut Clodius' throat.

But if you want to know what sort of a trial it was, it was a trial with an incredible outcome; so that others beside myself (who did so from the first) are now criticizing *Hortensius' tactics* after the event.

Cic. *Att.* 1.16.2-3

In example (23) Caesar's arrival as a whole is topical, but neither *eius* nor *adventus* is emphatic or contrastive. The possessive pronoun precedes the noun, though this is probably thanks to the fact that it is the first instance of an anaphoric pronoun referring back to *Caesar* (see Ch. 3 §4.2.1 below). Whilst the genitive is enclosed by the preposition *de* and the head noun in much the same way that an adjective and a noun may also enclose a genitive dependent on the noun (see Adams 1976), this is

unlikely to have had an effect on the order, as the presence of a preposition is associated with an increase in NGen order, rather than the GenN found here. See further Ch. 3 §6.2 below.

On the other hand, example (24) is not contrasting flocks of sheep with any other type of animal, nor with any other way of keeping sheep. In fact, the main discourse topic at this point is the number of herdsmen. Sheep are certainly not a new piece of information, as Cossinius has already established that he was talking about them, and the fact that there are eighty or a hundred under the care of one shepherd makes it obvious that they are in flocks. The NGen order here would seem to have no real motivation behind it. This ties in with (19) above, where both the head noun *iniussu* and the genitive *civitatis* were contrastive, with equal pragmatic value, and were found in the sequence NGen.

Example (25) returns to the pair of genitives *Hortensi consilio* and *consilium Hortensi* mentioned at the start of this section on information structure. *Hortensi consilio* is the first occurrence of the phrase, and introduces Hortensius as a prime mover in the events leading up to the trial. He has not been mentioned previously in the letter, so is an unpredictable element, and as he is the subject of the subsequent subordinate clauses, he evidently is important, more important than the *consilium* he proposes. *Hortensi* here is thus salient, being both highly informative and relevant to the discourse, and so, like most other pragmatically marked constituents, it is preposed, giving the GenN order. On the other hand, the second occurrence of the phrase follows close upon the heels of a description of Hortensius' tactics, so that both the *consilium* and Hortensius are old information and pragmatically unmarked, and the order is the NGen *consilium Hortensi*.

## **1.5 Conclusion**

From both the figures in the tables and the analysis of the examples, I hypothesise that a pragmatically marked constituent will precede a pragmatically unmarked one. When both constituents are pragmatically marked, if all else is equal NGen order occurs most often; however, if one of the constituents also has the function of topic, it will be found in topic position at the start of the clause and so will precede the other, even if their pragmatic status at phrase level is the same.

However, the counter-examples also make it clear that this hypothesis will not explain every instance of word order within the genitive construction. Although it plays a strong part in determining word order, the difference in pragmatic marking does not always result in head noun and dependent genitive being ordered according to their information value and status. There are other factors involved in determining word order within the genitive construction, which may at times coincide with the information structure ordering rules, and at other times override them, leading to the exceptions to the general patterns of pragmatic ordering. It is to these other factors that I shall now turn.

## **2. FUNCTION OF THE GENITIVE**

When considering possible influences on the word order within the genitive construction, it would make sense to examine the function of the genitive. Indeed, it has been considered to have some influence, especially in the case of subjective and objective genitives, see Adams 1976:81, Kühner and Stegmann 1912.II 1:416, Leumann, Hofmann and Szantyr 1965:66f..

When consulting more than one Latin grammar on the functions of the genitive, it soon becomes apparent that there is a bewildering variety of different types of

genitive. De Groot 1956:10-13 lists thirty of the most frequent uses found in the grammars, ranging from the possessive and partitive to the rather more obscure genitives of the temporal starting point and the punishment and the fine. Many of these uses overlap with or are subdivisions of each other. De Groot attempts to resolve this plethora of genitives by classifying them according to their grammatical function, where grammatical function is defined as “semantic categories of syntactic units” (1956:23), coming up with just eight uses of the case in total. However, he leaves a mere three functions for the genitive when it depends upon a noun or substantive – the proper genitive, e.g. *domus Ciceronis* “Cicero’s house”, *pars fluminis* “part of the river”, *nomen amicitiae* “the name friendship”, the genitive of quality, e.g. *puer sedecim annorum* “a boy of sixteen years”, *res magni momenti* “a matter of great importance”, and the genitive of the set of persons, e.g. *centum Romanorum* “a hundred of the Romans”, *maior fratrum* “the elder of the brothers” (1956:30). The first of these categories, the proper genitive, is very broad, as it includes the possessive, partitive, subjective and objective genitives, all of which de Groot considers lexical or referential uses of the genitive. In other words, the classification of a genitive into one or other of these functions is dependent upon the meaning of the words within the genitive construction: “Distinctions between them do not belong to the grammar, but to the vocabulary of a the [sic] given language” (1956:16). Nevertheless, the proper genitive seems a large and rather vague category, whilst the genitive of quality and genitive of set of persons are very much more specific.

Instead I have drawn my functions of the genitive from the most common uses listed in a number of works on Latin grammar, including Kühner and Stegmann 1912, Leumann, Hofmann and Szantyr 1965, *Bradley’s Arnold* 1938, Gildersleeve and

Lodge 1997 (first edition 1867), Bennett 1914, Palmer 1954 and Woodcock 1959. I distinguish six main adnominal functions of the genitive. These are (1) possessive, (2) partitive, (3) defining, (4) quality, (5) subjective and (6) objective. I also have included a seventh, miscellaneous category for those genitives whose functions are difficult to pin down.

## 2.1 Possessive genitive

The possessive genitive has, as Palmer 1954:290 observes, a “self-explanatory” function, namely that of indicating the possessor, e.g. *M. Laecae domum* “Marcus Laeca’s house” *Cat.* 1.8, *Arpinatis aquas* “the waters belonging to an Arpinate man” *Att.* 1.16.10. It also includes family relationships such as *Masinissae nepos* “Masinissa’s grandson” *Sall. Iug.* 65.1 or *Ariovisti uxores* “Ariovistus’ wives” *Caes. BG* 1.53.4, and parts of the body, both real, e.g. *nares equi* “the nostrils of the horse” *Varro Rust.* 2.7.8, and metaphorical, e.g. *in venis atque visceribus rei publicae* “in the veins and entrails of the republic” *Cat.* 1.31 (Bennett 1914:38). I also include certain abstract qualities which, like parts of the body, could be considered examples of inalienable possession, being inherent to the possessor, such as *Catilinae crudelis animus* “Catiline’s cruel mind” *Sall. Cat.* 31.4, but have excluded others which are less constant, e.g. *virtus militum* “the courage of the soldiers” *Sall. Iug.* 52.2, where courage is something that the soldiers do not always possess. Many of these excluded genitives have been assigned to the miscellaneous category in Ch. 3 §2.6 below. I have also excluded from the possessive instances where the genitive corresponds to an attributive adjective, e.g. the genitive *sentinam urbis* “the bilges of the city” *Att.* 1.19.4.18 vs the adjective *urbanam infamiam* “the disrepute of the city” *Cic. Flacc.*

frMed. 7, as these examples are starting to stretch the definition of things that may be possessors.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	72	43.1%	95	56.9%	<b>167</b>
Cic. <i>Att.</i> 1-3	44	41.1%	63	58.9%	<b>107</b>
Cic. <i>Cat.</i> 1-2	21	38.2%	34	61.8%	<b>55</b>
Sall. <i>Cat.</i>	42	46.7%	48	53.3%	<b>90</b>
Sall. <i>Iug.</i>	94	57.3%	70	42.7%	<b>164</b>
Varro <i>Rust.</i>	99	46.3%	115	53.7%	<b>214</b>

**Table 2.1: distribution of NGen and GenN in the possessive genitive**

In my corpus, the possessives occur most often in the order GenN, with the exception of Sall. *Iug.*:

- (26) ... ab exploratoribus certior factus est *Ariovisti copias* a nostris milia passuum quattuor et viginti abesse.

... He was informed by the scouts that *Ariovistus' troops* were twenty-four miles away from ours.

Caes. *BG* 1.41.5

- (27) in iis erat Fulvius, *senatoris filius*, quem retractum ex itinere parens necari iussit.

Amongst them was Fulvius, *a senator's son*, who was brought back and killed as his father ordered.

Sall. *Cat.* 39.5

- (28) ... nihil *horum ora vultusque* moverunt?

... do *the faces and expressions of these men* not move you at all?

Cic. *Cat.* 1.1

Each of the above genitives exemplifies one of the three types that the possessive genitive falls into. So (26) is an example of straightforward possession, with the army belonging to Ariovistus, whilst the genitive in (27) expresses a familial relationship, and the one in (28) indicates inalienable possession, in this case of parts of the body. Note that the genitive in (28) is deictic, as Cicero is referring to the rest of the senators gathered in the temple, and so is likely to be emphatic, and is also a demonstrative pronoun, both of which factors are associated with anteposed genitives; see Ch. 3 §1.2, §4.2.

All these relationships have NGen equivalents:

- (29) Kal. Iun. eunti mihi Antium et *gladiatores M. Metelli* cupide relinquente venit obviam tuus puer.

As I was on my way to Antium on the Kalends of June, eager to leave *M. Metellus' gladiator show* behind me, your boy met me ...

Cic. *Att.* 2.1.1

- (30) Is Adherbalem et Hiempsalem ex sese genuit Jugurthamque *filium Mastanabalis fratris* ... eodem cultu quo liberos suos domi habuit.

He was the father of Adherbal and Hiempsal, and he took in Jugurtha, *the son of his brother Mastanabal* ... and raised him in the same way as his own children in his house.

Sall. *Iug.* 5.7

- (31) tanta erat horum exercitatione celeritas, ut *iubis equorum* sublevati cursum adaequarent.

Their speed was so great, thanks to practice, that, holding onto *the manes of the horses*, they could match paces with them.

Caes. *BG* 1.48.7

These examples correspond with (26)-(28) above, with (29) another example of straightforward possession, where the gladiators are the property of Marcus Metellus, (30) another familial genitive, and (31) an example of inalienable possession, with the possessum once more being a part of the body. All three examples are pragmatically unmarked. Even though GenN order is by and large found more frequently, NGen order is still common in all works, barring Cic. *Cat.*, and it is clear from (29)-(31) that there are no real restrictions on word order imposed by different types of possession. Nonetheless, GenN order predominates in all the works bar Sall. *Iug.*. A possible explanation for this may be found in the fact that Sallust has the highest proportions overall of NGen order (see Table 1 above), suggesting that this was a quirk of his style. It is, though, interesting to note that out of the other authors, the next highest figures for NGen are found in Cicero's private and informal correspondence with Atticus, which perhaps accords with the observation that Sallust's style, if forceful and compressed, is also plain; see Syme 1964:260.

## 2.2 Partitive genitive

The partitive genitive, also called the genitive of the whole, designates the whole of which a part is mentioned, most obviously in phrases like *illa pars epistulae tuae* “that part of your letter” Cic. *Att.* 1.17.5, *urbis partes* “the parts of the city” Cic. *Cat.* 1.9, *partem istam subselliorum* “that part of the bench” Cic. *Cat.* 1.16. It is found after nouns expressing quantity and number, e.g. *multitudo Germanorum* “a host of Germans” Caes. *BG* 1.31.16, *hominum milia CXXX* “one hundred and thirty thousand men” Caes. *BG* 1.26.5, and weight, e.g. *quinis milibus pondo mellis* “five thousand pounds of honey” Varro *Rust.* 3.16.10. The whole does not necessarily have to be something concrete and tangible, e.g. *agri culturae partes* “the divisions of agriculture” Varro *Rust.* 1.5.3. The partitive genitive may also be used with neuter adjectives and pronouns indicating amount, e.g. *nihil causae* “no reason” Sall. *Iug.* 14.7, *tantum offensionis* “such great offence” Cic. *Att.* 1.17.1, *nummulum aliquid* “any money” Cic. *Att.* 1.19.9; and with pronouns and pronominal adjectives such as *neminem meorum* “none of my household” Cic. *Att.* 1.17.4, *omnium nostrum* “all of us” Cic. *Cat.* 1.17 (Bennett 1914:13ff., Leumann, Hofmann and Szantyr, 1965:52f.).

It may be worth mentioning that Latin has another way of expressing the whole of which something is a part, through partitive apposition (Gildersleeve and Lodge 1997:204, Hale and Buck 1903:172). This construction places two nouns in the same case together, one of them indicating the part or quantity, the other the whole, e.g. the manuscript reading *milia passus decem* Nepos *Milt.* 4.2; see Hahn 1953 for a discussion of the relationship between partitive apposition and the partitive genitive.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	92	60.1%	61	39.9%	<b>153</b>
Cic. <i>Att.</i> 1-3	67	72%	26	28%	<b>93</b>
Cic. <i>Cat.</i> 1-2	19	65.5%	10	34.5%	<b>29</b>
Sall. <i>Cat.</i>	30	66.7%	15	33.3%	<b>45</b>
Sall. <i>Iug.</i>	78	63.9%	44	36.1%	<b>122</b>
Varro <i>Rust.</i>	115	59%	80	41%	<b>195</b>

**Table 2.2: distribution of NGen and GenN in the partitive genitive**

Partitive genitives are most often found after the head noun in all of the texts sampled, averaging out at slightly less than two-thirds NGen:

- (32) ... ex hominum milibus amplius XXX, quem *numerum barbarorum* ad castra venisse constabat, plus tertia parte interfecta reliquos perterritos in fugam coniciunt ...

... having killed more than a third part of over thirty thousand men, which appears to have been *the number of barbarians* that came to the camp, they put the rest, utterly terrified, to flight ...

Caes. *BG* 3.6.2

- (33) quidam ipsum triticum conspargunt, cum addant in circiter mille modium *quadrantal amurcae*.

Some farmers sprinkle the wheat, too, with it, using a *quadrantal of amurca* to about a thousand modii.

Varro *Rust.* 1.57.2

- (34) Quae postquam oppidani cognovere, res trepidae, metus ingens, malum improvisum, ad hoc *pars civium* extra moenia in hostium potestate coegere uti deditionem facerent.

When the townsmen realised what had happened, their confusion, their great fear, their unexpected predicament, moreover, the fact that *some of the citizens*, caught outside the walls, were in the enemy's power compelled them to surrender.

Sall. *Iug.* 91.5

- (35) De oliveto oleam, quam manu tangere possis e terra ac scalis, leere oportet potius quam quatere, quod ea quae vapulavit macescit nec dat *tantum olei*.

With regard to the olive harvest: the olives which can be reached from the ground or by ladders should be picked rather than shaken down, because the fruit which has been bruised dries out and does not yield *so much oil*.

Varro *Rust.* 1.55.1

- (36) non enim dubito quin celerius tibi hoc rumor quam *ullius nostrum* litterae nuntiarint.

I'm sure that rumour brought you the news faster than *any of us* could do by letter.

Cic. *Att.* 1.15.1

The genitive in example (32) is governed by a head noun expressing quantity, here the sheer number of the tribesmen attacking the Roman camp. In (33), the head noun refers to the weight of the insecticide. As for example (34), the head noun *pars* “part” is concrete, referring as it does to a specific group of people, whilst in (35) the head noun is the neuter adjective *tantum* “so much”. Finally, in (36), the partitive genitive *nostrum* “us” is governed by the pronominal adjective *ullius* “any one”.

Note that all the preceding examples of partitive genitives are pragmatically unmarked, meaning that their NGen order is determined by some other factor than emphasis and contrast. Aside from their lack of marking, the only other feature they have in common is that they are all partitives, suggesting that NGen may be the default order for partitive genitives.

To test this, examples of GenN partitives are analysed below:

- (37) *nam uti quisque domum aut villam, postremo vas aut vestimentum aliquoius concupiverat, dabat operam ut is in proscriptorum numero esset.*

For whoever desired a house or a villa, even the possessions or garments of another, worked to ensure that he would be in *the numbers of the proscribed*.

Sall. *Cat.* 51.33

- (38) *igitur asinorum gregem qui facere vult bonum, primum videndum ut mares feminasque bona aetate sumat ...*

One who wishes, then, to start a good *herd of asses* should first be careful to get males and females of the proper age ...

Varro *Rust.* 2.6.2

- (39) *... Iugurthae imperat argenti pondo ducenta milia, elephantos omnis, equorum et armorum aliquantum.*

... he ordered Jugurtha to hand over *two hundred thousand pounds of silver*, all his elephants and a considerable number of horses and weapons.

Sall. *Iug.* 62.5

- (40) *cibi pars quod potio et ea iis aqua liquida, unde bibant esse oportet ...*

As drink is *a component of food*, and as this, in the case of bees, is clear water, they should have a place from which to drink ...

Varro *Rust.* 3.16.27

- (41) rogatio Sesti neque *dignitatis satis* habet nec cautionis.

Sestius' bill is not *satisfactory either from the standpoint of dignity* or from that of security.

Cic. *Att.* 3.20.3

- (42) potestne tibi haec lux, Catilina, aut huius caeli spiritus esse iucundus, cum scias esse *horum neminem* qui nesciat te pridie Kalendas Ianuarias Lepido et Tullo consulibus stetisse in comitio cum telo ...

Can this light, Catiline, or the breath of this atmosphere be joyful to you, when you know that *of these men* there is *none* who does not know that on the last day of the year, when Lepidus and Tullus were consuls, you stood in the assembly bearing a weapon ...

Cic. *Cat.* 1.15

Examples (37) and (38) are both instances of partitive genitives where the genitive refers to the set of things, be it donkeys or the victims of the proscription, of which the head noun is a part. The genitive in (37) is emphatic, highlighting the fact that even the innocent could be added to the dreaded proscription list, whilst in (38) it is a topical genitive, which both marks the change of conversation from cattle to donkeys as well as clearly sets out the type of farm animal that will be the next subject of discussion. Note that example (37) corresponds to (32), as both are governed by the head noun *numerus* "number", the main difference being that in (37) the genitive itself is emphatic, and, like most other emphatic genitives, it precedes the head noun, see Ch. 3 §1.2 above.

In (39) the head noun refers to the weight of the silver. Here the things demanded from Jugurtha by Metellus are all preposed before the amount: silver, elephants, horses and weapons. It is not the amounts of these things that Sallust is stressing, but rather the things themselves; how much or many of them is of secondary importance. The anteposed genitive in (40) is topical, as Merula is currently discussing food, *cibum*, for the bees, listing the different plants from which they gather nectar, and wishes to include drink under this umbrella term. The genitive in (41) depends on a neuter adjective, *satis*, and is contrasted with *cautionis*, which would explain why it

precedes the head noun. Finally, example (42), the partitive genitive with a pronominal adjective, has a deictic genitive, as Cicero is referring to the assembled senators. The genitive *horum* is thus emphatic, and precedes its head *neminem*. Note also that pronominal genitives most often are found before their head noun; see Ch. 3 §4.2 below.

It would thus appear that most examples of GenN for the partitive can be explained in terms of other features, particularly pragmatic ones. This being so, the more frequent order NGen would also be the basic one for the partitive genitive.

### **2.3 Defining genitive**

The defining genitive, as its name suggests, defines or explains the noun on which it depends, acting in a similar fashion to a noun in apposition, hence the name appositive genitive (Gildersleeve and Lodge 1997:231). This genitive may refer to a specific member of a class or set of things, e.g. *genus iudici* “the kind of jury” Cic. *Att.* 1.16.6, or may simply give more information about the head noun, which may be a generic word, e.g. *nomen imperi* “the name of empire” Sall. *Cat.* 2.1, but need not always be so, e.g. *acervi armorum* “a heap of weapons”, “a heap consisting of weapons” Caes. *BG* 2.32.4, *belli renovandi legionisque opprimendae consilium* “a plan for renewing the war and overwhelming the legions” Caes. *BG* 3.2.2, just as a noun in apposition describes the noun it modifies (Woodcock 1959:53, Gildersleeve and Lodge 1997:231). I have also considered it to be the genitive in expressions of number, e.g. *ad numerum quattuor milium* “to the number of four thousand” Caes. *BG* 1.15.1. These differ from the partitive genitive in that the quantity is not the head noun but the genitive itself.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	18	64.3%	10	35.7%	<b>28</b>
Cic. <i>Att.</i> 1-3	10	66.7%	5	33.3%	<b>15</b>
Cic. <i>Cat.</i> 1-2	5	38.5%	8	61.5%	<b>13</b>
Sall. <i>Cat.</i>	13	65%	7	35%	<b>20</b>
Sall. <i>Jug.</i>	27	84.4%	5	15.6%	<b>32</b>
Varro <i>Rust.</i>	27	65.9%	14	34.1%	<b>41</b>

**Table 2.3: distribution of NGen and GenN in the defining genitive**

There are relatively few examples of this genitive in each author – there are only thirteen instances in Cic. *Cat.* 1-2, which has the least tokens of all. Overall, the order NGen is found more frequently than GenN, except in Cic. *Cat.* 1-2, where the genitive precedes the noun more often, though this anomalous result may be due to the limited number of examples.

Since NGen is the more numerous of the two orders, I shall start with it. Examples are given below:

- (43) ... quod tantum valet regio ac *genus terrae*, ut ex eodem semine aliubi cum decimo redeat, aliubi cum quinto decimo, ut in Etruria locis aliquot.

... for the locality and *the type of soil* is so important that the same seed in one district yields tenfold and in another fifteen-fold – as at some places in Etruria.

Varro *Rust.* 1.44.1

- (44) atque ego credo fore qui, quia decrevi procul a re publica aetatem agere, tanto tamque utili labori meo *nomen inertiae* inponant ...

And I believe there will be those who, since I have decided to spend my life far from affairs of state, will give this great and useful work of mine *the name idleness* ...

Sall. *Jug.* 4.3

- (45) interea Manlius in Etruria plebem sollicitare, egestate simul ac *dolore iniuriae* novarum rerum cupidam ...

Meanwhile Manlius in Etruria was rousing the common people, who already were eager for revolution thanks to their poverty and *resentment of their wrongs* ...

Sall. *Cat.* 28.4

- (46) eorum, qui domum redierunt, censu habito, ut Caesar imperaverat, repertus est *numerus milium C et X*.

When a census was held at Caesar's command, *the number* of those who returned home, was found to be *one hundred and ten thousand*.

Caes. *BG* 1.29.3

Example (43) is an instance of *genus* + genitive, where the defining genitive is a specific member of some class or category, in this case a type of soil. The genitives in examples (44) and (45) give more information about the head noun, with *nomen* “name” in (44) being a generic noun – *nomen* + genitive is an idiomatic construction, where the noun has lost much of the original force of its meaning – whilst the meaning of *dolor* “resentment”, “grief” is still important to the sense of the expression *dolor iniuriae* in (45). Here, the genitive *iniuriae* “injury”, “wrong” clarifies the reason for the Etrurians’ resentment. The genitive construction in example (46) is a numerical expression, where the number of the Helvetii who survived their disastrous attempt at migration contrasts with the grand total of three hundred and sixty-eight thousand Helvetii and their allies that had set out, emphasising the scale of their losses and of the magnitude of the Roman victory.

Examples of the less common GenN order are given below:

- (47) Nec minus oppidi quoque nomen Thebae indicat antiquiorem esse agrum, quod *ab agri genere*, non a conditore nomen ei impositum.

The name of Thebes, too, no less clearly shows that the country is more ancient, in that the name given it comes *from a type of land*, and not from the name of its founder.

Varro *Rust.* 3.1.6

- (48) vide, inquit Atticus, ne te fallat et novenae istae partes non exeant *extra pecoris minoris ac maioris nomen*.

“Don’t get confused,” said Atticus, “and let your ninefold division get away from *the matter of smaller and larger animals*.”

Varro *Rust.* 2.1.25

- (49) an, cum bello vastabitur Italia, vexabuntur urbes, tecta ardebunt, tum te non existimas *invidiae incendio* conflagraturum?

Or, when Italy is laid waste by war, the cities in turmoil, houses aflame, do you not think that you will be consumed by *a blaze of hatred* then?

Cic. *Cat.* 1.29

(50) nunc esse in Gallia *ad C et XX milium numerum*.

Now the Germans in Gaul were approaching *a number of one hundred and twenty thousand*.

Caes. *BG* 1.31.5

Example (47) is to be compared with (43) above, as both are instances of *genus* + genitive, with the genitive referring to a particular member of some set of things. In (47), however, there is a contrast between *ager* “land” and *conditor* “founder” – it might have been expected that the city would have been named after the man who founded it, but instead it takes its name from a topographical feature. As seen in §1 above, emphatic or contrastive constituents are more likely to precede unemphatic ones, and so the genitive *agri* precedes its head noun.

(48) is an example of a genitive modifying a generic word, again *nomen*, as in (44) above. Here too the genitive is contrastive. Atticus opposes *pecoris minoris ac maioris* “smaller and larger animals”, to which Scrofa’s ninefold division of animal husbandry can be applied, to *mulis et pastoribus* “mules and shepherds” in the next sentence, where he feels that the case for the same ninefold division is rather weaker. Further, at 2.1.12, Scrofa has set up three different types of livestock for discussion, these being the small animals, comprising sheep, goats and pigs, the larger animals, made up of cattle, donkeys and horses, and a third division *in pecuaria quae non parantur, ut ex iis capiatur fructus, sed propter eam aut ex ea sunt, muli canes pastores* “of animals which are not kept for the profit they themselves bring, but on account of the above groups, or as a result of them, mules, dogs and shepherds”. So *pecoris minoris ac maioris* has already been established as a contrasting topic of discussion from the mules and the shepherds, and, in accordance with most other contrastive genitives, it precedes the head noun.

In (49) the head noun is not generic, but the genitive gives more information about it. It is not merely any blaze, but a blaze comprised of hatred and unpopularity. As

discussed in example (20) in Ch. 3 §1.3 above, *invidia* “hatred”, “unpopularity” is topical, and as such it is found in the first position of its subordinate clause, and precedes its head noun.

Finally, the numerical expression in (50) is also contrastive, as Caesar wishes to show the exponential increase in the number of Germans in Gaul from fifteen thousand to one hundred and twenty thousand, making it quite clear that they are a legitimate threat to the safety and stability of the area. See also the discussion of example (14) in Ch. 3 §1.2 above.

So it would seem that the order of the defining genitive is NGen. Why, then, is the reverse order found most often in Cic *Cat.* 1-2? One possible reason is that of the eight instances of GenN defining genitives, seven of them are enclosed between the head noun and a modifying adjective, e.g. *reliqua coniuratorum manus* “the rest of the band of the conspirators” Cic. *Cat.* 1.12, *per omnes honorum gradus* “through every step of honour” Cic. *Cat.* 1.28, *ad hoc incredibile sceleris foedus* “to this incredible pact of crime” Cic. *Cat.* 2.8. Adams 1976:80 observes that in such circumstances, the position of the genitive will be determined by the adjective, i.e. if the adjective is of a sort that frequently precedes the noun, such as demonstrative adjectives or adjectives expressing size or quantity, then the genitive will itself precede the noun. I have also noticed that in my corpus, genitives enclosed by adjectives are often anteposed even when the adjective is not a quantifier or a demonstrative, and in Ch. 3 §2.4 below I suggest, following Elerick 1994, that under certain circumstances the order adjective + genitive + noun may be a natural result of the typological principle of harmony.

There are other possible reasons for the unusual preponderance of GenN order in Cic. *Cat.* 1-2. One of the genitives, *invidiae incendio* “a blaze of hatred” Cic. *Cat.*

1.29 is topical, whilst another, *horum hominum species* “these men’s sort” Cic. *Cat.* 2.18, is focal. Regarding the first, *invidiae incendio*, as mentioned in the discussion of example (20) in Ch. 3 §1.3 above, *invidia* is Cicero’s main worry at *Cat.* 1.28-29 – it is his fear of unpopularity and resentment that has kept him from acting, but if he does not act, Rome will fall and his indecisiveness will earn him the very *invidia* he has been trying to avoid. As for *horum hominum species*, Cicero has been discussing the sorts of followers Catiline has attracted, and at 2.18 he turns to the debtors, to whom *horum hominum species* refers. The entire genitive construction is clearly topical, but of its constituents, the genitive phrase *horum hominum* is more important than *species*. It has already been established that Cicero is discussing types of people, making *species* old information. What is new and relevant here, and consequently emphatic, is the people themselves, and so *horum hominum* is found preceding its head.

Yet another of the GenN examples, *tuorum comitum magna et perniciose sentina rei publicae* “the great and noxious dregs of the republic composed of your companions” Cic. *Cat.* 1.12, contains a metonymic genitive. As Catiline’s companions are the bilgewater of the state, the genitive and the head noun have the same reference, and so the genitive precedes the noun; see the discussion of (12) in Ch. 3 §1.2 above. In addition to the metonymic genitive, the head noun phrase itself is long and complex, with two adjectives and a dependent genitive modifying *sentina*. As a result, it meets Hawkins’ criteria for heaviness and in accordance with his Heaviness Principle, it is found at the end of the genitive construction (1983:90f.). In fact, *magna et perniciose sentina rei publicae* is so heavy it is found not just after its dependent genitive but at the end of the entire sentence. Hardly surprising that the dependent genitive is anteposed!

Every single one of the preposed defining genitives in Cic. *Cat.* 1-2 can be explained in terms of information structure, weight, or typology. On the other hand, for most of the defining genitives that follow their head nouns, there is no apparent motivation, except in the case of *gravissimo iudicio taciturnitatis* “the weighty judgement of silence” Cic. *Cat.* 1.16, which is in a chiasmic relationship with *voctis contumelia* “the reproach of voices”, with the two genitives *taciturnitas* “silence” and *vox* “voice” clearly contrasting with each other. The rhetorical pattern takes precedence over the usual rules of information structure, resulting in NGen order.

Thanks to the analysis of the examples, it is clear that the increased proportion of defining genitives found before their head noun in Cic. *Cat.* 1-2 is the result of interaction with other factors, and that NGen remains the basic order for the defining genitive in all six works included in my corpus.

#### **2.4 Genitive of quality**

Related to the defining genitive is the genitive of quality, also called the genitive of description. It describes the noun on which it depends by an epithet denoting either a specific quality, e.g. *homo regiae superbiae* “a man of kingly arrogance” Sall. *Iug.* 64.5, or size, e.g. *in vinea iugerum C* “in a vineyard of one hundred iugera” Varro *Rust.* 1.19.3, or measure, e.g. *triduique viam* “a journey of three days” Caes. *BG* 1.38.1. In the Classical period, the genitive is invariably modified by an adjective, e.g. *eius modi senatus consultum* “a senatorial decree of this sort” Cic. *Cat.* 1.4, *unius ambulationis sermone* “one walk’s speech” Cic. *Att.* 1.18.1 (Woodcock 1959:53, Gildersleeve and Lodge 1997:233, *Bradley’s Arnold* 1938:171).

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	8	42.1%	11	57.9%	<b>19</b>
Cic. <i>Att.</i> 1-3	9	45%	11	55%	<b>20</b>
Cic. <i>Cat.</i> 1-2	0	0%	4	100%	<b>4</b>
Sall. <i>Cat.</i>	8	47.1%	9	52.9%	<b>17</b>
Sall. <i>Iug.</i>	15	60%	10	40%	<b>25</b>
Varro <i>Rust.</i>	7	36.8%	12	63.2%	<b>19</b>

**Table 2.4: distribution of NGen and GenN in the genitive of quality**

The genitive of quality occurs most frequently in the order GenN in my corpus, except in Sall. *Iug.*, though it should be noted that I have very few examples of the genitive of quality, which does make the reliability of the figures a little doubtful. On the other hand, I do have more examples of the genitive of quality for Sallust than for anyone else, and NGen is the order found most often in his work. However, Sallust does have in general higher proportions of NGen order than any of the other authors (see Ch. 3 §2.1 above), so it may be that his personal preference is skewing the order.

Examples of GenN order follow:

- (51) *tum magni ponderis saxa et praecutas trabes in muro conlocabant.*

Then they set *rocks of great weight* and sharpened stakes upon the wall.

Caes. *BG* 2.29.3

- (52) *non se existimare Romanos sine ope divina bellum gerere, qui tantae altitudinis machinationes tanta celeritate promovere et ex propinquitate pugnare possent ...*

They did not think that the Romans could have fought without divine aid, since they were able to move *machines of such a height* forward so fast and fight at close quarters ...

Caes. *BG* 2.31.2

- (53) *... equites Mauri nuntiant Iugurtham circiter duum milium intervallo ante eos consedissee.*

... the Moorish horsemen announced that Jugurtha was encamped at *a distance of about two miles* ahead of them.

Sall. *Iug.* 106.5

- (54) quae quidem tamen aliquid habebant solaci ante quam eo venisti a Pompeio:  
'nunc Hortensium adlice et *eius modi viros*.'

But it still offered some consolation until you got to the point where, after mention of Pompey, you go on: 'And now draw in Hortensius and *personages of that sort*.'

Cic. Att. 3.9.2

Example (51) is a straightforward instance of the genitive of quality, since the genitive *magni ponderis* "of great weight" describes an inherent feature of the rocks. The genitive in example (52) expresses the size of the tower, and is clearly emphatic: the Atuatucae are not so much surprised that the Romans can move the towers, but that they can move towers of such a size. At BG 2.30.3-4 they mock the Romans for being so small (*tantulae staturae* "of such little stature") and taunt them that they will never be able to move these tall towers (*tanti oneris turrim in muro ... conlocare*); see example (56) below. It is evident from the preceding passage that the size of the towers is what is stressed here.

In (53) the genitive is a measure of distance, and in (54) a generic genitive of quality. By generic I mean that it uses one of the oft-occurring expressions such as *eius* or *huius modi*. These do not mean much by themselves, and gain most of their meaning from their context, since they refer to something within the context. Note that *eius modi* is an anaphoric expression, and refers to men with political clout and influence on a par with Hortensius.

Note, however, that in each of these four examples, the head noun and an adjective enclose the genitive. It may be possible that the genitive is preposed because of this. See further below.

Turning now to the reverse NGen order, examples follow:

- (55) erat eodem tempore Cn. Piso, *adulescens nobilis, summae audaciae*, egens factiosus, quem ad perturbendam rem publicam inopia atque mali mores stimulabant.

There was at that same time one Gnaeus Piso, *a young nobleman of utmost audacity*, impoverished and inclined to sedition, whose neediness and bad habits drove him to agitate against the state.

Sall. *Cat.* 18.4

- (56) quibusnam manibus aut quibus viribus praesertim *homines tantulae staturae* – nam plerumque omnibus Gallis prae magnitudine corporum suorum brevitatis nostra contemptui est – tanti oneris turrim in muro sese conlocare confiderent?

With whose hands or strength did *such short men* – for our lack of height is despised by most of the Gauls on account of their own great stature – believe that they would move such a massive tower to their walls?

Caes. *BG* 2.30.4

- (57) si sit C iugerum, habere oportere vasa torcularia instructa trina, *dolia cum operculis culleorum octingentorum*, acinaria viginti, frumentaria viginti, item eius modi alia.

... if [the vineyard is] 100 iugera it should have three complete pressing equipments, *vats and covers to hold 800 cullei*, twenty grape hampers, and other like implements.

Varro *Rust.* 1.22.4

- (58) Clodium praesentem fregi in senatu cum oratione perpetua plenissima gravitatis tum *altercatione eius modi* ... Surgit pulchellus puer, obicit mihi ad Baias fuisse. falsum, sed tamen ‘quid? hoc simile est’ inquam ‘quasi in operto dicas fuisse?’

Clodius I quashed face to face in the Senate in a set speech of impressive solemnity and also in *an exchange of amenities which went somewhat as follows* [an exchange of this sort] ... Our little Beauty gets on his feet and accuses me of having been at Baiae – not true, but anyhow, “Well,” I reply, “is that like saying I intruded on the Mysteries?”

Cic. *Att.* 1.16.8-10

The genitive in example (55), like (51) above, describes the qualities of the head noun, in this case *adulescens*, “young man”, which is in apposition with Piso. Sallust introduces Piso here in order to briefly discuss the unsuccessful conspiracy he led, making him important and relevant new information as a result. The appositional phrase *adulescens nobilis* “young nobleman” gives more information about who this particular Piso is, rather than describing his character and other qualities, and so follows Piso’s name directly. As for his rashness, poverty and rebellious tendencies, although these explain why he acted the way he did, they are not as important as Piso

himself, and so *Piso* and the appositional phrase explaining who he is precedes the genitive of quality as well as the rest of the attributes.

In (56) we find another example of the genitive expressing size, in this case, a lack of it. The genitive is contrastive, as the Romans' short stature is compared both with the massive towers that they are building as well as with the Gauls' own height, but it follows the head noun. However, the mention of the height difference between the Gauls and the Romans is Caesar's own interjection into a taunt hurled by the besieged *Atuatuci*, and once it is removed, *homines tantulae staturae* "such short men" and *tanti oneris turrim* "such a massive tower" stand side by side. Thanks to the chiasmic ordering of the phrases, the postposed genitive *tantulae staturae* is followed immediately by *tanti oneris*, and the contrast between small and large is reinforced.

The genitive in (57) gives an exact measurement, this time of the amount of wine that can be stored in the vats. Here both head noun and genitive are salient, as they are part of a list of equipment and the quantities of each item. The equal pragmatic weight of the head noun and the genitive might be a reason behind the NGen order, though note as well that *culleorum* is enclosed by the head noun *dolia* and the adjective *octingentorum*. As mentioned previously, there is a tendency for genitives to be enclosed by the head noun and an adjective modifying either the head noun or the genitive itself (*Bradley's Arnold* 1938:19, *Adams* 1976:80, *Bauer* 1995:57), with the adjective determining whether the modifiers precede or follow their head noun. As *octingentorum* follows *culleorum*, which it modifies, the preference for enclosed genitives results in the genitive itself following the head noun *dolia*.

Finally (58) has the generic genitive *eius modi*. It is immediately evident that *eius modi* is cataphoric, referring to what will follow, rather than what has gone before, and so it stands closer to Cicero's description of the meeting, his speech and the

subsequent debate with Clodius. Also, *altercatione eius modi* stands in antithesis with *oratione perpetua plenissima gravitatis*, as signalled by the conjunctions *cum ... tum*. It is not the attributes of the speech and debate that are contrasted, but the speech and the argument themselves, and once again the pragmatically more salient nouns precede their modifiers.

So the above examples show that in the genitive of quality, both NGen and GenN orders can be explained in terms of other potential factors. Which then is the basic order? Although Sall. *Iug.* has the highest number of tokens of the construction and is thus more likely to present reliable results, all other works show GenN more often. Clearly, statistics are not of much help in determining the order here. In fact, there are other, linguistic (as opposed to numeric) grounds for considering GenN to be the usual order for this function of the genitive.

As mentioned previously, Adams 1976:80 observes that when both a genitive and an adjective depend on the same noun, the genitive will be enclosed by the noun and the adjective, giving the orders AdjGenN, or NGenAdj. Whether the modifiers are preposed or postposed is determined by the adjective. Bauer 1995:57 points out that the same ordering patterns are present when the adjective modifies not the head noun but the genitive itself. The genitive of quality will always take an adjective, and so will be enclosed. In the examples of the genitive of quality in my corpus, most of the modifiers of the genitive are either pronouns, numerals, or adjectives expressing size, e.g. *eius modi senatus consultum* “a senatorial decree of this sort” Cic. *Cat.* 1.4, *huiusce modi orationem* “this sort of speech” Sall. *Cat.* 52.1, *unius ambulationis sermone* “one walk’s speech” Cic. *Att.* 1.18.1. De Sutter 1986 calls these extensional modifiers, which can be applied to many different types of nouns and contribute to identifying the reference of the head noun, rather than indicating its inherent

properties or qualities (Seiler 1978:310), and shows that they have a “strong tendency” to precede the head noun (de Sutter 1986:172). Since there is this tendency for the genitive to be enclosed, when the modifying adjective precedes the genitive, anteposition of the genitive and the resulting GenN order are to be expected.

However, as mentioned in Ch. 3 §2.3 above, not all of the preposed enclosed genitives are preceded by extensional adjectives. The theory that the type of adjective determines the position of the enclosed genitive is not sufficient to explain these other anteposed enclosed genitives.

An explanation as to why enclosed genitives tend to precede their governing nouns is given by Elerick 1994, who posits the principle of Harmonic Phenotypic Linearization, discussed in Ch. 1 above. This principle predicts that in a language with variant word order, like Latin, typologically harmonic orders are more likely to be expressed than non-harmonic orders. The notion of typological harmony is derived from Greenberg’s 1963 word order universals, and refers to the distribution of particular combinations of word order patterns across languages. According to Universal 5 (Greenberg 1963:88), the combination of the orders adjective + noun and genitive + noun is harmonic, so when a combination of adjective, head noun and genitive occur in the same construction, the principle of Harmonic Phenotypic Linearization predicts that one of the two harmonic sequences adjective + genitive + noun and noun + genitive + adjective is most likely to occur – provided that the adjective is a modifier of the genitive rather than the head noun, as in the genitive of quality.

This prediction is confirmed by the frequency distribution for the genitive of quality in all authors except Sallust, as the harmonic sequence adjective + genitive + noun is found in the three older authors Varro, Cicero and Caesar. In Sallust, where NGen is

the most frequent order, the harmonic pattern predicted is noun + genitive + adjective, but the most common order is noun + adjective + genitive. Most of these genitives of quality are the formulaic *huiusce modi*, but even when these are removed, the harmonic pattern does not predominate. For Sallust it seems that NGen may be the basic order underpinning the genitive construction, whilst for the other authors, the order in the genitive of quality is most definitely GenN. This inconsistency may fall in line with Ledgeway's observation that "harmonically inconsistent orders" provide evidence of an "ongoing, yet well-advanced" shift in Latin from head-final to head-initial word order (2012:202), with the older authors still preserving head-final order in the genitive of quality, while Sallust uses the newer head-initial order.

## 2.5 Subjective and objective genitive

The subjective and objective genitives are those genitives which depend on a noun which contains the idea of activity, or some verbal state of affairs. The head noun is usually abstract, e.g. *memoria* "memory", *adventus* "arrival", *amor* "love", *spes* "hope". Were this noun to be converted into a verb, a subjective genitive would, as its name implies, become the subject of an active verb, e.g. *consilium Hortensi* "Hortensius' plan" Cic. *Att.* 1.16.3, *Iugurthae exitium* "Jugurtha's death" Sall. *Iug.* 70.5, whilst the objective genitive would become the object of the verb e.g. *auctorem consiliorum meorum* "the author of my counsels" Cic. *Att.* 1.16.1, *earum rerum memoria* "the memory of those things" Caes. *BG* 2.4.3. Note that the objective genitive "often depends upon a noun whose verbal cognate takes, not the accusative, but the dative or ablative, or some prepositional construction" (*Bradley's Arnold* 1938:169).

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	43	38.1%	70	61.9%	<b>113</b>
Cic. <i>Att.</i> 1-3	66	44%	84	56%	<b>150</b>
Cic. <i>Cat.</i> 1-2	25	51%	24	49%	<b>49</b>
Sall. <i>Cat.</i>	30	50%	30	50%	<b>60</b>
Sall. <i>Iug.</i>	76	56.7%	58	43.3%	<b>134</b>
Varro <i>Rust.</i>	28	32.6%	58	67.4%	<b>86</b>

**Table 2.5.1: distribution of NGen and GenN in the subjective genitive**

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	48	60.8%	31	39.2%	<b>79</b>
Cic. <i>Att.</i> 1-3	79	61.2%	50	38.8%	<b>129</b>
Cic. <i>Cat.</i> 1-2	31	58.5%	22	41.5%	<b>53</b>
Sall. <i>Cat.</i>	30	54.5%	25	45.5%	<b>55</b>
Sall. <i>Iug.</i>	79	56.8%	60	43.2%	<b>139</b>
Varro <i>Rust.</i>	43	59.7%	29	40.3%	<b>72</b>

**Table 2.5.2: distribution of NGen and GenN in the objective genitive**

In my corpus, the subjective genitive is found most often GenN (except for Cic. *Cat.* 1-2 and Sall. *Cat.* and *Iug.*), whilst NGen occurs more frequently for the objective genitive across the board. Considering that the head noun for both subjective and objective genitives has some verbal force, this may support Adams' suggestion that the orders Gen<sub>subj</sub>N and NGen<sub>obj</sub> reflect sentence-level word order patterns SV and VO (1976:81f.). Since the basic order for the genitive construction is NGen, subjective genitives may precede the head noun especially in instances where an objective genitive also depends on the same noun (Adams 1976:81). In my corpus, I have found four examples of a subjective and an objective genitive depending on the same noun. These are *pro veteribus Helvetiorum<sub>subj</sub> iniuriis populi Romani<sub>obj</sub>* “for the old injuries done by the Helvetii<sub>subj</sub> to the Roman people<sub>obj</sub>” Caes. *BG* 1.30.2, *ab hac hominum<sub>subj</sub> satietate nostri<sub>obj</sub>* “from people’s<sub>subj</sub> weariness with us<sub>obj</sub>” Cic. *Att.* 2.5.1, *unius<sub>subj</sub> procuratio oliveti<sub>obj</sub>* “the one’s<sub>subj</sub> (Minerva’s) protection of the olive orchard<sub>obj</sub>” Varro *Rust.* 1.1.6, and *cuius<sub>subj</sub> procuratio huius templi<sub>obj</sub>* “whose<sub>subj</sub> care of this temple<sub>obj</sub>” Varro *Rust.* 1.2.2. In all four, the subjective genitive precedes the

head noun and the objective genitive follows. Note too *alterius<sub>subj</sub> hortorum<sub>obj</sub>* “the other’s<sub>subj</sub> (Venus’) of the garden<sub>obj</sub>” Varro *Rust.* 1.1.6, which repeats the subjective-first order, despite ellipsis of the head noun *procuratio*. The Gen<sub>subj</sub>NGen<sub>obj</sub> order may possibly support the argument for SV and VO word order, though any conclusions about sentence-level word order patterns drawn from just four examples of genitive and noun ordering can only be tentative.

### 2.5.1 Subjective genitive

The subjective genitive is most often found GenN:

- (59) ... cum pro se quisque in conspectu imperatoris etiam in extremis suis rebus operam navare cuperet, paulum *hostium impetus* tardatus est.

... since each of his own accord desired to perform some great deed in the sight of the general, no matter how dire his situation, *the enemy’s attack* was held up for a little.

Caes. *BG* 2.25.3

- (60) sed haec et praesidi apud pudorem Pulchelli non habet satis et *a fratris adventu* me ablegat ...

But the protection offered by the latter, resting on Little Beauty’s sense of decency, is insufficient, and it takes me away just when *my brother is coming home*.

Cic. *Att.* 2.18.3

- (61) Ita utrumque per se indigens alterum *alterius auxilio* eget.

So each by itself is insufficient and needs *the other’s help*.

Sall. *Cat.* 1.7

- (62) ... subtilius descriptis temporibus observanda quaedam sunt, eaque in partes VIII dividuntur: primum a favonio ad aequinoctium vernalis dies XLV, hinc *ad vergiliarum exortum* dies XLIV, ab hoc ad solstitium dies XLIX ...

But in the more exact divisions certain things are to be taken into account, which cause an eightfold division: the first from the rising of the west wind to the vernal equinox, 45 days, thence *to the rising of the Pleiades* 44 days, thence to the solstice 48 days ...

Varro *Rust.* 1.28.2

The verbal force of the head noun in this particular genitive construction can be seen in these examples. In (59) the genitive construction *hostium impetus* “the

enemy’s attack” is equivalent to the phrase *hostes impetunt* “the enemy attacks”, and in (60) *fratris adventu* “my brother’s arrival” corresponds to *frater advenit* “my brother arrives”, or, as Shackleton Bailey puts it, “my brother is coming”, the translation clearly demonstrating the subject-verb relationship between genitive and head noun. Examples (61) and (62) have inanimate genitives depending on the head noun, as opposed to the animate human nouns *hostes* “enemy” and *frater* “brother”, but they are nonetheless in the same subject-verb relationship. Note, though, that in (61) *alterius* “of the other” is contrasted with *alterum*, and that in (62) *vergiliarum* “of the Pleiades” is emphatic, as it is specifically these stars that the farmer is awaiting.

The subjective genitive may also be found NGen, and in Cic. *Cat.* 1-2 and Sallust this is its most frequent order:

- (63) ... aliis *mortem parentum* non modo impellendo verum etiam adiuvando pollicebatur.

... to others he promised *the death of their parents*, not only by inciting them but even by helping.

Cic. *Cat.* 2.8

- (64) At reges, ubi *de adventu Mari* cognoverunt, divorsi in locos difficilis abeunt.

But the kings, when they learned *of Marius’ arrival*, separated and withdrew to unassailable locations.

Sall. *Iug.* 87.4

- (65) solum enim hominis *exitium herbae* et semitae fundamentum.

For the foot of man is *death to grass*, and marks the beginning of a path.

Varro *Rust.* 1.47.1

- (66) Aquitania a Garumna flumine ad Pyranaeos montes et eam partem Oceani, quae est ad Hispaniam, pertinet, spectat *inter occasum solis* et septentriones.

Aquitania reaches from the Garonne to the Pyrenees and that part of the ocean which is beside Spain, and it lies between west [*the setting of the sun*] and north.

Caes. *BG* 1.1.7

Examples (63) and (64) are, like (59) and (60) above, instances of animate human genitives depending on the verbal head noun. There are no obvious pragmatic explanations for the GenN and NGen orders seen in these four examples, but in the

case of (59) and (63) there is a difference in the thematic rôles assigned to the genitives. In (59) *hostium* is an agent, since the action of attacking is one that they undertake of their own volition. In (63) on the other hand, the parents are dying, which is not a voluntary action, but rather an experience that happens to its subject, regardless of volition. Similarly, in (65) the grass withers, and in (66) the sun sets, actions not usually regarded as voluntary, especially in the case of the inanimate grass and sun. Note that in (62) above, which also contains an inanimate genitive experiencing an action, the GenN order *vergiliarum exortum* may be the result of emphasis fronting an inanimate genitive that would otherwise follow its head noun. Also, the noun phrases in (64) and (66) are governed by prepositions, a factor which is associated with increased NGen order; see further Ch. 3 §6.2 below.

It would seem, then, that order in the subjective genitive is influenced partly by the fact that it corresponds to a subject-verb sequence. Thematic rôles are assigned to the arguments of verbs – even if they are not assigned between two nouns, the parallel is still there for the subjective genitive. Genitives which would be assigned agent rôle precede more often, whilst those which would be assigned the rôle of experiencer may be found after their head noun. Note, though, that NGen occurs more often overall in Sallust's works – in his case, personal preference may be playing a part.

### 2.5.2 Objective genitive

The objective genitive is most frequently found NGen:

- (67) sed plebes incredibile memoratu est quam intenta fuerit quantaque vi rogationem iusserit, magis *odio nobilitatis*, quoi mala illa parabantur, quam cura rei publicae ...

But the common people passed the bill with an eagerness and enthusiasm incredible to relate, more out of *hatred for the nobility*, by whom they had been ill treated, than out of concern for the state ...

Sall. *Iug.* 40.3

- (68) *in suppliciis deorum* magnifici, domi parci, in amicos fideles erant.

They were lavish in their *worship of the gods*, frugal at home, faithful to their friends.

Sall. *Cat.* 9.2

- (69) ... *cupiditate regni* adductus novis rebus studebat ...

... thanks to his *desire for a kingdom* he was eager for revolution ...

Caes. *BG.* 1.9.3

- (70) *contra herba in pratis ad spem faenisicae* nata non modo non evellenda in nutricatu, sed etiam non calcanda.

On the other hand, growth that springs up on a meadow *for haying* must not only not be plucked while it is maturing, but also must not be trampled.

Varro *Rust.* 1.47.1

The objective genitive stands in the same relationship to its head noun as an object would to its verb. So in example (67) the genitive construction *odio nobilitatis* “hatred for the nobility” corresponds to *nobilitatem oderunt* “they hate the nobility”, where the objective genitive *nobilitatis* has now become the accusative *nobilitatem*. Similarly in examples (69) and (70) the objective genitives *regni* and *faenisicae* would be in the accusative if their head nouns became verbs. However, this genitive does not always correspond to an accusative object, but sometimes a dative or genitive or ablative. In example (68) *suppliciis deorum* “worship of the gods” corresponds to *dis supplicant* “they worship the gods”, where *dis* is in the dative. As with the subjective genitive, prepositions do not appear to have any effect on the word order in this construction.

The objective genitive can also be found GenN:

- (71) *nam plane ita putaverunt, cum religio, cum pudicitia, cum iudiciorum fides, cum senatus auctoritas concidisset, fore ut aperte victrix nequitia ac libido poenas ab optimo quoque peteret ...*

They quite supposed that with the collapse of religion and good morals, of *the integrity of the courts* and the authority of the Senate openly triumphant villainy and vice would wreak vengeance on the best in our society ...

Cic. *Att.* 1.16.7

- (72) nonnulli ficta et haec et multa praeterea existumabant ab iis qui *Ciceronis invidiam*, quae postea orta est, leniri credebant atrocitate sceleris eorum qui poenas dederant.

Some thought that these and many other details besides were invented by those who believed that the *dislike of Cicero*, which afterwards arose, could be reduced by making the crimes of the men whom he put to death even more horrific.

Sall. *Cat.* 29.3

- (73) is M. Messala M. Pisone consulibus *regni cupiditate* inductus coniurationem nobilitatis fecit ...

During the consulship of Marcus Messala and Marcus Piso, driven by *desire for a kingdom*, he created a conspiracy of nobles ...

Caes. *BG* 1.2.1

- (74) ad *huius vitae studium* meditati illi sunt qui feruntur labores tui ...

Your famous labours, which are being talked about, have been preparation for *the pursuit of this sort of life* ...

Cic. *Cat.* 1.26

In my corpus, it proved hard to find animate nouns in the objective genitive, such as examples (71) and (72), and when I did, they were found GenN far more frequently than NGen. Whilst the animate nouns do not take different thematic rôles from the inanimates in the objective genitive, it is interesting that in both the subjective and objective genitives the distinction between animate and inanimate appears to play a part in determining word order within the construction. Why should this be so? Inanimates are less likely to be used as subjects, since they are less likely to be agents which do things and more likely to have things done to them.

While the GenN order in (71) and (72) can be attributed to the animacy of the genitives, in (73) and (74) we find inanimate genitives preceding their nouns. Example (73) *regni cupiditate* “desire for a kingdom” can be directly contrasted with (69) *cupiditate regni*, where the order of genitive and noun are reversed. In (73), the GenN order may be due to the fact that Orestorix, already powerful, wishes to be king, a desire that shortly contributes to his downfall. As a result, Caesar emphasises the genitive by placing it before its head noun, which, incidentally, also juxtaposes the

kingdom with the consuls. This results in a contrast between the two rather different forms of government, as well as between the barbarian Helvetii and the Romans. In the case of (74) the genitive *huius vitae* is topical, referring to “the life of brigandage masquerading as war” that Cicero claims will be Catiline’s once he departs from Rome (Dyck 2008:112).

So GenN order in the objective genitive may be caused by animacy as well as by pragmatic marking, leaving the basic order for this particular function of the genitive NGen.

## 2.6 Miscellaneous genitives

The multiplicity of genitive functions in the grammar books reflect the fact that not all genitives are easily categorisable, as both Bennett 1914:70 and De Groot 1956 observe. Genitives in my corpus that did not fit into one of the categories above were grouped together under the term miscellaneous. They do not necessarily have similar functions – in fact the only thing these genitives have in common is the fact that their functions are hard to pin down. A number of them are almost, but not quite possessive, e.g. *omnis fructos agri culturae* “all the fruits of agriculture” Varro *Rust.* 1.1.5, *poenam sui sceleris* “the penalty of his crimes” Cic. *Cat.* 2.28, where the fruits and the penalty may belong in some way to agriculture and crime, yet *agri culturae* and *sceleris* are not exactly entities which may possess others. Abstract qualities which are not clearly possessed or defined by their dependent genitive also make up a sizeable number of these miscellaneous genitives, e.g. *naturae infirmitas* “the weakness of nature” Sall. *Iug.* 1.4, *turpitudinem fugae* “the ignominy of flight” Caes. *BG* 2.27.2. Also included are phrases where, although both noun and genitive are concrete, the genitive still does not possess, define or form part of its head noun, e.g.

*natura loci* “the nature of the place” Caes. *BG* 3.9.3. A good number of the genitive gerunds and gerundives fall into this category as well, e.g. *principium genendi* “the origin of growth” Varro *Rust.* 1.40.1, *finem orandi* “an end of speaking” Caes. *BG* 1.20.5.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	122	58.7%	86	41.3%	<b>208</b>
Cic. <i>Att.</i> 1-3	63	63%	37	37%	<b>100</b>
Cic. <i>Cat.</i> 1-2	35	55.6%	28	44.4%	<b>63</b>
Sall. <i>Cat.</i>	83	62.9%	49	37.1%	<b>132</b>
Sall. <i>Iug.</i>	133	52.2%	122	47.8%	<b>255</b>
Varro <i>Rust.</i>	88	58.7%	62	41.3%	<b>150</b>

**Table 2.6: distribution of NGen and GenN in miscellaneous genitives**

These genitives are found NGen most frequently, which reflects the fact that NGen is the most common order overall in the corpus, and may also support NGen being the basic order overall for the genitive. Given their lack of features in common, no further conclusions can be safely drawn from this group.

## 2.7 Conclusion

From the preceding sections, it is clear enough that certain orders occur more frequently in certain functions, with exceptions capable of being explained in terms of other factors. I suggest that the function of the genitive does indeed contribute to determining the word order in the genitive construction, though its effect is most likely more limited than that of information structure, as it has been seen in the sections above that examples where the order for one particular genitive function is reversed can often be attributed to the head noun or the genitive carrying pragmatic marking. Still, there is sufficient evidence to suggest that different functions of the genitive give rise to different orders.

### 3. DISCONTINUITY

In the literature I surveyed, there are four main hypotheses regarding the influence of discontinuity, or hyperbaton, on Latin word order. The first and second hypotheses both argue that discontinuous noun phrases are pragmatically marked, but differ in their views on just *how* they are marked. In the first hypothesis, the order of the constituents is determined by their degree of emphasis, with the more emphatic constituent preceding the less emphatic constituent (de Jong 1986, Bolkestein 2001, Devine and Stephens 2000, 2006), a hypothesis in keeping with the findings of §1 above, where emphatic constituents frequently preceded pragmatically unmarked constituents. If this hypothesis is correct and discontinuous constituents are arranged according to their degree of emphasis, the marked GenN order may be found more frequently in discontinuous noun phrases than in continuous ones. However, it should be noted that a pragmatic ordering of constituents will not necessarily lead to an overall GenN order, as it is equally possible for the head noun to be more emphatic than the genitive, resulting in NGen order.

The second hypothesis is that discontinuity emphasises the modifier, regardless of whether it precedes or follows its head. Adams 1971:2 lists this as one of the main forces behind the order of the constituents of a discontinuous phrase, along with prosody (see further below). Note, though, that this view is based not on genitives, but on adjectival modifiers, which have their own specific patterns of distribution, with determinative adjectives following the head, whilst affective, quantifying and qualifying adjectives tend to precede (Adams 1971:12, Pinkster 1990:185). As this hypothesis predicts that it is the genitive that will carry the pragmatic marking, regardless of its position, it is possible that, in accordance with the findings of §1 above, GenN will occur more frequently in discontinuous noun phrases than in

continuous ones. It is also possible that there will be examples of NGen order, where the genitive still carries pragmatic marking. The presence of emphatic postposed genitives in discontinuous noun phrases is the major difference between the predictions of the two pragmatic hypotheses.

The third hypothesis is that the order of constituents in discontinuous noun phrases is determined by prosody; cf. Adams 1971:2ff for a discussion of this hypothesis, also Devine and Stephens 2006 on prosodic motivations for genitive ordering in general. This hypothesis finds its roots in ancient works on rhetoric: the author of the *Rhetorica ad Herennium* says that hyperbaton *multum proderit ad continuationes ... in quibus oportet verba sicuti ad poeticum quendam extruere numerum, ut perfecte et perpolitissime possint esse absolutae* “has much to add to periods ... in which the words should be arranged after the manner of poetry, so that they may be finished as completely and in as most polished a manner as possible” (*Rhet. ad Her.* 4.44). Quintilian too states that the most effective arrangement of words is usually not found in *illum horridum sermonum, ut forte fluxerit* “plain speech, as it happens to flow out” 9.4.2 but that in which words *ex loco transferuntur in locum, ut iungantur quo congruunt maxime* “are transferred from their original place to another, to be joined where they fit best” 9.4.27. He also observes *nec aliud potest sermonem facere numerosum quam oportuna ordinis permutatio* “there is no other way of making speech rhythmical other than an appropriate change of order” 8.6.64.

The fourth hypothesis revolves around Elerick’s 1989 principle of pre-emptive markedness. This principle states that “the pragmatics of processing work to discourage the presence in any marked string of other formal complications that could bring about a markedness overload” (p. 561). In other words, when a construction is marked in some way, it is less likely to exhibit any other marked patterns. As far as

discontinuity is concerned, this hypothesis predicts that the order NGen, which is both numerically more common and pragmatically unmarked, will be found more often in discontinuous noun phrases than the marked GenN order. In his discussion of the effects of hyperbaton on word order, Quintilian remarks that *felicissimus tamen sermo est cui et **rectus ordo** et apta iunctura et cum his numerus oportune cadens contigit* “the best style is that in which the *natural order*, appropriate linkage and, together with these, the correct rhythm occurs” (9.4.27, emphasis added), which could perhaps be taken to support this hypothesis.

A glance through any one of the texts in the corpus will soon show that there are differing degrees of discontinuity. There are many instances where the head noun and its dependent genitive are adjacent to each other, and so are continuous, e.g. *iussu consulis* “by the order of the consul” Cic. *Cat.* 1.23, *greges ovium* “flocks of sheep” Varro *Rust.* 2.1.16. There are also examples of unmistakably discontinuous NPs, e.g. *neque ullam facultatem habere navium* “nor do they have any great number of ships” Caes. *BG* 3.9.6, *lubido maxuma invaserat rei publicae capiundae* “a great desire of seizing power invaded him” Sall. *Cat.* 5.6.

However, there are also instances where the NP is continuous, but the governing noun and the head constituent of the genitive are separated by another modifier. Sometimes the modifier qualifies the head noun, e.g. *in lactis duos congios* “to two congii of milk” Varro *Rust.* 2.11.4, sometimes it qualifies the genitive, e.g. *mentis meae motum* “the agitation of my mind” Cic. *Att.* 3.8.4. Since the investigation was focused on the discontinuity of the sequence head noun-genitive rather than the discontinuity of the NP as a whole, I considered these to be an intermediate category of genitive discontinuity and grouped them separately from both the continuous and discontinuous noun phrases.

Finally, there are instances of conjunction, where a genitive modifies two or more nouns, e.g. *praeter invidiam et ignominiam nominis mei* “except the hatred and unpopularity of my name” Cic. *Att.* 3.23.5, or a noun is modified by two or more genitives, e.g. *post C. Gracchi et M. Fulvi caedem* “after the deaths of Gaius Gracchus and Marcus Fulvius” Sall. *Iug.* 31.7. I considered these coordinated NPs to be continuous.

### 3.1 Continuous noun phrases: Head noun and genitive continuous

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	336	53.1%	297	46.9%	<b>633</b>
Cic. <i>Att.</i> 1-3	246	53.7%	212	46.3%	<b>458</b>
Cic. <i>Cat.</i> 1-2	108	51.2%	103	48.8%	<b>211</b>
Sall. <i>Cat.</i>	211	57.8%	154	42.2%	<b>365</b>
Sall. <i>Iug.</i>	454	60.6%	295	39.4%	<b>749</b>
Varro <i>Rust.</i>	321	52.7%	288	47.3%	<b>609</b>

**Table 3.1: distribution of NGen and GenN when noun and genitive are continuous**

When the noun phrase is continuous, the order NGen is found most often, though not by much. In the case of Cic. *Cat.* 1-2 in particular the difference is negligible, with only five more tokens of NGen order than of GenN. Sallust, however, once again uses NGen far more frequently than the other authors.

(75) ... Diviacum atque Haeduos *finibus Bellovacorum* adpropinquare cognoverant.

... they knew that Diviacus and the Aedui were approaching *the territory of the Bellovaci*.

Caes. *BG* 2.10.5

(76) *cibi pars* quod potio et ea iis aqua liquida, unde bibant esse oportet ...

As drink is *a component of food*, and as this, in the case of bees, is clear water, they should have a place from which to drink ...

Varro *Rust.* 3.16.27

The genitive constructions in both (75) and (76) are examples of continuous genitives comprised of one head noun and one dependent genitive. In (75) the NGen order is not obviously motivated, whilst in (76) the genitive is preposed, despite being

a partitive, as the nourishment of bees is under discussion at this point, and so *cibi* “food” is topical.

Below follow examples of coordinated genitive constructions:

- (77) habes ubi ostentes *tuam illam praeclaram patientiam famis, frigoris, inopiae rerum omnium* ...

You have an opportunity to demonstrate *your famous ability to endure hunger, cold, a scarcity of all things* ...

Cic. *Cat.* 1.26

- (78) tu autem qui saepissime *curam et angorem animi mei* sermone et consilio levasti tuo ... ubinam es?

And you whose talk and advice has so often lightened *my worry and vexation of spirit* ... where are you?

Cic. *Att.* 1.18.1

- (79) nocturnis consiliis, *armorum atque telorum portationibus*, festinando agitando omnia plus timoris quam periculi effecerant.

By their nighttime councils, *their stockpiling of arms and weapons*, by rushing and agitating everything they were a cause more of fear than of actual danger.

Sall. *Cat.* 42.2

- (80) vitavi ne viderem, ne aut *illius luctum squaloremque* adspicerem aut ne me, quem ille florentissimum reliquerat, perditum illi adflictumque offerrem.

I have avoided meeting him so as not to see *him in the dress and grief of mourning* [lit. his grief and mourning clothes] nor yet to present myself – me, whom he left in the full tide of prosperity – before his eyes, a ruined and broken man.

Cic. *Att.* 3.10.2

In example (77), multiple genitives depend on the head noun in a list of the hardships that Catiline is capable of enduring. As in ex. (13) in Ch. 3 §1.2 above, the NGen order results from the fact that in a list the things listed do not precede the head on which they depend. The NGen order in (78), though, may be caused by the genitive *animi* being enclosed between the nouns which it modifies and the possessive adjective *mei* (cf. Adams 1976:80, Bauer 1995:57, ex. (57) in Ch. 3 §2.4 above). In this example, the head nouns are coordinated, rather than the genitives.

GenN order is found in both examples (79) and (80). In (79), the genitives are coordinated, whilst in (80) the nouns are coordinated. The GenN order in this

particular example is the result of a contrast between Cicero (*me*) and his brother (*illius*), with Cicero explaining that not only does he not wish to see Quintus in mourning, but he also does not want his brother to see *him* in a similar state. The antithesis is made clear by the use of *aut ... aut* “either ... or”.

The objection might be raised that these coordinated genitive constructions should belong with genitives separated from their head noun by a modifier, especially in the case of an example such as (77), where *frigoris* and *inopiae rerum* are separated from *patientiam* by at least one intervening genitive. However, I have chosen to conflate these coordinated genitive constructions with straightforward continuous genitives because of the sorts of genitive constructions that are coordinated, namely lists and synonymous pairs. Lists by their nature comprise a string of modifiers dependent on a single head. As they are long and complex, they almost always follow the head (see further Ch. 3 §3.2.1 below), and so for every modifier that is not the first in the list, there will be others before them – it is not optional, not a stylistic choice that an author can make. Because of this, I treat the listed modifiers as one unit, which means that for the purposes of discontinuity the list is a single continuous modifier.

The other examples of coordinated genitives and nouns I have given above are instances of synonymous pairs, where the coordinated elements are either synonyms, e.g. *armorum atque telorum* “arms and weapons”, or near synonyms, e.g. *curam et angorem* “worry and vexation”. In the case of *luctum squaloremque* “grief and mourning clothes”, although *luctus* and *squalor* are not synonyms, both words have similar connotations, and combined the two refer to Quintus’ great distress at his brother’s exile. This is an example of hendiadys, whereby two coordinated words are taken together to refer to one concept. The result is one referential unit, so I consider the coordinated phrase to be one continuous unit.

### 3.2 Continuous noun phrases: Head noun and genitive separated by modifier

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	43	54.4%	36	45.6%	<b>79</b>
Cic. <i>Att.</i> 1-3	38	52.1%	35	47.9%	<b>73</b>
Cic. <i>Cat.</i> 1-2	18	50%	18	50%	<b>36</b>
Sall. <i>Cat.</i>	19	50%	19	50%	<b>38</b>
Sall. <i>Iug.</i>	36	37.9%	59	62.1%	<b>95</b>
Varro <i>Rust.</i>	36	55.4%	29	44.6%	<b>65</b>

**Table 3.2: distribution of NGen and GenN when noun and genitive are in a continuous phrase, but are separated by a modifier**

From Table 3.2, it is clear that there is no overall trend for either order to be found more often. Caesar, Varro and Cic. *Att.* 1-3 use NGen more frequently, Cic. *Cat.* 1-2 and Sall. *Cat.* both use the two orders equally as often, and Sall. *Iug.* uses GenN most often. That Sall. *Iug.* does so is a little surprising, given the overall tendency for NGen to predominate in Sallust's work. However, a comparison with Table 3.1 above suggests that for Caesar, Cicero and Varro, continuous genitives and genitives separated from their head nouns by modifiers behave in much the same way. For Sallust, on the other hand, genitives separated from the head noun by modifiers are found before the noun more often than genitives continuous with their head noun.

This type of discontinuity can be further subdivided into instances where the modifier separating the head noun and the genitive modifies the genitive, and instances where it modifies the noun.

#### 3.2.1 Head noun modifiers

When the head noun and genitive are separated by another modifier of the head noun, both NGen and GenN orders are found. However, NGen is found relatively infrequently:

- (81) quae quidem res Caesari non minorem quam ipsa victoria voluptatem attulit, quod *hominem honestissimum provinciae Galliae*, suum familiarum et hospitem, ereptum ex manibus hostium sibi restitutum videbat ...

This gave Caesar no less pleasure than the victory itself, since he saw *a most distinguished man of the province of Gaul*, his own friend and guest, snatched from the hands of the enemy and returned to him ...

Caes. *BG.* 1.53.6

- (82) quin etiam principes eius ordinis *partem illam subselliorum* ad quam ille accesserat nudam atque inanem reliquerunt.

Indeed even the leaders of his own order left *that part of the bench* which he approached bare and empty.

Cic. *Cat.* 2.12

- (83) ita ille, patricius *ex gente clarissima Corneliorum*, qui consulare imperium Romae habuerat, dignum moribus factisque suis exitum [vitae] invenit.

So he, a patrician *from the most brilliant family of the Cornelii*, who had held the power of consul at Rome, found an end appropriate to his conduct and his deeds.

Sall. *Cat.* 55.6

- (84) igitur testudo, aut peristylum tectum tegulis aut rete, fit magna, in qua *milia aliquot turdorum ac merularum* includere possint ...

Well, there is built a large domed building, or a peristyle covered with tiles or netting, in which *several thousand fieldfares and blackbirds* can be enclosed ...

Varro *Rust.* 3.5.1

Even though NGen is the basic order for the genitive construction as a whole, it is not very common when a modifier of the head noun separates it from the genitive. One possible explanation for this can be found in Hawkins' Heaviness Principle 1983:90f., which states that heavier phrases will be positioned towards the right. Since the combination of head noun and modifier produces a phrase with at least two words, it is heavier than just the genitive, and so is more likely to follow it, giving the order GenN. Another possible reason for the paucity of these examples is that most of these modifiers are adjectives. Although the ordering of adjectives relative to the nouns they modify is variable, out of 776 attributive adjectives in Cic. *Att.* 1, five hundred of them, or some two-thirds of them, precede their head noun. This means that when the head noun is modified by an adjective and precedes the genitive, the

order is most often adjective + head noun + genitive, with the result being that the head noun and genitive are continuous.

Conversely, when the head noun follows the genitive, the order genitive + adjective + head noun is to be expected. This, taken together with the Heaviness Principle, suggests that GenN should be more frequent, and indeed this is the case:

- (85) Caesar ab decimae legionis cohortatione ad dextrum cornu profectus, ubi suos urgeri signisque in unum locum conlatis *duodecimae legionis confertos milites* sibi ipsos ad pugnam esse impedimento vidit ...

Caesar, after haranguing the tenth legion, made for the right wing, where he saw his men hard-pressed, and, with their standards all gathered into one place, *the soldiers of the twelfth legion so close packed* that each was a hindrance to the others in the fight ...

Caes. *BG* 2.25.1

- (86) hunc vero si secuti erunt sui comites, si ex urbe exierint *desperatorum hominum flagitiosi greges*, o nos beatos, o rem publicam fortunatam, o praeclaram laudem consulatus mei!

If his companions follow him, if *the dissolute band of desperate men* depart from the city, o how happy we shall be, how fortunate the republic, how excellent the praise of my consulship!

Cic. *Cat.* 2.10

- (87) praeterea Dabar, Massugrae filius, ex gente Masinissae, ceterum materno genere impar – nam pater eius ex concubina ortus erat – Mauro *ob ingeni multa bona* carus acceptusque.

Moreover Dabar, the son of Massugrada, of the family of Masinissa, though on his mother's side of inferior birth – for her father was the son of a concubine – was very dear to the Moor *on account of his many good qualities*.

Sall. *Iug.* 108.1

- (88) hoc pecus alitur maxime glande, deinde faba et hordeo et cetero frumento, quae res non modo pinguitudinem efficient, sed etiam *carnis iucundum saporem*.

As this animal feeds chiefly on mast, and next on beans, barley, and other grains, this food produces not only fat but *a pleasant flavour in the flesh* [lit. *a pleasant taste of the flesh*].

Varro *Rust.* 2.4.6

The genitives in (85) and (86) are both pragmatically marked. In (85), Caesar is naming specific legions, the tenth and the twelfth, to locate the places where the action is occurring on the battlefield. The genitive in example (86) is metonymic,

since *desperatorum hominum* “desperate men” refers to exactly the same group of people as does *flagitiosi greges* “dissolute band”, and so can stand in for it; cf. example (12) in Ch. 3 §1.2 above. In (87), the genitive *ingeni* “quality” is enclosed by a preposition and the head noun phrase *multa bona* “many good things”, but is unmarked. In (88), the genitive is again without pragmatic marking, but still precedes. As mentioned in the discussion of the NGen examples above, it is probable that the noun, being modified by an adjective, is heavier than the genitive and so follows in accordance with Hawkins’ Heaviness Principle.

Note that although GenN occurs most often, the genitives are frequently pragmatically marked, as in (85) and (86). Further, a number of the prehead genitives are wh-relatives, which invariably precede (see Ch. 3 §4.2 below), e.g. *quoius inpio facinore* “by whose impious crime” Sall. *Iug.* 14.21, *quorum magnum numerum* “a great number of whom” Caes. *BG* 1.4.2. The NGen examples, on the other hand, lack pragmatic marking, by and large, and do not include any wh-relatives. It is possible that the apparent preponderance of GenN orders is the result of interaction with these other factors, and that the basic order when a modifier of the head noun separates it from the genitive is actually NGen, the basic order for the genitive construction as a whole.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	6	27.3%	16	72.7%	<b>22</b>
Cic. <i>Att.</i> 1-3	4	36.4%	7	63.6%	<b>11</b>
Cic. <i>Cat.</i> 1-2	3	30%	7	70%	<b>10</b>
Sall. <i>Cat.</i>	1	7.1%	13	92.9%	<b>14</b>
Sall. <i>Iug.</i>	4	7.5%	26	92.5%	<b>30</b>
Varro <i>Rust.</i>	8	36.4%	14	63.6%	<b>22</b>

**Table 3.2.1a: distribution of NGen and GenN when noun and genitive are in a continuous phrase, but are separated by a modifier of the noun**

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	6	60%	4	40%	<b>10</b>
Cic. <i>Att.</i> 1-3	2	40%	3	60%	<b>5</b>
Cic. <i>Cat.</i> 1-2	2	50%	2	50%	<b>4</b>
Sall. <i>Cat.</i>	1	12.5%	7	87.5%	<b>8</b>
Sall. <i>Iug.</i>	4	26.7%	11	73.3%	<b>15</b>
Varro <i>Rust.</i>	8	57.1%	6	42.9%	<b>14</b>

**Table 3.2.1b: distribution of NGen and GenN when noun and genitive are in a continuous phrase, but are separated by a modifier of the noun, minus preposed emphatic constituents and wh-relatives**

The tables above show that indeed preposed emphatic genitives and wh-relatives make up a substantial proportion of the GenN tokens in each author. However, when these are removed NGen is not necessarily the more frequent order. Moreover, the figures for this particular genitive construction are too low to draw reliable conclusions. A comparison with the ordering patterns found when the genitive and head noun are separated by a modifier of the genitive should help, since if the Heaviness Principle and adjective ordering patterns are at work in these instances of the genitives, NGen order should be expected to occur substantially more often than GenN order.

### 3.2.2 Genitive modifiers

As predicted, when the head noun and genitive are separated by a modifier that modifies the genitive, NGen occurs most often:

- (89) una erat magno usui res praeparata a<b> nostris, falces praeacutae insertae adfixaeque longuri<i>s, non absimili *forma muralium falcium*.

One most useful device had been prepared by our men, sharp hooks inserted and fastened to long poles, not unlike *siege hooks in shape* [lit.: the shape of siege hooks].

Caes. *BG* 3.14.5

- (90) ... Antonium porro in cogendis pecuniis dicitare partem mihi quaeri et a me *custodem communis quaestus* libertum esse missum.

... Antonius, when levying money, is in the habit of saying that part of it is for me and that I have sent my freedman *to keep an eye on our joint profits* [lit: as the guardian of our common profits].

Cic. *Att.* 1.12.2

- (91) sed ea res frustra sperata: *tanta libido cum Mario eundi* plerosque invaserat.

But that hope was in vain, for *a great desire of going with Marius* had invaded almost everyone.

Sall. *Iug.* 84.3

- (92) *de magnitudine Gallicarum succidiarum* Cato scribit his verbis ...

*With regard to the size of the Gallic fitches*, Cato uses this language ...

Varro *Rust.* 2.4.11

Examples (89)-(91) are unemphatic orders, with neither the noun nor the genitive carrying pragmatic marking. In both (89) and (90), the genitive construction consists of an unmodified head noun followed by a genitive phrase consisting of an adjective modifying the genitive and the genitive. In (91), the noun *libido* “desire” is itself modified by the adjective *tanta* “so great”, which precedes it. However, the genitive phrase is even heavier than *tanta libido*, consisting as it does of the gerund *eundi* “of going” with a prepositional phrase *cum Mario* “with Marius” as its argument. The head noun in example (92) carries pragmatic marking, however. At this point in the *De Re Rustica*, Scrofa is discussing the hams and fitches imported from Gaul, making these old information, whilst the sheer size of the fitches and the rotundity of the Insubrian pigs is the topic of his quote from Cato. Consequently *magnitudine* is emphatic and precedes its dependent genitive.

When a modifier of the genitive separates it from the head noun, the order GenN is also found, though not as frequently as NGen:

- (93) hic pagus unus, cum domo exisset, *patrum nostrorum memoria* L. Cassium consulem interfecerat et eius exercitum sub iugum miserat.

This one canton, when it had left its home, *within the memory of our fathers*, had killed L. Cassius the consul and made his army pass under the yoke.

Caes. *BG* 1.12.5

- (94) est mihi tanti, Quirites, *huius invidiae falsae atque iniquae tempestatem* subire, dummodo a vobis huius horribilis belli ac nefarii periculum depellatur.

I am not unwilling, Quirites, to endure *the storm of this false and unfair resentment*, provided only that the danger of this horrific and abominable war is driven away from you.

Cic. *Cat.* 2.15

- (95) praeterea esse in Hispania citeriore Pisonem, in Mauretania cum exercitu P. Sittium Nucerinum, *consili sui participes*.

Moreover Piso was in Hither Spain, and in Mauretania with an army was P. Sittius Nucerinus, *participants in his plans*.

Sall. *Cat.* 21.3

- (96) *equi boni futuri signa*, si cum gregalibus in pabulo contendit in currendo aliave qua re, quo potior sit.

*It is a sign that the horse will be a good one* [lit.: the signs of a horse that will be good in the future] if, when in pasture with its mates, it vies with them in racing or in other ways to show its superiority.

Varro *Rust.* 2.7.6

Examples (94) and (96) both have heavy genitive phrases, comprising the genitive plus two adjectives modifying it, but the genitives are also emphatic. In (94) Cicero contrasts the consequences he may potentially endure for taking action against Catiline, namely unfair resentment and unpopularity, with the disaster that he will stave off. The antithesis is reinforced by the parallel use of *huius* “this” at the start of each genitive phrase, as well as by the GenN order. In (96), the genitive phrase *equi boni futuri*, “a good horse in the future”, can be taken as the topic of the sentence, since Lucienus is talking about good horses as much as about indications of their potential.

Note that for instances of genitives and nouns separated by a modifier of the genitive the proportions of NGen are not as high, relative to GenN, as the proportions of GenN:NGen were for head noun modifiers. Also note that in both instances where

the noun and genitive are separated by a modifier of the noun and instances where they are separated by a modifier of the genitive, GenN is frequently the result of marked genitives and wh-relatives, whilst the instances of NGen do not have many marked nouns. So, does this support the hypothesis that the Heaviness Principle combines with adjective ordering patterns to motivate the word order, or does it simply reflect the fact that NGen is the basic order for the genitive construction as a whole and that GenN order is more likely to come about as a result of emphatic ordering patterns?

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	33	62.3%	20	37.7%	<b>53</b>
Cic. <i>Att.</i> 1-3	31	52.5%	28	47.5%	<b>59</b>
Cic. <i>Cat.</i> 1-2	15	57.7%	11	42.3%	<b>26</b>
Sall. <i>Cat.</i>	17	77.3%	5	22.7%	<b>22</b>
Sall. <i>Iug.</i>	32	52.5%	29	47.5%	<b>61</b>
Varro <i>Rust.</i>	26	66.7%	13	33.3%	<b>39</b>

**Table 3.2.2a: distribution of NGen and GenN when noun and genitive are in a continuous phrase, but are separated by a modifier of the genitive**

It would seem that word order when the head noun and genitive are separated by a single modifier differs according to whether the separating modifier belongs with the head noun or with the genitive. If it modifies the noun, the order GenN is found more often; if it modifies the genitive, NGen occurs most frequently. This does suggest that the motivating factor for order when the noun and genitive are separated by one of their own modifiers is a combination of the Heaviness Principle and a tendency for adjectives to be placed before the noun they modify. However, the GenN examples are often also the result of the genitives being emphatic or wh-relatives, which invariably precede the rest of their phrase, and when they are removed from consideration in the case of head noun modifiers, the number of GenN examples drops substantially. It is not possible to tell, though, whether NGen or GenN is the more frequent of the orders in this case, due to an insufficient number of tokens.

Further research into this particular type of separation of the head noun and genitive will be necessary to determine which order predominates with the interacting tokens removed.

It is worth noting, however, that there are examples of emphatic genitives that are extremely heavy and do not precede their nouns. In these cases the sheer weight of the genitive phrase overrides any pragmatic marking that it carries:

- (97) demonstravi haec Caecilio, simul et illud ostendi, si ipse unus cum illo contenderet, me ei satis facturum fuisse; nunc, *in causa universorum creditorum, hominum praesertim amplissimorum, qui sine eo quem Caecilius suo nomine perhiberet facile causam communem sustinerent*, aequum esse eum et officio meo consulere et tempori.

I explained all of this to Caecilius, making it clear at the same time that had the dispute been solely between himself and Satyrus I should have met his wishes. As it was, *seeing that the whole group of creditors was involved, men moreover of the highest station who would easily maintain their common cause without help from anyone Caecilius might bring in on his own account*, I suggested that it would be reasonable for him to make allowance for my obligations and my present position.

Cic. Att. 1.1.4

In this particular example, Cicero contrasts the phrase *universorum creditorum* “all the creditors” with the earlier *ipse unus* “himself alone”, as the main factor in his decision not to prosecute his friend Satyrus is the fact that Caecilius is not the only creditor, but part of a group taking joint action. However, *universorum creditorum* is modified by an appositional phrase describing the social status of the men involved, which also takes a subordinate relative clause elaborating on their clout and their ability to get the results they desire out of the trial. The genitive phrase thus consists of three parts, namely the genitive, the appositional phrase, and the subordinate relative clause, making it sufficiently complex and sufficiently heavy for the Heaviness Principle to override the tendency for emphatic constituents to be fronted.

There are also a handful of instances where the head noun and the genitive are separated by two modifiers, one modifying the head noun and the other the genitive.

These are not very common at all, as the table below shows. Since there are so few of them, it is impossible to draw any reasonable conclusions about word order from them.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	4	100%	0	0%	4
Cic. <i>Att.</i> 1-3	3	100%	0	0%	3
Cic. <i>Cat.</i> 1-2	0	NA	0	NA	0
Sall. <i>Cat.</i>	1	50%	1	50%	2
Sall. <i>Iug.</i>	0	0%	4	100%	4
Varro <i>Rust.</i>	2	50%	2	50%	4

**Table 3.2.2b: distribution of NGen and GenN when noun and genitive are in a continuous phrase, but are separated by modifiers of both the noun and the genitive**

### 3.3 Discontinuous noun phrases

In truly discontinuous noun phrases, the head noun and the genitive are separated by some constituent or constituents that do not belong to the noun phrase. Quintilian calls this phenomenon of phrasal discontinuity *hyperbaton proper* (8.6.65), and it has been described as “perhaps the most distinctively alien feature of Latin word order” (Devine and Stephens 2006:524).

In 3.1, when the head noun and dependent genitive were continuous, NGen was marginally more frequent. However, the situation is quite different for phrasal discontinuity, as Table 3.3a shows: GenN is most often found in Caesar and Sallust, each order occurs roughly as often as the other in Cic. *Cat.* 1-2 and Varro, and NGen is the most common order in Cic. *Att.* 1-3. Whilst the figures for phrasal discontinuity in both of Sallust’s works are relatively low, Adams 1971:8f. notes that this is to be expected in historians and annalists, since *hyperbaton* was associated with high style and florid rhetoric (Adams 1971:4).

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	24	43.6%	31	56.4%	<b>55</b>
Cic. <i>Att.</i> 1-3	54	65.1%	29	34.9%	<b>83</b>
Cic. <i>Cat.</i> 1-2	10	52.6%	9	47.4%	<b>19</b>
Sall. <i>Cat.</i>	6	37.5%	10	62.5%	<b>16</b>
Sall. <i>Iug.</i>	12	44.4%	15	55.6%	<b>27</b>
Varro <i>Rust.</i>	50	48.5%	53	51.5%	<b>103</b>

**Table 3.3a: distribution of NGen and GenN in discontinuous noun phrases**

Below are examples of discontinuous noun phrases when the order is NGen:

- (98) cum creverunt, patiuntur sequi matrem pastum domique secernunt a matribus ac seorsum pascunt, ut *desiderium* ferre possint *parentis nutricis*, quod decem diebus assecuntur.

When the piglets are grown they are allowed to follow the mother to pasture; but when they come home they are separated from the mothers and fed apart, so as to grow accustomed to *the lack of the mother's nourishment*, a point which they reach in ten days.

Varro *Rust.* 2.4.20

- (99) nam plane ita putaverunt ... fore ut aperte victrix nequitia ac libido *poenas* ab optimo quoque peteret *sui doloris*, quem improbissimo cuique iniusserat severitas consulatus mei.

They quite supposed that ... openly triumphant villainy and vice would *wreak vengeance* on the best in our society *for the pain* branded by the severity of my consulship upon the worst.

Cic. *Att.* 1.16.7

- (100) *pro multitudine* autem *hominum* et pro gloria belli atque fortitudinis angustos se fines habere arbitrabantur ...

Indeed, the Helvetii considered that their lands were too small for *the number of their people* and for their fame in war and their courage ...

Caes. *BG* 1.2.5

- (101) hunc post dominationem L. Sullae *lubido maxuma* invaserat *rei publicae capiundae*, neque id quibus modis adsequeretur, dum sibi regnum pararet, quicquam pensi habebat.

After the rule of L. Sulla, *a great desire* invaded Catiline *of seizing power*, nor did he care one whit how he achieved it, as long as he won absolute power for himself.

Sall. *Cat.* 5.6

In example (98), the head noun *desiderium* “lack” is focal, as the whole point of separating the piglets from their mothers in the sties is to begin weaning them.

Consequently, *desiderium* is not found next to its dependent genitive, but is instead found in the topic position at the start of its clause. In (99) on the other hand, the head noun is unmarked, and separated from its genitive by a prepositional phrase as well as the verb. The discontinuity here may be due to a combination of two factors. Firstly, *poenas petere* is an idiomatic expression meaning “to exact a penalty”, with a variant *poenas ab aliquo petere* “to exact a penalty from somebody”. Consequently *poenas ab optimo quoque peteret* “exact a penalty from all the best men” is quite a natural and idiomatic phrase. The second possible reason for the discontinuity of the noun and its dependent genitive would be that the genitive *sui doloris* “their suffering” is followed by a subordinate relative clause describing when and to whom this suffering happened. The genitive and relative clause remain close together to make it quite clear what the relative pronoun *quem* is referring to. Were the genitive to remain continuous with its head noun, the sheer length of the relative clause would break the flow of the sentence and make for awkward, disjointed reading; cf. *aperte victrix nequitia ac libido poenas sui doloris, quem improbissimo cuique iniusserat severitas consulatus mei, ab optimo quoque peteret* “openly triumphant villainy and vice would wreak vengeance for the pain branded by the severity of my consulship upon the worst on the best in our society”. Instead, because the combination of genitive and the relative clause that depends on it is so heavy, it is postponed to the end of the sentence in accordance with Hawkins’s 1983 Heaviness Principle, with the result that the genitive is separated from the head noun.

The head noun in example (100) is emphatic once again, focusing attention on the fact that one of the motivating factors for the migration of the Helvetii is their sheer numbers. Here, however, the head noun and genitive are separated not by a verb, nor by a preposition phrase, but instead by the emphatic conjunction *autem* “indeed”,

“moreover”. The conjunction is found in the position traditionally considered to be reserved for Wackernagel particles in the clause, and automatically breaks up the noun phrase; see Ch. 3 §3.3.1 below for further on discontinuity caused by these and similar particles.

Finally, in (101) it is not the noun that carries pragmatic marking, but the genitive. Power, especially supreme power obtained under dubious circumstances, is the topic of the sentence, and Sallust uses three expressions synonymous with such power: *dominatio* “absolute dominion”, “tyranny”, *cipio* “to seize”, “to take by force”, and *regnum* “absolute power”, “despotism”. However, the genitive is also heavy, being made up of a two-part noun, *rei publicae*, and a gerundive *cipiundae*, and so it is postponed to the end of its clause, separated from its head noun by a single verb. This example is not unique amongst discontinuous noun phrases with the order NGen, e.g. *triplicem aciem instruxit legionum quattuor veteranarum* “he drew up a battle line comprised of the four veteran legions” Caes. *BG* 1.24.2, where the genitive *legionum quattuor veteranarum* “four veteran legions” contrasts with the two newly conscripted legions mentioned shortly afterwards, but due to its weight is postponed to the end of its own clause, with a single verb separating it from the head noun.

The order GenN is more frequent in the works of Caesar and Sallust. In Varro too it is more common than NGen, but only by the slightest of margins:

(102) unum ... qui propter diligentiam culturae *Stolonum* confirmavit *cognomen*, quod nullus in eius fundi reperiri poterat stolo, quod effodiebat circum arbores e radicibus quae nascerentur e solo, quos stolones appellebant.

One ... who has proved the appropriateness of *the family name* [lit.: the nickname of Stolo] by his diligence in farming; he used to dig around his trees so thoroughly that there could not be found on his farm a single one of those suckers which spring up from the roots and are called ‘stolones’.

Varro *Rust.* 1.2.9

- (103) *sationis* autem *gradus*, secundus, hanc habet curam: natura ad quod tempus cuiusque seminis apta sit ad serendum.

The second *step*, *that of planting*, requires care as to the season of planting which is suited to the nature of each seed.

Varro *Rust.* 1.39.1

- (104) ubi de eius adventu Helvetii certiores facti sunt, legatos ad eum mittunt nobilissimos civitatis, *cuius legationis* Nammeius et Verucloetius *principem locum* obtinebant ...

When the Helvetii learned of his arrival, they sent an embassy of the noblest citizens to him, *of which embassy* Nammeius and Verucloetius held *the chief place* ...

Caes. *BG* 1.7.3

The genitive in example (102) is fairly obviously emphatic, as *stolo* is repeated twice more in Fundanius' introduction of Gaius Licinius Stolo and explanation of how he lives up to his family cognomen. In (103), the genitive *sationis* "of sowing" is the topic of the entire subsequent section of dialogue, and consequently is found at the start of the sentence. As in (100) above, the noun phrase is broken up by the conjunction *autem*, which cliticises onto emphatic constituents. Last of all, example (104) contains an unemphatic genitive *legationis* "embassy", "delegation", modified by the relative adjective *cuius* "whose", "of which". Since *cuius* is a wh-relative, it is found at the start of the subordinate relative clause, along with *legationis*, the noun which it modifies.

From these examples, it is clear that information structure affects the order of the constituents in discontinuous genitive constructions. What of Elerick's hypothesis that unmarked word order will be used more frequently in discontinuous phrases? In Table 3.3b below, it can be seen that the distribution of GenN increases in discontinuous phrases for Caesar, Sallust and Varro, but decreases for Cicero *Att.* 1-3, but stays much the same for Cicero *Cat.* 1-2. These figures are more in line with the distribution expected for an information structure hypothesis. Whilst at first glance Cic. *Att.* 1-3 would appear to back up Elerick's hypothesis, in light of the evidence

provided by the other authors, this reflects the fact that an emphatic ordering of the constituents within the noun phrase is just as likely to be NGen as it is to be GenN – head nouns may also be emphatic.

Texts	NGen		GenN	
	Continuous	Discontinuous	Continuous	Discontinuous
Caes. <i>BG</i> 1-3	53.1%	43.6%	46.9%	56.4%
Cic. <i>Att.</i> 1-3	53.7%	65.1%	46.3%	34.9%
Cic. <i>Cat.</i> 1-2	51.2%	52.6%	48.8%	47.4%
Sall. <i>Cat.</i>	57.8%	37.5%	42.2%	62.5%
Sall. <i>Iug.</i>	60.6%	44.4%	39.4%	55.6%
Varro <i>Rust.</i>	52.7%	48.5%	47.3%	51.5%

**Table 3.3b: comparison of distribution of NGen and GenN in continuous and discontinuous noun phrases**

As for the hypothesis that discontinuity is motivated by prosody, this is in part true, but is not a major driving force. Cicero himself notes that clausulae, whilst important, can be overused, and is scornful of those who are *servientis numero* “slaves to rhythm” and insert *inania quaedam verba quasi complementa numerorum* “empty words to complete the rhythm” *Orat.* 230, and considers a good orator to be one who *neque verbum ita traiciat, ut id de industria factum intellegatur, neque inferciens verba quasi rimas expleat nec minutos numeros sequens concidat delumbetque sententias* “neither moves words around so that it was obviously done on purpose, nor stuffs in words to stop up the gaps, nor dismembers and weakens sentences in the quest for short rhymes” *Orat.* 231. Adams 1971:3 argues that metrically pleasing orders are overridden by emphasis and contrast, pointing out that “Cicero does not adopt a euphonic disjunction if it does not produce an appropriate emphasis, but he is prepared to sacrifice the clausula in order to bring a word into relief”.

As it is there are not many examples of clausulae involving the genitive construction in my corpus. At Cic. *Cat.* 1.6, there is *voces coniurationis potest*, which ends in a double cretic *coniurātīōnīs pōtēst* – the fact that a postposed genitive would give a clausula no doubt played a part in the NGen order – and again at Cic. *Cat.* 1.7

*audaciae satellitem atque administrum tuae* has probably been re-arranged for another double cretic *ādmīnīstrūm tūāe*, with the genitive anteposed whilst its modifier is postposed. An example of actual hyperbaton motivated by discontinuity, though involving an adjective rather than a genitive, is found at Cic. *Cat.* 1.1 *effrenata iactābīt āudāciā*, where the adjective *effrenata* has been split from its head noun *audacia* by the intervening verb, giving not just a double cretic, but also highlighting the rashness of Catiline's behaviour.

In my corpus, the lack of genitives in clausulae, let alone discontinuous genitives in clausulae, is evidence that whilst metrical considerations may motivate word order, prosody is only useful as an explanation for those few individual instances where it is used.

### 3.3.1 Clitics

As has been mentioned above, some of my examples of discontinuity involve the head noun and dependent genitive being split by Wackernagel particles, which stand in second position in their clause, as well as unstressed personal pronouns and the verb *esse*. As Adams 1994a; 1994b argues, these latter particles are prone to enclisis on focused constituents, which tend to be found in initial position. In this section I look at whether or not genitive constructions behave differently when the head noun and dependent genitive are separated by one of these clitics.

Table 3.3.1 shows the breakdown of the various clitics into their different categories: Wackernagel particles, unemphatic personal pronouns, and cliticising *esse*. There are not many examples of any of them, but certain interesting patterns can be observed. So, on the whole, Wackernagel particles and unemphatic pronouns are

found with GenN order most often. This particular distribution, with GenN more frequent than NGen, is similar to the distribution for true discontinuity.

Texts	NGen		GenN		Total
		%		%	
<b>Wackernagel particles</b>					
Caes. <i>BG</i> 1-3	3	50%	3	50%	<b>6</b>
Cic. <i>Att.</i> 1-3	0	0%	3	100%	<b>3</b>
Cic. <i>Cat.</i> 1-2	1	100%	0	0%	<b>1</b>
Sall. <i>Cat.</i>	0	NA	0	NA	<b>0</b>
Sall. <i>Iug.</i>	0	0%	1	100%	<b>1</b>
Varro <i>Rust.</i>	5	33.3%	10	66.7%	<b>15</b>
<b>Unemphatic pronouns</b>					
Caes. <i>BG</i> 1-3	0	0%	2	100%	<b>2</b>
Cic. <i>Att.</i> 1-3	2	50%	2	50%	<b>4</b>
Cic. <i>Cat.</i> 1-2	1	33.3%	2	66.7%	<b>3</b>
Sall. <i>Cat.</i>	0	0%	2	100%	<b>2</b>
Sall. <i>Iug.</i>	0	0%	1	100%	<b>1</b>
Varro <i>Rust.</i>	0	0%	1	100%	<b>1</b>
<b><i>Esse</i></b>					
Caes. <i>BG</i> 1-3	3	30%	7	70%	<b>10</b>
Cic. <i>Att.</i> 1-3	10	90.9%	1	9.1%	<b>11</b>
Cic. <i>Cat.</i> 1-2	2	66.7%	1	33.3%	<b>3</b>
Sall. <i>Cat.</i>	3	100%	0	0%	<b>3</b>
Sall. <i>Iug.</i>	1	100%	0	0%	<b>1</b>
Varro <i>Rust.</i>	10	76.9%	3	23.1%	<b>13</b>

**Table 3.3.1: distribution of NGen and GenN in noun phrases separated by clitics**

The distribution for cliticising *esse* “to be”, though, is strikingly different from the other two. When head noun and genitive are separated by cliticising *esse*, NGen is more common for all authors bar Caesar. The distribution of NGen and GenN for cliticising *esse* is not as good a match for phrasal discontinuity as that of the cliticising particles. Faced with these distributions, it is tempting to think that cliticising *esse* may be too weak on its own for its presence between the head noun and dependent genitive to be considered true discontinuity, but this is not necessarily the case. Given that *esse* cliticises on to focused elements, i.e. pragmatically marked elements, and that phrasal discontinuity is probably determined by or at least related to the principles of information structure, with pragmatically marked constituents preceding unmarked ones, all that can be safely concluded from this distribution is that in the phrases split by cliticising *esse*, there were more marked head nouns (41%)

than there were in phrases split by the other two types of clitic (12% for Wackernagel clitics and 8% for unemphatic pronouns).

### **3.4 Conclusion**

From the discussion of discontinuous noun phrases above, it is fairly clear that information structure affects ordering patterns in discontinuous noun phrases. In more than half of the examples provided, the first of the two discontinuous constituents carries some form of emphasis or contrast, regardless of whether it is the head noun or the dependent genitive, which appears to confirm the first hypothesis, that the pragmatically marked constituent will precede the unmarked one, rather than the second, which predicts that discontinuity emphasises the modifier regardless of its position. There are, however, instances where pragmatically marked constituents follow, though these can be attributed to the weight of the constituent overriding the tendency for phrases to be arranged according to the principles of information structure.

There are also instances where neither head noun nor dependent genitive is marked, and yet the phrase is still discontinuous, though these too can be explained in terms of interaction with other factors. It is, in fact, possible that discontinuity is not so much an independent variable as it is a dependent variable, as the differing degrees of discontinuity reflect different positions of the head noun and genitive with respect to one another; cf. de Melo 2010:74f., who identifies four positions for possessive pronouns relative to their head nouns, these being premodifier hyperbaton (the possessive pronoun precedes its head noun but is separated from it), possessive pronoun preceding head noun but not separated from it, possessive pronoun following

head noun but not separated from it, and postmodifier hyperbaton (the possessive pronoun follows its head noun but is separated from it).

The prosodic hypothesis, whilst it does undoubtedly motivate some examples of hyperbaton, is not an overriding determinant of discontinuity. It is in fact an aesthetic preference that can be discarded if it results in an order too artificial, or nonsensical. The fourth hypothesis, namely that the proportions of NGen should be higher in discontinuous noun phrases than in continuous ones, simply does not apply. Caesar, Sallust and Varro all have higher percentages of GenN tokens in discontinuous phrases than continuous ones, but the reverse holds true. This split between the two orders is a reminder that both constituents can be contrastive or emphatic.

#### **4. LEXICAL CATEGORY**

A point that has been made several times above is that *wh*-relatives and interrogatives, be they adjectives or pronouns, are invariably found at the start of their clause. This will obviously affect word order within the Latin noun phrase. Also, in a pilot study involving just Cic. *Att.* 1.16-19 and Cic. *Cat.* 1, when the possessive genitive was a pronoun, it was found in the sequence GenN in eighteen of twenty cases, whilst occurring in the basic order NGen only twice. Between these genitive pronouns and the *wh*-relatives and interrogatives, it would seem that the lexical category or part of speech of the constituents has some influence on word order within the genitive construction.

In this section I shall discuss the effect of the lexical category of the constituent in the genitive on word order. The genitive can only ever be a nominal, though there are several different types of constituent that may be used as such. These are (1) a noun, e.g. *ex litteris Caesaris* “from Caesar’s letters” Caes. *BG* 2.35.4, *nares equi* “the

nostrils of the horse” Varro *Rust.* 2.7.8, (2) a pronoun, e.g. *tui mentionem* “mention of you” Cic. *Att.* 1.16.10, *eius consilium* “his plan” Sall. *Iug.* 64.2, (3) a *wh*-pronoun, e.g. *quoius libido* “whose whim” Sall. *Cat.* 51.25, *quorum greges* “herds of which” Varro *Rust.* 2.6.5, (4) an adjective used as a noun, e.g. *multitudine armatorum* “a multitude of armed men” Caes. *BG* 3.3.2, *maiorum fortia facta* “the brave deeds of their ancestors” Sall. *Iug.* 85.4, and (5) a gerund(ive), e.g. *hic munitissimus habendi senatus locus* “this fortified place where we are holding a meeting of the senate” *Cat.* 1.1, *studio legundi* “eagerness to collect them” Sall. *Iug.* 93.2.

#### 4.1 Nouns

Most of the genitives in my corpus are, unsurprisingly, nouns. These can be proper nouns, naming people, e.g. *amicitia Masinissae* “the friendship of Massinissa” Sall. *Iug.* 5.5, *rex Germanorum* “king of the Germans” Caes. *BG* 1.31.10, places, e.g. *partes Italiae* “parts of Italy” Cic. *Cat.* 1.9, geographical features such as rivers, e.g. *ad ripam Rhodani* “to the bank of the Rhône” Caes. *BG* 1.6.4, and constellations, e.g. *ad Aquilae occasum* “to the rising of Aquila” Varro *Rust.* 2.1.18; or common nouns, naming humans, e.g. *servi mors* “a slave’s death” Cic. *Att.* 1.12.4, *senatoris filius* “a senator’s son” Sall. *Cat.* 39.5, animals, e.g. *greges ovium* “flocks of sheep” Varro *Rust.* 2.1.16, things, e.g. *litterarum exemplum* “a copy of the letter” Cic. *Att.* 3.8.4, *aquae catinos* “bowls of water” Varro *Rust.* 1.63.1, and abstract concepts, e.g. *spei plena* “full of hope” Cic. *Att.* 3.18.2, *pacis spes* “hope of peace” Sall. *Iug.* 65.4.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	339	58.5%	240	41.5%	<b>579</b>
Cic. <i>Att.</i> 1-3	262	59.5%	178	40.5%	<b>440</b>
Cic. <i>Cat.</i> 1-2	112	56%	88	44%	<b>200</b>
Sall. <i>Cat.</i>	176	59.7%	119	40.3%	<b>295</b>
Sall. <i>Iug.</i>	394	61.1%	251	38.9%	<b>645</b>
Varro <i>Rust.</i>	330	57%	249	43%	<b>579</b>

**Table 4.1: distribution of NGen and GenN when the genitive is a noun**

When the genitive is a noun, it is most often found after its head noun. In fact, as the table above shows, the actual proportions of NGen:GenN are fairly consistent across all four authors, hovering close to 60% NGen.

- (105) fuisti igitur apud Laecam illa nocte, Catilina, distribuisti *partes Italiae*, statuisti quo quemque profisci placeret, delegisti quos Romae relinqueres, quos tecum educeres ...

So you were at Laeca's that night, Catiline, you distributed *the parts of Italy*, you decided where each man was to go, you chose those whom you would leave at Rome, and those whom you would take with you ...

Cic. *Cat.* 1.9

- (106) ac primo *adventu exercitus nostri* crebras ex oppido excursiones faciebant parvulisque proeliis cum nostris contendebant.

At first, with *the arrival of our army*, they often sallied forth from the town and skirmished with our troops.

Caes. *BG* 2.30.1

- (107) tum Marius ... collis duos propinquos inter se occupat, quorum in uno castris parum amplo *fons aquae* magnus erat ...

Then Marius ... occupied two neighbouring hills, one of which did not have enough space to pitch camp but did have a large *spring of water* ...

Sall. *Iug.* 98.3

- (108) quem neque gloria neque pericula excitant, nequiquam hortere: *timor animi* auribus officit.

It is fruitless to exhort one whom neither glory nor peril excites: *the fear of his heart* blocks his ears.

Sall. *Cat.* 58.2

In example (105), the genitive is a proper noun naming the country Italy, whilst in examples (106)-(108) they are common nouns. Note that the genitive *exercitus* “army” in (106) is enclosed between the head noun *adventu* “arrival” and the

possessive adjective *nostrī*. The NGen order in this example is determined by its typological harmonious combination with NAdj order; cf. Elerick 1994, Ch. 3 §2.4 above. The NGen order found in the other examples, however, is not apparently motivated, and in fact both examples (105) and (108) contain subjective genitives which might be expected to precede their head nouns, see Ch. 3 §2.5.1 above.

There are also examples of GenN order:

- (109) *me vero teste producto credo te ex acclamatione Clodi advocatorum audisse quae consurrectio iudicum facta sit, ut me circumsteterint ...*

When I myself was called as a witness, you must have heard from the shouts of *Clodius' supporters* how the jury rose in a body and surrounded me ...

Cic. *Att.* 1.16.4

- (110) *denique Romani veteres ... orbis facere atque ita ab omnibus partibus simul tecti et instructi hostium vim sustentabant.*

Finally the Roman veterans ... formed a ring and so, simultaneously protected from all sides and presenting an orderly front, they withstood *the enemy's attacks*.

Sall. *Iug.* 97.5

- (111) *igitur asinorum gregem qui facere vult bonum, primum videndum ut mares feminasque bona aetate sumat, utriusque ut quam diutissime fructum ferre possint.*

One who wishes, then, to start *a good herd of asses* should first be careful to get males and females of the proper age, so that they both may continue to bring in a profit as long as possible.

Varro *Rust.* 2.6.2

- (112) *tum magni ponderis saxa et praeacutas trabes in muro conlocabant.*

Then they set *stones of great weight* and sharpened beams along the walls.

Caes. *BG* 2.29.3

The genitive in example (109) is a proper noun, this time referring to a specific individual, rather than to a place, as in (105) above. As will be seen in Ch. 3 §5 below, genitives referring to humans frequently occur before their head nouns. Examples (110)-(112) contain common nouns in the genitive. Note that (110) is again a human noun, *hostium* “enemies”. In (111), the genitive *asinorum* “donkeys” is topical, as Murrius has just changed the subject of discussion at this point from cattle

to donkeys, and goes on to speak about them at length. Since the donkeys are the discourse topic, *asinorum* is found not merely at the start of its own phrase but at the beginning of the sentence. As for the abstract genitive *ponderis* “weight” in (112), it is enclosed by the preceding adjective *magni* “great” and the head noun *saxa* “rocks”, and so it in turn is anteposed.

The GenN examples can all be explained in terms of other factors, whereas most of the NGen examples are unmotivated and in some instances override other factors that would give a reverse order. It is clear, then, that when the genitive is itself a noun, it will most often follow the head noun.

#### 4.2 Pronouns

Pronouns are another of the more common types of nominal used in the genitive. They may be personal, e.g. *desiderio tui* “longing for you” Cic. *Att.* 1.3.1, *Volux filius eius* “his son Volux” Sall. *Iug.* 101.5, demonstrative, e.g. *huius constantia* “this man’s constancy” Sall. *Cat.* 54.3, *istius furorem* “this man’s madness” Cic. *Cat.* 1.2, determinative, e.g. *ipsius adventus* “his arrival” Caes. *BG* 1.22.1, and indefinite, e.g. *triumphus alicuius* “somebody’s triumph” Varro *Rust.* 3.2.16. They are not to be confused with the possessive pronouns *meus*, *tuus*, *noster* and *voster* of the Latin grammars, which, despite their name, are in actual fact adjectives.

For all the authors bar Sallust, dependent genitive pronouns precede their head noun most often. As observed before, Sallust uses the order NGen more frequently than the others, and for the dependent genitive pronouns this is once again the case. According to Bauer 1995:55f., these genitive pronouns are usually found GenN most often. She observes that whilst the other genitive modifiers have undergone a shift from preposition to postposition, the pronouns continue to exhibit the archaic Latin GenN

order. This raises the possibility that the NGen order found in Sallust may be attributed in part to the change in the ordering of genitive modifiers being somewhat further advanced in Classical Latin than the literary texts of Cicero and Caesar suggest, with Sallust's simpler style perhaps more closely reflecting the norms of the spoken language. Note that Cicero's informal letters to Atticus have proportionally far fewer instances of GenN pronouns than do his speeches against Catiline and Caesar's commentaries.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	27	29%	66	71%	<b>93</b>
Cic. <i>Att.</i> 1-3	30	42.3%	41	57.7%	<b>71</b>
Cic. <i>Cat.</i> 1-2	5	20%	20	80%	<b>25</b>
Sall. <i>Cat.</i>	29	63%	17	37%	<b>46</b>
Sall. <i>Iug.</i>	50	61.7%	31	38.3%	<b>81</b>
Varro <i>Rust.</i>	56	45.2%	68	54.8%	<b>124</b>

**Table 4.2a: distribution of NGen and GenN when the genitive is a pronoun**

Examples of NGen order are given below:

- (113) ... animum inducere non potui u taut illum, *amantissimum mei*, mollissimo animo, tanto in maerore adspicerem ...

... I could not bring myself to meet him, *devoted to me* [lit.: *most fond of me*] and soft-hearted as he is, in so sad a state ...

Cic. *Att.* 3.9.1

- (114) porro autem anxius erat, dubitans in maximo scelere tantis civibus deprehensis quid facto opus esset: *poenam illorum* sibi oneri, inpunitatem perdundae rei publicae fore credebat.

On the other hand he was concerned, wavering over what should be done with such citizens caught in a serious crime: he believed that *punishment of them* would be a burden on himself, but were he to let them go unpunished they would be the downfall of the state.

Sall. *Cat.* 46.2

- (115) Ariovistus ad postulata Caesaris pauca respondit ... sedes habere in Gallia ab ipsis concessas, *obsides ipsorum* voluntate datos ...

Ariovistus replied briefly to the demands of Caesar ... The territories he held in Gaul had been conceded to him by the Gauls themselves, and *their hostages* had been given willingly.

Caes. *BG* 1.44.1-2

(116) sit denique inscriptum *in fronte unius cuiusque* quid de re publica sentiat.

Finally, let it be written *on the forehead of each and every man* what he thinks of the state.

Cic. *Cat.* 1.32

The genitives in examples (114)-(116) all contain at least three syllables, so it is possible that the NGen order is due to the heaviness of the genitives; see Ch. 3 §3.2.1 above. On the other hand, *illius* and *ipsius* are also trisyllabic, and are usually found before the noun, e.g. *illius potentia* “that man’s power” Sall. *Cat.* 48.7, *ipsius adventus* “his arrival” Caes. *BG* 1.22.1, whilst *eorum* (also trisyllabic) can be found either before or after the noun, e.g. *eorum aspectum praesentiamque* “their faces and presence” *Cat.* 1.17. Also, the genitive *mei* “of me” in example (113) is disyllabic, yet it too follows the noun. As a result, the argument that phonological weight causes postposing of the genitive does not seem particularly strong.

However, there is an alternative explanation for the NGen order of the personal pronoun *mei* in example (113). The genitives of *ego* and *tu* often follow their noun, e.g. *desiderio tui* “longing for you” Cic. *Att.* 1.3.1. This postpositive order may have come about by analogy with the possessive pronouns *meus* and *tuus*, which regularly follow their head nouns, cf. *causae meae* “my cause” Cic. *Att.* 3.13.1.

Whilst weight was ruled out as a factor determining the order of the genitive pronouns in examples (113)-(115), example (116) contains a somewhat heavier genitive, *unius cuiusque*. It is polysyllabic and has a more complex structure than the other genitives, as it is a phrasal term consisting of two words *unus* and *quisque*. The weight of this genitive is likely to be the deciding factor in the NGen order, given its phonological and morphological complexity relative to the other genitives discussed.

Although NGen order is found most often in Sallust, GenN occurs more frequently in the works of the other three authors:

(117) valde *eius sermo* de Publio cum tuis litteris congruebat.

What he had to say about Publius chimed in very well with your letter.

Cic. Att. 2.8.1

- (118) *horum feturae* initium admissionis facere oportet ab aequinoctio verno ad solstitium, ut partus idoneo tempore fiat.

*In the matter of breeding* [lit.: as regards the breeding of these animals], the beginning of mating should be at the vernal equinox and it should continue until the solstice, so that the foal may come at a seasonable time.

Varro Rust. 2.7.7

- (119) Labienus, ut erat ei praeceptum a Caesare, ne proelium committeret, nisi *ipsius copiae* prope hostium castra visae essent, ut undique uno tempore in hostes impetus fieret ...

Labienus was under orders from Caesar to not join battle, unless *his own forces* were seen near the enemy camp, so that a simultaneous attack might be made on the enemy from all sides ...

Caes. BG 1.22.3

- (120) *quanta quousque animo* audacia natura aut moribus inest, tanta in bello patere solet.

As much as *a man's* spirit is bold by nature or custom, so much will he be accustomed to endure in battle.

Sall. Cat. 58.2

In example (117), both parts of the genitive construction are emphatic, *eius sermo* “his speech” contrasting with *tuis litteris* “your letter”. More significant, though, is the fact that *eius* is an anaphoric pronoun, referring to Curio, first mentioned in the previous sentence. The genitive *horum* “these” in (118) is also anaphoric, referring back to the phrase *equinum pecus* “horses”. Both the genitives in (117) and (118) are examples of new anaphora, being the first pronouns used in lieu of the nouns they refer to. This may cause the genitives to precede their head nouns. See below for further discussion of the significance of anaphora.

Examples (119) and (120) show determinative and indefinite pronouns in the genitive respectively. Both constructions are apparently unmarked.

When the pronouns are broken down into the categories personal, demonstrative, determinative and indefinite, certain ordering patterns emerge.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	26	33.3%	52	66.7%	<b>78</b>
Cic. <i>Att.</i> 1-3	21	48.8%	22	51.2%	<b>43</b>
Cic. <i>Cat.</i> 1-2	3	30%	7	70%	<b>10</b>
Sall. <i>Cat.</i>	26	72.2%	10	27.8%	<b>36</b>
Sall. <i>Iug.</i>	46	70.8%	19	29.2%	<b>65</b>
Varro <i>Rust.</i>	45	52.9%	40	47.1%	<b>85</b>

**Table 4.2b: distribution of NGen and GenN when the genitive is a personal pronoun**

It is quite clear from Table 4.2b that personal pronouns used as genitives vary in their order, as there is little consistency in the distribution of the NGen and GenN across the works in my corpus. Caesar and Cic. *Cat.* 1-2 use GenN more often, whilst in Sallust NGen is once again the order most frequently found. In both Cic. *Att.* 1-3 and Varro *Rust.* the two orders occur roughly as often as each other. This distribution suggests that the fact that the genitive is a personal pronoun has little to do with its position relative to its head noun. Instead, I suggest that the variation in word order clearly visible in Table 4.2b is caused by anaphora. See Ch. 3 §4.2.1 below.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	0	0%	9	100%	<b>9</b>
Cic. <i>Att.</i> 1-3	4	20%	16	80%	<b>20</b>
Cic. <i>Cat.</i> 1-2	1	9.1%	10	90.9%	<b>11</b>
Sall. <i>Cat.</i>	2	33.3%	4	66.7%	<b>6</b>
Sall. <i>Iug.</i>	2	13.3%	13	86.7%	<b>15</b>
Varro <i>Rust.</i>	7	20%	28	80%	<b>35</b>

**Table 4.2c: distribution of NGen and GenN when the genitive is a demonstrative pronoun**

Demonstrative pronouns, unlike the personal pronouns, do exhibit a clear tendency to be found before their head noun. This is in line with the order given in the grammars, see Kühner and Stegman 1912 II.2:608, Marouzeau 1922:149, *Bradley's Arnold* 1938:19, Leumann, Hofmann and Szantyr 1965:407, Gildersleeve and Lodge

1997:430. Demonstrative pronominal genitives definitely have an effect on the word order found in the genitive construction.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	1	20%	4	80%	5
Cic. <i>Att.</i> 1-3	0	0%	2	100%	2
Cic. <i>Cat.</i> 1-2	0	0%	2	100%	2
Sall. <i>Cat.</i>	0	0%	1	100%	1
Sall. <i>Iug.</i>	0	NA	0	NA	0
Varro <i>Rust.</i>	0	NA	0	NA	0

**Table 4.2d: distribution of NGen and GenN when the genitive is a determinative pronoun**

There are very few determinative pronouns. GenN is the order in which they most often occur, but with such small sample sizes, realistic and accurate patterns of distribution are not to be expected.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	-	-	-	-	0
Cic. <i>Att.</i> 1-3	3	75%	1	25%	4
Cic. <i>Cat.</i> 1-2	0	0%	1	100%	1
Sall. <i>Cat.</i>	1	33.3%	2	66.7%	3
Sall. <i>Iug.</i>	-	-	-	-	0
Varro <i>Rust.</i>	1	50%	1	50%	2

**Table 4.2e: distribution of NGen and GenN when the genitive is an indefinite pronoun**

There are extremely few indefinite pronouns. As with the determinative pronouns discussed above, the minuscule sample size makes it unlikely that the patterns of distribution will be accurate.

#### 4.2.1 Anaphora

Pronouns are by their nature anaphoric, referring to some other constituent. I distinguish between three types of anaphora: new, old, and resumptive. I define new anaphora as the first time that the antecedent is picked up by a pronoun or pronominal adjective. In the following examples, the antecedents and prior anaphoric constituents are underlined, whilst the anaphoric genitive pronoun is italicised:

- (121) posteaquam in vulgus militum elatum est, qua adrogantia in conloquio Ariovistus usus omni Gallia Romanis interdixisset impetumque in nostros *eius* equites fecissent ...

Afterwards the word spread amongst the rank and file of the arrogance with which in the parley Ariovistus had forbidden the Romans the use of all Gaul and the attack that *his* cavalry had made on ours ...

Caes. *BG.* 1.46.4

Old anaphora occurs when there have been previous anaphoric mentions of the antecedent:

- (122) ipsas pecudes propter caritatem aureas habuisse tradiderunt ... ut in Libya ad Hesperidas, unde aurea mala, id est secundum antiquam consuetudinum capras et oves, Hercules ex Africa in Graeciam exportavit. ea enim a sua voce Graeci appellarunt mela. Nec multo secus nostri ab eadem voce, sed ab alia littera (vox *earum* non me, sed be sonare videtur) ...

They have related that on account of their costliness some sheep actually had fleeces of gold ... as among the Hesperides in Libya, from which Hercules brought from Africa to Greece golden 'mala', which is the ancient manner of naming goats and sheep. For the Greeks called these 'mela' from the sound of their bleating; and in fact our people give them a similar name from the same bleating, but with a different consonant (for *their* bleating seems to give the sound 'be', and not 'me') ...

Varro *Rust.* 2.1.6-7

Finally, resumptive anaphora occurs when prior anaphoric mention has been made of the antecedent but there has then been an intervening discussion of different material. For example,

- (123) nam quanta sit in Quinto, fratre meo, comitas, quanta iucunditas, quam mollis animus et ad accipiendam et ad deponendam offensionem, nihil attinet me ad te, qui ea nosti, scribere. sed accidit perincommodum quom eum nusquam vidisti ... illa pars epistulae tuae minime fuit necessaria, in qua exponis quas facultates aut provincialium aut urbanorum commodorum et aliis temporibus et me ipso consule praetermiseris. mihi enim perspecta est et ingenuitas et magnitudo animi tui, neque ego inter me atque te quiquam interesse umquam duxi praeter voluntatem institutae vitae ... atque harum rerum commemorationem verecundia saepe impedivit utriusque nostrum; nunc autem ea fuit necessaria propter eam partem epistulae tuae per quam te ac mores tuos mihi purgatos ac probatos esse voluisti. Atque in ista incommoditate alienati *illius* animi et offensi illud inest tamen commodi ...

I need not tell you, for you already know, what a kindly, amiable fellow my brother Quintus is, how impressionable he is both in taking offence and in laying it aside. But unfortunately you did not see him at all ... One part of your letter was quite unnecessary, that in which you point out the various advantageous opportunities both in Rome and in the provinces that you have preferred to let go by during my Consulship and at other times. I am perfectly aware of your large-minded indifference to personal profit, and I have never felt any difference

between us except in the modes of life we have chosen ... Delicacy has often kept both you and me from putting these things into words, as it has now been necessary to do because of the passage in your letter in which you have set out to justify yourself and your manner of life to me. There is at any rate one good thing in this bad business of *Quintus*' [lit.: *that man's*] estrangement and dudgeon ...

Cic. *Att.* 1.17.2-7

In this example, the genitive *illius* at *Att.* 1.17.7 refers back to Cicero's brother Quintus, last mentioned by name at *Att.* 1.17.2 and by anaphora at *Att.* 1.17.4. At *Att.* 1.17.5-6, however, Cicero discusses a specific part of Atticus's last letter, which has nothing to do with Quintus but instead Atticus and Cicero's own relationship. When he mentions Quintus after the rather lengthy digression, he uses the anaphoric pronoun *illius* without naming his brother again. However, this use of the pronoun differs from old anaphora, as can be seen from Shackleton Bailey's decision to translate *illius* as "Quintus" rather than "that man", "the man we were talking about before".

The distribution of new, old and resumptive anaphoric pronominal genitives for each of the authors is given in Table 4.2.1 below.

As Table 4.2 showed, pronominal genitives most often precede their noun in Caesar, so it comes as no real surprise that in Table 4.2.1, his anaphoric pronouns are found GenN most often, whether they are new or old or resumptive. For Cicero too, anaphoric pronouns are found before their head nouns. Note that in Caesar and both of Cicero's works, new anaphoric pronouns are found GenN proportionately more often than old anaphoric pronouns. As for the resumptive anaphoric pronominal genitives, these are only ever found GenN in these two authors, though there are so few of them that it would be unwise to draw any definite conclusions.

Whilst Cicero and Caesar both tended to GenN order for their anaphoric pronominal genitives, Sallust once again uses NGen more often. Even so, new anaphoric pronouns precede their noun more often than the old anaphoric pronouns. The

resumptive anaphoric pronominal genitives are found both before and after their head nouns, and are in fact anteposed more often.

In contrast to the others, Varro does not have one clear overall order for anaphoric pronominal genitives. Instead, new anaphoric pronouns are found GenN most often, whilst old ones are found NGen most frequently. This is a clearer illustration of the pattern seen in the other three authors, where new anaphoric pronouns are found GenN proportionately more frequently than old ones. As for the resumptive anaphoric pronouns, in Varro these occur GenN most often, though there is one example of NGen order.

	NGen		GenN		Total
	<i>Total</i>		<i>Total</i>		
<b>Caesar BG 1-3</b>					
New	14	31.1%	31	68.9%	<b>45</b>
Old	9	39.1%	14	60.9%	<b>23</b>
Resumptive	0	0%	4	100%	<b>4</b>
<b>Cicero Att. 1-3</b>					
New	8	28.6%	20	71.4%	<b>28</b>
Old	5	35.7%	9	64.3%	<b>14</b>
Resumptive	0	0%	1	100%	<b>1</b>
<b>Cicero Cat. 1-2</b>					
New	0	0%	4	100%	<b>4</b>
Old	1	20%	4	80%	<b>5</b>
Resumptive	0	0%	1	100%	<b>1</b>
<b>Sallust Cat.</b>					
New	12	54.5%	10	45.5%	<b>22</b>
Old	9	75%	3	25%	<b>12</b>
Resumptive	1	100%	0	0%	<b>1</b>
<b>Sallust Iug.</b>					
New	29	60.4%	19	39.6%	<b>48</b>
Old	11	64.7%	6	35.2%	<b>17</b>
Resumptive	2	50%	2	50%	<b>4</b>
<b>Varro Rust.</b>					
New	23	31.1%	51	68.9%	<b>74</b>
Old	23	60.5%	15	39.5%	<b>38</b>
Resumptive	1	20%	4	80%	<b>5</b>

**Table 4.2.1: Anaphora**

From these figures, I suggest that anaphora has some, albeit slight, influence on the order of pronominal genitives. In all four authors and across all six works, new anaphoric genitives are more likely to precede their head nouns than old ones, whilst

resumptive pronominal genitives are overall found GenN more often than NGen. The fact that in Caesar and Cicero all anaphoric pronominal genitives are found most often GenN may be due to the fact that anaphoric pronouns are by nature topical, referring back to old information as they do, and so they occur in the pre-head topic position within the noun phrase. Also noteworthy is the fact that Sallust has higher proportions of postposed genitives than the other authors once again.

### 4.3 *Wh*-pronouns

Although the *wh*-pronominal genitives *cuius* and *quorum* could have been included with the other pronouns in Ch. 3 §4.2 above, they have been separated from the others because they behave in a very distinctive fashion. They are the only constituents in the genitive construction with an invariable order, always preceding their head noun, as is demonstrated in Table 4.3 below. The *wh*-pronouns are either interrogative, e.g. *quis mortalium* Sall. *Cat.* 20.11, *quid consili* Cic. *Cat.* 1.1, or relative, e.g. *quoniam aves hospitales* Varro *Rust.* 3.2.3.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	0	0%	24	100%	<b>24</b>
Cic. <i>Att.</i> 1-3	0	0%	22	100%	<b>22</b>
Cic. <i>Cat.</i> 1-2	0	0%	12	100%	<b>12</b>
Sall. <i>Cat.</i>	0	0%	12	100%	<b>12</b>
Sall. <i>Iug.</i>	0	0%	37	100%	<b>37</b>
Varro <i>Rust.</i>	0	0%	36	100%	<b>36</b>

**Table 4.3: distribution of NGen and GenN when the genitive is a *wh*-pronoun**

That the *wh*-pronouns precede their head nouns is not surprising, as *wh*-fronting is a feature found in many languages. Salvi 2005:438 suggests that *wh*-interrogatives have focal qualities – the *wh*-interrogative specifically requests new information, marking it out as important – hence their tendency to precede. Also the *wh*-relatives are usually anaphoric, and can often be found following directly after the constituent they depend on, e.g. *eorum qui e labore febrem habent* “those which are feverish from work”

Varro *Rust.* 2.1.22.

Examples of the *wh*-pronominal genitives are given below.

- (124) Gallia est omnis divisa in partes tres, *quarum unam* incolunt Belgae, aliam Aquitani, tertiam qui ipsorum lingua Celtae, nostra Galli appellantur.

Gaul is a whole divided into three parts, *of which one* the Belgae are the inhabitants, another the Aquitani, and the third those who in their own tongue are called the Celts, and in ours the Gauls.

Caes. *BG* 1.1.1

- (125) quod utinam illum, *quoniam in pio facinore* in has miseras proiectus sum, eadem haec simulantem videam ...

I wish that I might see that man, *by whose impious crime* I have been cast into these wretched circumstances, making this same pretence ...

Sall. *Iug.* 14.21

- (126) ideo modo consistunt in eis *quorum sapor* dulcis.

So truly do they alight only on objects *which* have a sweet *savour* [lit.: *whose savour* is sweet].

Varro *Rust.* 3.16.6

#### 4.4. Adjectives

The category of genitive adjectives falls into two similar but slightly different uses of the adjective as a nominal. On the one hand, there are adjectives that stand by themselves, with the head noun understood, e.g. *nostrum* “our men”, whilst on the other hand there are adjectives which have become lexicalised as nouns, e.g. *maiores* “the ancestors”. These two uses are clearly related, with the first leading to the second.

Regardless of how they are used as nominals, these genitive adjectives can be classified into three main categories. They can be descriptive, e.g. *maiorum imagines* “portraits of the ancestors” Sall. *Iug.* 4.5, *voluntates nobilium* “the goodwill of the nobles” Cic. *Att.* 1.1.2, possessive, e.g. *diligentia nostrorum* “the diligence of our men” Caes. *BG* 3.21.3, or quantifying, e.g. *omnium animus* “the mind of all” Sall. *Cat.* 21.5.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	18	48.6%	19	51.4%	<b>37</b>
Cic. <i>Att.</i> 1-3	33	53.2%	29	46.8%	<b>62</b>
Cic. <i>Cat.</i> 1-2	17	68%	8	32%	<b>25</b>
Sall. <i>Cat.</i>	20	39.2%	31	60.8%	<b>51</b>
Sall. <i>Iug.</i>	42	50.6%	41	49.4%	<b>83</b>
Varro <i>Rust.</i>	12	50%	12	50%	<b>124</b>

**Table 4.4: distribution of NGen and GenN when the genitive is an adjective**

For the most part, nominal adjectives are found before the head noun roughly as often as they occur after it. The two exceptions are Cic. *Cat.* 1-2, where NGen is found most often, and Sall. *Cat.*, in which, unusually, GenN is the more frequent order.

Examples of NGen order are given below:

- (127) at Catilina ex itinere plerisque consularibus, praeterea optumo quoique litteras mittit: se falsis criminibus circumventum, quoniam *factioni inimicorum* resistere nequiverit, fortunae cedere ...

But on his journey Catiline sent letters to many consulars, as well as to the most distinguished nobles: he was beset with false accusations, since he could not resist his *enemies' faction* he had given in to fate ...

Sall. *Cat.* 34.2

- (128) quam si expectaro, non erit quod putes me causae meae, *voluntati meorum* defuisse.

If I wait for that, you will have no reason to think that I have failed in what I owe to my cause and *my friends' good will*.

Cic. *Att.* 3.13.1

- (129) tu cum conscientia scelerum tuorum agnoscas *odium omnium* iustum et iam diu tibi debitum, dubitas quorum mentes sensusque vulneras, eorum aspectum praesentiamque vitare?

You, who by the knowledge of the wickedness of your crimes understand that *everyone's hatred* of you is just and has been owed to you for a long time, do you doubt whether to avoid the sight and presence of those men whose minds and senses you injure?

Cic. *Cat.* 1.17

The genitive in example (127) is a descriptive adjective which has been lexicalised as the noun *inimicus* “enemy”, whilst in (128) *meorum* is a possessive adjective whose head noun *amicorum* “friends” is understood, and in (129) *omnium* is a quantifying adjective. For all three examples, there are no obvious motivations for NGen order. In

fact, the genitives in (128) and (129) are subjective, yet they still follow their head noun.

When the genitive precedes the noun, though, the situation is somewhat different:

- (130) eodem tempore Iugurtha amissis amicis – quorum plerosque ipse necaverat, ceteri formidine pars ad Romanos, alii ad regem Bocchum profugerant – quom neque bellum geri sine administris posset et *novorum fidem* in tanta perfidia veterum experiri periculosum duceret, varius incertusque agitabat.

At that time Jugurtha, who had lost his friends – most of whom he had killed himself, and the rest had fled in fear, part to the Roman, others to king Bocchus – since he could not wage a war without officers and as he judged it to be hazardous to trust to the *fidelity of new people* when old friends had proved to be faithless, was troubled and irresolute.

Sall. *Iug.* 74.1

- (131) diutius cum sustinere *nostrorum impetus* non possent, alteri se, ut coeperant, in montem receperunt, alteri ad impedimenta et carros suos se contulerunt.

When the enemy could no longer withstand *our men's attack*, some of them retreated to higher ground, as they had already begun to do, whilst others formed up around their baggage and wagons.

Caes. *BG* 1.26.1

- (132) minime maleficia, quod *nullius opus* vellicans facit deterius ...

The bee is not in the least harmful, as it injures *no man's work* by pulling it apart ...

Varro *Rust.* 3.16.7

In example (130), the genitive *novorum* is descriptive, though, unlike (127) it has not been lexicalised, and instead the head noun *amicorum* is understood. Note, though, that both parts of the genitive construction are emphatic, as *novorum fidem* “fidelity of new friends” is contrasted with *perfidia veterum* “treachery of old friends”. Sallust uses the contrast to play up Jugurtha’s inenviable position: he is isolated and alone, betrayed or deserted by his old companions, and is now compelled to rely upon people whom he does not know well. Since both dependent genitives and head nouns are emphatic, it might be expected that NGen would be the outcome, see Ch. 3 §1.3 above. However, the constituents of the contrasting phrases are ordered chiastically, with the genitive preceding in *novorum fidem* but following in *perfidia veterum*. The

GenN order of *novorum fidem* is the result of an aesthetic pattern, rather than information structure.

As for the possessive adjective *nostrorum* in example (113), it is also a subjective genitive, a genitive function associated with anteposition of the genitive, depending on the head noun *impetus* “attack”, derived from *impetere* “to attack”. The quantifier *nullius* in (132), depends on *opus* “work”, a noun with no direct verbal cognate (“to work” is *opus facere*) but still with a sense of action. It too can be considered a subjective genitive. As a result, it may very well be the grammatical function of these two genitives rather than their lexical category that determines their order.

Consequently, it would seem that there are alternative explanations for the genitive adjectives examples of GenN order provided by other factors, whilst the NGen examples are apparently otherwise unmotivated. This may suggest that NGen is the basic order when the genitive is an adjective, or derived from one. On the other hand, the near-equal distribution of NGen and GenN orders overall for the genitive adjectives may also mean that they may have little to no effect on the word order in the genitive construction.

#### **4.5 Gerunds and gerundives**

In Latin, gerunds are nominal forms of verbs, e.g. *finem oppugnandi* “an end of attacking” Caes. *BG* 2.6.4. Like nouns, they may be inflected for case, such as the genitive *oppugnandi*, but, like verbs, they may on occasion have complements, e.g. *Romam eundi* “going to Rome” Sall. *Iug.* 104.2. Gerundives, on the other hand, are adjectival forms of verbs, and so they depend on nouns, e.g. *eximendorum favorum signum* “the signal for removing the comb” Varro 3.16.32.

I have chosen to group gerunds and gerundives together, rather than subsuming them under the categories of noun and adjective respectively, because of their verbal origin.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	19	55.9%	15	44.1%	<b>34</b>
Cic. <i>Att.</i> 1-3	13	68.4%	6	31.6%	<b>19</b>
Cic. <i>Cat.</i> 1-2	2	50%	2	50%	<b>4</b>
Sall. <i>Cat.</i>	11	73.3%	4	26.7%	<b>15</b>
Sall. <i>Iug.</i>	16	64%	9	36%	<b>25</b>
Varro <i>Rust.</i>	9	64.3%	5	35.7%	<b>14</b>

**Table 4.5: distribution of NGen and GenN when the genitive is a gerund(ive)**

The gerunds and gerundives are most often found NGen, ignoring Cic. *Cat.* 1-2 on account of its small number of examples. This may be due to the fact that the gerund(ive) genitives are frequently longer and more complex than the head noun, e.g. *locum resecandae libidinis et coërcendae iuventutis* “an opportunity for cutting back on licentiousness and keeping the youth in order” Cic. *Att.* 1.18.2, *scientia pecoris parandi ac pascendi* “a science of assembling and feeding cattle” Varro *Rust.* 2.1.11. As a result, they meet two of the criteria for heaviness found in Hawkins’ Heaviness Principle (1983:90f.), and are therefore more likely to follow the head noun; cf. Ch. 3 §3.2.2 above for the effect of weight on the position of dependent genitives modified by adjectives. However, although gerunds and gerundives are both forms of verbs, they do function differently, gerunds acting like nouns, gerundives like adjectives, and it is worthwhile examining each of them in turn to determine what, if any, effect they have on word order.

#### 4.5.1 Gerunds

With the exception of Caesar and Cicero, the genitive gerunds follow their head noun most often. Whilst there is only one example of a genitive gerund in Cic. *Cat.* 1-2,

Caesar has the most gerunds of all the authors, and the prevalence of GenN order in his work cannot simply be ignored.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	10	43.5%	13	56.5%	<b>23</b>
Cic. <i>Att.</i> 1-3	4	50%	4	50%	<b>8</b>
Cic. <i>Cat.</i> 1-2	0	0%	1	100%	<b>1</b>
Sall. <i>Cat.</i>	8	73.3%	3	26.7%	<b>11</b>
Sall. <i>Iug.</i>	10	66.7%	5	33.3%	<b>15</b>
Varro <i>Rust.</i>	6	66.7%	3	33.3%	<b>9</b>

**Table 4.5.1: distribution of NGen and GenN when the genitive is a gerund**

Examples of gerunds following their head noun are given below:

- (133) *haec cum pluribus verbis flens a Caesare peteret, Caesar eius dextram prendit. consolatus rogat, finem orandi faciat.*

These things, with many words, he sought in tears from Caesar, who took him by the hand and bade him be consoled and to *end his entreaty* [lit.: make *an end of speaking*].

Caes. *BG* 1.20.5

- (134) *Si fastidium saliendi est, scillae medium conterunt cum aqua ad mellis crassitudinem; tum ea re naturam equae, cum menses ferunt, tangunt; contra ab locis equae nares equi tangunt.*

If the horse *will not cover the mare* [lit.: there is *an aversion to breeding*], the centre of a squill is crushed in water and reduced to the consistency of honey; with this the natural parts of the mare are touched when she is in heat, and on the other hand the nostrils of the horse are touched with what comes from the natural parts of the mare.

Varro *Rust.* 2.7.8

- (135) *non mea culpa saepe ad vos oratum mitto, patres conscripti, sed vis Iugurthae subigit, quem tanta libido extinguendi me invasit ut neque vos neque deos immortalis in animo habeat, sanguinem meum quam omnia malit.*

It is not through any fault of mine that I often appeal to you, Conscript Fathers, but rather I am compelled to do so by the hostility of Jugurtha, who has been invaded by *so great a desire of destroying me* that he heeds neither you nor the immortal gods, desiring my blood above all else.

Sall. *Iug.* 24.2

The order of the genitive construction in example (133) has no obvious motivation.

It is possible, though, that the gerund is either an objective or a partitive genitive after *finis*, both of which are found more frequently after the head noun, see Ch. 3 §2.2 and §2.5.2 above.

On the other hand, the NGen order in example (134) can be explained in terms of information structure. At this point in the text, the conversation has turned to the breeding of horses, and consequently *saliendi* “breeding” is old information, whilst *fastidium* “aversion” is an unexpected problem. As Lucienus not only explains what to do in order to overcome the horse’s aversion, but also goes on to relate a story about a stallion who was extremely reluctant to breed his own mother, *fastidium* is clearly the focus of the discussion.

Example (135) has a complex head noun phrase, consisting of the adjective *tanta* “so great” followed by the noun *lubido* “desire” and a complex genitive made up of the gerund *extinguendi* “destroying” and its complement *me*. Since head and dependent genitive are both complex, they are both heavy. Neither the head noun phrase nor the dependent genitive phrase is heavier than the other, and so, in the absence of other motivating factors, they occur in the order NGen; cf. the genitive constructions in Ch. 3 §1.3 above where both head noun and dependent genitive carry pragmatic marking.

Although NGen is found more often in Sallust and Varro, GenN occurs more frequently in Caesar. Examples follow:

- (136) Sabinus idoneo rebus omnibus loco castris sese tenebat, cum Viridovix contra eum duorum milium spatio consedisset cotidieque productis copiis *pugnandi potestatem faceret*, ut iam non solum hostibus in contemtionem Sabinus veniret, sed etiam nostrorum militum vocibus nonnihil carperetur ...

Sabinus stayed put in camp, in a place suitable for any emergency, while Viridovix pitched an opposing camp two miles away and brought out his troops every day to give him *the opportunity of fighting*, so that at length Sabinus was not only held in contempt by the enemy, but was also disparaged by some criticisms of our own soldiers ...

Caes. BG 3.17.5

- (137) Alterae partes quattuor sunt, cum iam emeris, observandae, de pastione, de fetura, de nutricatu, de sanitate. *Pascendi primus locus* qui est, eius ratio triplex, in qua regione quamque potissimum pascas et quando et qui ...

After the purchase has been made we come to the second group of four points which are to be observed: they are those concerned with pasturage, breeding, feeding, and health. *Of pasturage, which is the first point*, there are three divisions: the preferable locality for the pasturage of the several species, the time, and the manner ...

Varro *Rust.* 2.1.16

- (138) quod si in eam me partem incitarem, profectem iam *aliquam* reperirem *resistendi* viam.

But if I had urged myself in that direction I should surely have found *some method of opposition* [lit.: *some way of resisting*] before now.

Cic. *Att.* 2.16.3

In example (136), the genitive construction *pugnandi potestatem* “opportunity of fighting” lacks any apparent internal motivation, be it from function of the genitive or information structure. At best, it could be argued that there is a contrast between fighting and Sabinus’ decision to stay put, which is played up by the reaction of both the Gauls and Sabinus’ own soldiers. Note that the phrase *potestatem facere* “to give leave”, “to give an opportunity” is an idiomatic expression, see the *TLL* Vol. X, col. 316, as well as *IIIB* under the entry for *potestas* in Lewis and Short (p. 1408). Whilst this does not necessarily mean that the expression is always found in the order *potestatem facere*, and in fact the object and the verb can be split up, e.g. *potestatem sui facerent* Cic. *Q. Fr.* 1.2.15, or have their order reversed, e.g. *fieri potestatem* Cic. *Verr.* 2.4.66, there are four further instances in Caesar – *BG* 1.40.8, 1.50.2, 4.11.2, 4.15.5 – where the phrase is found *potestatem facere*, with the object directly preceding the verb.

The genitive *pascendi* “pasturing” in (137) is obviously topical. Scrofa has just listed the four main points he will talk about next, and is now beginning to discuss each of them in turn, starting with the subject of pasturage. The position of *pascendi* at the very start of the sentence makes it clear that it is a discourse topic, and so the

demands of information structure override all other potential factors; see Ch. 3 §1.3 above.

In example (138) the gerund *resistendi* “resisting” is partly enclosed by the noun *viam* “way” and its emphatic, but discontinuous, adjective *aliquam* “some”. Since the adjective is extensional, it precedes the head noun, and so the genitive too is anteposed; see Ch. 3 §2.4 above for a discussion of the word order patterns of enclosed genitives. The objection might be raised that because the adjective is discontinuous, it cannot effectively enclose the genitive. A possible solution – presented in terms of generative syntax – is that *aliquam* started out within the noun phrase, but has moved from its original position, leaving behind a morphological and phonologically null trace that has the same enclosing effect as the adjective itself, giving the structure *aliquam<sub>i</sub> reperirem t<sub>i</sub> resistendi viam*, where *t* stands for the invisible trace.

The ordering patterns of genitive gerunds are not clear-cut, with different orders found more often in different authors. Nor does analysing examples of the gerunds alone help matters much, since apparently unmotivated examples of both pre- and post-head gerunds can be found. Instead, the ordering patterns become clear when gerunds and gerundives are compared.

#### 4.5.2 Gerundives

Whilst the ordering patterns for gerunds are not straightforward, it is immediately clear that NGen is the most common order for genitive gerundives in each and every one of the authors.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	9	81.8%	2	18.2%	11
Cic. <i>Att.</i> 1-3	9	81.8%	2	18.2%	11
Cic. <i>Cat.</i> 1-2	2	66.7%	1	33.3%	3
Sall. <i>Cat.</i>	3	75%	1	25%	4
Sall. <i>Iug.</i>	6	60%	4	40%	10
Varro <i>Rust.</i>	3	60%	2	40%	5

**Table 4.5.2: distribution of NGen and GenN when the genitive is a gerundive**

One glance at examples of the gerundives shows why this should be so. They are all of them found in genitive phrases that are at least two words in length, e.g. *consilium belli faciendi* “plan of waging war” Cic. *Cat.* 2.14, and frequently longer, e.g. *spe non corrigendae sed sanandae civitatis* “hope not of reforming but of healing the state” Cic. *Att.* 1.18.2, *data facultate per provinciam itineris faciendi* “an opportunity of marching through the province having been given” Caes. *BG* 1.7.5, *cupidine caecus ob thesauros oppidi potiundi* “blinded by desire of capturing the city on account of the treasury” Sall. *Iug.* 37.3. Thanks to this, the gerundives are indisputably heavy, which leads to NGen being the most common order:

- (139) hac oratione habita mirum in modum conversae sunt omnium mentes summaque alacritas et cupiditas belli gerendi inlata est ...

By delivering this speech, the minds of all the soldiers were changed in a remarkable way, and the utmost keenness and *desire of waging war* was kindled in them ...

Caes. *BG* 1.41.1

- (140) atque in ista incommoditate alienati illius animi et offensi illud inest tamen commodi, quod et mihi et ceteris amicis nota fuit et abs te aliquanto ante testificata *tua voluntas omittendae provinciae*, ut, quod una non estis, non dissensione ac discidio vestro sed voluntate ac iudicio tuo factum esse videatur.

There is at any rate one good thing in this bad business of Quintus’ estrangement and dudgeon, I mean that I and your other friends know from statements of your own made some time beforehand of *your inclination to say no to the province* [lit.: *your inclination of forgoing the province*], so that your not being together won’t be attributed to any difference or rift between you but to your own inclination and decision.

Cic. *Att.* 1.17.7

- (141) ea mora *in spem* adductus Aulus, quem pro praetore in castris relictum supra diximus *aut conficiundi belli aut terrore exercitus ab rege pecuniae capiundae*

milites mense Ianuario ex hibernis in expeditionem evocat, magnisque itineribus hieme aspera pervenit ad oppidum Suthul, ubi regis thesauri erant.

Because of this delay Aulus, who had been left as the commander of the army, as we have mentioned above, was filled with *hope of either finishing the war or, by fear of his army, coercing a bribe from the king*, and in January he led his soldiers out of their winter quarters on a special mission, and by forced marches in the bitter winter he came to the town of Suthul, where the king's treasury was.

Sall. *Iug.* 37.3

Example (139) is quite straightforward, with a head noun *cupiditas* “desire” followed by a dependent genitive phrase consisting of a noun *belli* “war” and a modifying gerundive *gerendi* “waging”. There is no immediately obvious reason why the genitive phrase should follow, aside from the fact that it is longer and thus heavier than the head noun. However, example (140) demonstrates that even when the head noun phrase is itself comprised of two words, in this case a noun *voluntas* “inclination” and the modifying possessive pronoun *tuus* “your”, the gerundive phrase still follows.

On the other hand, (141) provides an example of an extremely heavy genitive phrase comprised of not just one but two gerundive phrases *conficiundi belli* “finishing the campaign” and *pecuniae capiundae* “coercing a bribe”, which are contrasted with each other as two possible motivations for Aulus' actions. Since they carry the pragmatic function of contrast, it would be expected that genitive would precede the head noun. However, not only are there two gerundive phrases in this genitive, but the second phrase also has two complements, the instrumental phrase *terrore exercitus* “by fear of his army” and the prepositional phrase *ab rege* “from the king”. This makes it a very heavy dependent genitive indeed. The sheer weight of this gerundive phrase overrides the contrast, and in fact also causes the genitive phrase to be postponed to the end of the subordinate clause describing Aulus, separating it from its head noun. The Heaviness Principle plays an indisputable rôle in determining the position of this particular genitive phrase.

When the gerundives are found GenN, this is largely thanks to interaction with other factors, especially information structure:

- (142) nihilne te nocturnum praesidium Palati ... nihil *hic munitissimus habendi senatus locus*, nihil horum ora vultusque moverunt?

Does not the nightly watch on the Palatine ... nor *this most fortified place for assembling the Senate*, nor the faces and expressions of these men move you?

Cic. *Cat.* 1.1

- (143) his amicis sociisque confisus Catilina, simul quod aes alienum per omnis terras ingens erat et quod plerique Sullani milites, largius suo usu, rapinarum et victoriae veteris memores civile bellum exoptabant, *opprimundae rei publicae consilium cepit*.

Confiding in such friends and allies as these, Catiline, because his own debts were great throughout the land and because many Sullan soldiers, having squandered their property and remembering old victories, were eager for civil war, devised *a plan of overthrowing the republic*.

Sall. *Cat.* 16.4 topic of conspiracy

- (144) *eximendorum favorum signum* sumunt es ipsis † viris alvos habeat nem congerminarit † coniecturam capiunt, si intus faciunt bombum et, cum intro eunt ac foras, trepidant et si, opercula alvorum cum remoras, favorum foramina obducta videntur [mellis] membranibus, cum sint repleti melle. in eximendo quidam dicunt oportet [ita ut] novem partes tollere, decumam relinquere; quod si omne eximas, fore ut discedant. alii hoc plus relinunt, quam dixi. ut in aratis qui faciunt <non> restibiles segetes, plus tollent frumenti ex intervallis, sic in alvis, si non quotannis eximas aut non aeque multum, et magis his assiduas habeas apes et magis fructuosas. *eximendorum favorum primum* putant esse *tempus* vergiliarum exortu, secundum aestate acta, antequam totus exoriatur arcturus, tertium post vergiliarum occasum, et ita, si fecunda sit alvos, ut ne plus tertia pars eximatur mellis, reliquum ut hiemationi relinquatur; sin alvus non sit fertilis, ne quid eximatur. exemptio cum est maior, neque universam neque palam facere oportet, ne deficient animum. favi qui eximuntur, siqua pars nihil habet aut habet incunatum, cultello praesicatur.

*The signal for removing the comb* is given by the following occurrences ... if the bees make a humming noise inside, if they flutter when going in and out, and if, when you remove the covers of the hives, the openings of the combs are seen to be covered with a membrane, the combs being filled with honey. Some authorities hold that in taking off the honey nine-tenths should be removed and one-tenth left; for if you take all, the bees will quit the hive. Others leave more than the amount stated. Just as in tilling, those who let the ground lie fallow reap more grain from the interrupted harvests, so in the matter of hives if you do not take off honey every year, or not the same amount, you will by this method have bees which are busier and more profitable. It is thought that *the first season for removing the comb* is at the time of the rising of the Pleiades, the second at the end of summer, before Arcturus is wholly above the horizon, and the third after the setting of the Pleiades. But in this case, if the hive is well filled no more than one-third of the honey should be removed, the remainder being left for winter; but if the hive is not well filled no honey should be taken out. When the amount removed is large, it should not all be taken at one time or openly, for fear the bees

may lose heart. If some of the comb removed contains no honey or honey that is dirty, it should be cut off with a knife.

Varro *Rust.* 3.16.32-34

In example (142), the gerundive phrase *habendi senatus* “holding a meeting of the senate” is enclosed by the noun *locus* “place” and its modifying adjective *munitissimus* “most fortified”, and so precedes the noun. It is also a genitive of quality, which may also explain why it is found before the head noun; see Ch. 3 §2.4 above. It is also worth noting that within the genitive phrase itself, the gerundive *habendi* precedes the noun *senatus*, enclosing it between itself and the head noun *locus*. The same pattern is present in the genitives in (143) and (144) as well, with the genitive noun enclosed between its modifying gerundive and the head noun. The genitive phrase in (143) is also focal, with *opprimundae rei publicae* “overthrowing the republic” being the main purpose of the conspiracy.

Turning to (144), information structure once again plays a rôle in determining the ordering of the dependent genitive and its head noun. There are two examples of the genitive gerundives, *eximendorum favorum signum* “the sign for removing the comb” and *eximendorum favorum primum tempus* “the first season for removing the comb”, both of which are topical, as the passage in question discusses the removal of the honeycomb from the beehive, repeating *eximo* “remove” and *favus* “honeycomb” throughout.

The first instance of *eximendorum favorum* comes with a switch in topic that is marked by the speaker, Merula, who states that now he is done with discussing caring for bees he will turn to the profit that they bring. This is immediately followed by the sentence beginning *eximendorum favorum signum* “the sign for removing the comb”, and Merula proceeds to lay out guidelines for the amount of honey that can be removed without distressing the bees. In the second instance, *eximendorum favorum*

is no longer new and indeed has been discussed for a while. Now the conversation turns to the best time for removing honey. However, it is still a conversation about removing honey, so *eximendorum favorum* remains topical.

It is clear that genitive gerundives are most often found following their head noun thanks to their weight and complexity. Returning to the problem of the order of genitive gerunds, it seems likely that NGen is the basic order for them too, but that, because the gerunds are usually simple, one-word genitive phrases, they are not constrained by length in the same way that the gerundives are, and so they may be found preceding the head noun more often.

#### **4.6 Conclusion**

Lexical category has some effect on word order, though this is limited to certain categories, with the nouns and adjectives having very little apparent influence. On the other hand, pronouns are usually found before their head nouns, with Sallust the sole exception, while gerund(ive)s are most commonly found after their head noun. In addition, the effect of the *wh*-pronouns on word order is absolutely undeniable. Every single *wh*-pronoun in the genitive precedes its head noun. This is the one invariable ordering pattern in the Latin genitive construction, overriding all other considerations.

#### **5. ANIMACY**

In a number of languages, such as Sesotho (Siewierska 1988:56, Morolong and Hyman 1977), Rumanian (Myhill 1992:202) and Navajo (Hale 1973), it has been shown that animacy is linked to word order, with highly animate nouns being more likely to precede less animate nouns in the sentence. This may be due to the fact that animate nouns are more likely to be found as subjects than inanimate nouns. They are

also more likely to be topicalised, and so occur earlier in the sentence (Myhill 1992:45, 47).

Animacy does not merely affect word order on the sentence level. Leech, Francis and Xu 1994 show that in English animacy determines the order of constituents in a possessive construction. The more animate the possessor, the more likely it is that the Saxon genitive *X's Y* will be selected over the prepositional construction *the Y of X*. In this section, I discuss the role played by animacy in determining the order of constituents in the Latin genitive construction, in particular the degree of animacy of the constituent in the genitive and its effect upon the order of the genitive and its head noun.

The animacy hierarchy I use is from Croft 1990:112 following Silverstein 1976 and Dixon 1979. The hierarchy, from most to least animate, is as follows: 1<sup>st</sup>/2<sup>nd</sup> person pronouns > 3<sup>rd</sup> person pronouns > proper nouns > human common nouns > animate nonhuman common nouns > inanimate common nouns. The different points on the animacy hierarchy are not always distinguished by literal animacy – the distinction between third person pronouns and nouns, for example, is based on a pronominal versus nominal distinction, as the third person pronouns are capable of having proper nouns and human common nouns as their referents.

There are two chief hypotheses for the effect of animacy on Latin word order. One is that the more animate the genitive the more likely it is to precede the head noun. On the other hand, Devine and Stephens 2006:380 note that “in Latin genitive raising the hierarchy seems to work in the opposite direction (*hostium castra* > *Vari castra*)”, i.e. more animate constituents are less likely to precede the head noun than less animate ones. Another possible hypothesis is that it is the relative animacy of the head noun

and genitive that determines their order, with the more animate of the two constituents preceding the less animate.

At this point, I should note that the pilot study in *Att.* 1.16-19 and *Cat.* 1 suggested that the animacy hierarchy was in complete disarray. The table below shows the relative positions of the different types of animate genitives in each work in my full corpus, from most to least often GenN:

	Caes. <i>BG</i> 1-3	Cic. <i>Att.</i> 1-3	Cic. <i>Cat.</i> 1-2	Sall. <i>Cat.</i>	Sall. <i>Iug.</i>	Varro <i>Rust.</i>
Often GenN	3 <sup>rd</sup> person animals humans names	3 <sup>rd</sup> person names/humans inanimates	3 <sup>rd</sup> person inanimates humans names	animals humans 3 <sup>rd</sup> person names	animals 3 <sup>rd</sup> person names inanimates	3 <sup>rd</sup> person names animals inanimates
Rarely GenN	inanimates	1 <sup>st</sup> person	1 <sup>st</sup> person	inanimates 1 <sup>st</sup> person	humans 1 <sup>st</sup> person	humans 1 <sup>st</sup> person

**Table 5: distribution of animate genitives from most to least often GenN**

Even just a brief glance at the table makes it instantly clear that the animacy hierarchy hypotheses are in disarray. Animacy has no effect on the word order of the genitive construction, at least not when the distinction between the different types of animacy is so fine-grained.

### 5.1 First and Second Person Pronouns

The first and second person pronouns *mei* and *tui* and their plural forms *nostri*, *nostrum* and *vestri*, *vestrum* rank highest in the animacy hierarchy. According to the first hypothesis, this should make them more likely to precede the head noun, but Devine and Stephens 2006 suggest otherwise, and in fact the figures in the table below agree with their observations:

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	0	NA	0	NA	<b>0</b>
Cic. <i>Att.</i> 1-3	8	72.7%	3	27.3%	<b>11</b>
Cic. <i>Cat.</i> 1-2	2	100%	0	0%	<b>2</b>
Sall. <i>Cat.</i>	3	100%	0	0%	<b>3</b>
Sall. <i>Iug.</i>	1	100%	0	0%	<b>1</b>
Varro <i>Rust.</i>	2	100%	0	0%	<b>2</b>

**Table 5.1: distribution of NGen and GenN in first/second person genitives**

The first and second person pronouns do not occur often enough for figures to give a reliable indication of their position, with only two or so instances in most of the authors. There are none whatsoever in Caes. *BG* 1-3, which is unsurprising, given his third person narration and his preference for indirect speech. In Cic. *Att.* 1-3, on the other hand, there are twelve instances of the first and second person pronouns, four of which are found preceding the head noun. However, it would appear from the table that NGen is the most common order, which contradicts the order predicted by the animacy hierarchy.

Turning now to the analysis of examples in context, below are instances of NGen order:

- (145) quo mihi rectius [esse] videtur ingeni quam virium opibus gloriam quaerere, et, quoniam vita ipsa qua fruimur brevis est, *memoriam nostri* quam maxime longam efficere ...

What seems better to me is to seek fame with the help of intelligence rather than strength, and, since the life itself which we enjoy is brief, to make *the memory of us* last as long as possible ...

Sall. *Cat.* 1.3

- (146) ... animum inducere non potui ut aut illum, *amantissimum mei*, mollissimo animo, tanto in maerore adspicerem aut meas miserias luctu adflictus et perditam fortunam illi offerrem aut ab illo adspici paterer.

... I could not bring myself to meet him, *devoted to me* [lit.: *most loving of me*] and soft-hearted as he is, in so sad a state, nor yet, bowed in woe as I am, to thrust my misery and ruin in his way or allow him to see it.

Cic. *Att.* 3.9.1

- (147) at Quintus Lucienus senator, homo quamvis humanus ac iocosus, introiens, *familiaris omnium nostrum*, “Synepirotae,” inquit, “χαῖrete.”

At this point Quintus Lucienus, the senator, a thoroughly kind and jovial person, and *a friend to all the company* [lit.: *a friend of us all*], entered and said: “Greetings, fellow-citizens of Epirus.”

Varro *Rust.* 2.5.1

All three examples are without pragmatic marking on either the noun or the dependent genitive. However, both examples (145) and (146) are objective genitives, which usually follow their head noun. In (146) the adjective *amantissimum* is treated like a noun in order for it to take a dependent genitive; see also exx. (148) and (150) below. Example (147), on the other hand, is a possessive genitive, which function has variable order, so the NGen order cannot be explained in terms of information structure, nor function.

In my corpus the only instances of GenN order for this construction are found in Cic. *Att.* 1-3. Since there are so few examples, all three of them are given below:

- (148) ... cum et meo dolore moveare et ipse omni virtute officioque ornatissimum *tuique* et sua sponte et meo sermone *amantem* adfinem amicumque amiseris.

... for you will feel my distress, and you yourself have lost a family connection and a friend, one who possessed every good quality and disposition to serve others, *and who loved you* [lit.: *a lover of you*] both of his own accord and from hearing me speak of you.

Cic. *Att.* 1.5.1

- (149) “regem appellas” inquam, “cum Rex *tui mentionem nullam* fecerit?”

“You talk about kings,” I answered, “when Rex didn’t have *a word to say about you* [lit.: *made no mention of you*]?”

Cic. *Att.* 1.16.10

- (150) ego quod per Thessaliam si irem in Epirum perdiu nihil eram auditurus et quo [et] *mei studiosos* habeo *Dyrrachinos* ad eos perrexi ...

... I proceeded to Dyrrachium, because if I had travelled to Epirus by way of Thessaly I should have heard nothing for a very long time, and because *the townspeople are warm friends of mine*.

Cic. *Att.* 3.22.4

All are objective genitives, so here it is likely that function has been overridden by some other factor. In the case of (149) that other factor may be information structure,

as the genitive *tui* “you” could be considered to be contrasted implicitly with the other people that Rex did mention in his will, and who benefited as Clodius had hoped to. However, in examples (148) and (150) there do not appear to be any other motivating factors, except for possibly the assonance *amantem adfinem amicumque amiseris* in (148). Note, though, that the preposed genitives *tui* and *mei* are short and light, whilst the head nouns in both (149) and (150) are relatively heavy, so it may be that these genitives precede their head nouns thanks to the Heaviness Principle, discussed in Ch. 3 §3.2.1 above.

The analysis of the examples does not help much in determining the neutral order for first and second person pronominal genitives. The fact that NGen is rather more frequent suggests on numerical grounds that the neutral order for these genitives is postposition, which would be in keeping with Devine and Stephens’ hypothesis that more animate genitives are less likely to precede the head noun than less animate genitives.

As mentioned above, it is possible that the animacy of the head noun is also involved, and that order is determined by the relative animacy of the head noun and its dependent genitive. This hypothesis predicts that whichever constituent is more animate will precede. However, a glance at example (145) shows that this is not always the case, where the abstract, inanimate noun *memoria* “memory” precedes the first person pronoun *nostri* “us”.

Note that both this section and Ch. 3 §5.2 below overlap entirely with Ch. 3 §4.2 above as they all three look at the effect of pronouns on word order.

## 5.2 Third person pronouns

The personal pronouns *eius* and *eorum* are here supplemented by the *wh*-pronouns *cuius* and *quorum*, as well as the demonstratives and determinatives *huius*, *illius* and *ipsius* (see Ch. 3 §4.2 above) as all of these have a third person reference. Note, though, that instances of third person pronouns that refer to animals have been moved to the animate non-human common nouns on the grounds that an animal-human distinction is more likely to be significant for the animacy hierarchy than a nominal-pronominal one.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	27	23.1%	90	76.9%	<b>117</b>
Cic. <i>Att.</i> 1-3	27	32.5%	56	67.5%	<b>83</b>
Cic. <i>Cat.</i> 1-2	6	16.7%	30	83.3%	<b>36</b>
Sall. <i>Cat.</i>	27	52.9%	24	47.1%	<b>51</b>
Sall. <i>Iug.</i>	47	45.6%	56	54.4%	<b>103</b>
Varro <i>Rust.</i>	19	41.3%	27	58.7%	<b>46</b>

**Table 5.2a: distribution of NGen and GenN in third person genitives**

The third person pronouns for Caesar and Cicero are found GenN most often by a very large margin, whilst for Varro and Sall. *Iug.* they are still found GenN, though by a rather smaller margin. In Sall. *Cat.*, however, they are found NGen more often, though there is not much difference in the proportions of NGen:GenN. There is no consistency across authors.

NGen examples are given below:

- (151) quorum de natura moribusque Caesar cum quaereret, sic reperiebat: nullum esse aditum ad eos mercatoribus; nihil pati vini reliquarumque rerum ad luxuriam pertinentium inferri, quod iis rebus relanguescere *animos eorum* virtutemque remitti existimarent.

When Caesar asked about their nature and customs, he learned the following: no merchants visited them, nor did they allow any wine or other trappings of luxury to be imported, because they thought that through such things *their spirits* were made feeble and their bravery diminished.

Caes. *BG* 2.15.4

- (152) in horum emptione solet accedere peculium aut excipi et stipulatio intercedere, sanum esse, furtis noxisque solutum; aut si mancipio non datur, dupla promitti,

aut, si ita pacti, simpla. *cibus eorum* debet esse interdus separatim unius cuiusque gregis, vespertinus in cena, qui sunt sub uno magistro, communis.

In the purchase of slaves, it is customary for the “peculium” to go with the slave, unless it is expressly expected; and for a guarantee to be given that he is sound and has not committed thefts or damage; or, if the transfer is not by mancipation, double the amount is guaranteed, or merely the purchase price, if this be agreed on. *They should eat* [lit.: *their meals* should be] during the day apart, each with his own herd, but in the evening all those who are together under one head-herdsman should eat together.

Varro *Rust.* 2.10.5

- (153) nam si digna poena pro factis eorum reperitur, novom consilium adprobo; sin magnitudo sceleris omnium ingenia exsuperat, iis utendum censeo quae legibus comparata sunt ... equidem ego sic existumo, patres conscripti, omnis cruciatus minores quam *facinora illorum* esse.

For if a punishment equivalent to their deeds is found, then I support an unprecedented course of action; but if the magnitude of their wickedness exceeds all men’s imagination then I advise that those penalties should be used which are laid down by the laws ... For my part, conscript fathers, I believe that all tortures are lesser than *the crimes of those men*.

Sall. *Cat.* 51.8-15

- (154) sit denique inscriptum in *fronte unius cuiusque* quid de re publica sentiat.

Finally, let it be written *on the forehead of each and every man* what he thinks of the state.

Cic. *Cat.* 1.32

Since this section is concerned with third person pronouns, it follows that they will almost all of them be anaphoric. So, in example (151) *eorum* is old anaphora, following *quorum* and *eos*. As noted in Ch. 3 §4.2.1 above, old anaphoric constituents are often found following the head noun. Similarly, in (152) *eorum* is also old, following *horum*. Moreover, the head noun *cibus* is a new topic, as the conversation shifts from the buying of slaves to their feeding, and so is found not merely at the start of the noun phrase but at the very beginning of the sentence; see Ch. 3 §1.1 and §1.3 above.

Example (153) also contains an anaphoric pronoun, in this case a resumptive anaphoric pronoun which picks up on the *eorum* referring to the conspirators mentioned much earlier in Caesar’s speech. Although in Ch. 3 §4.2.1 above it was noted that resumptive anaphoric pronouns are more usually found before their head

noun, *illorum* here follows instead. Further, it is a subjective genitive, which might be expected to precede its head noun. Two features associated with GenN order have been overridden here, possibly by animacy. Note, however, that this example is taken from Sallust with his overall tendency to NGen order.

The genitive *unius cuiusque* in example (154) is polysyllabic and consists of two words, making it heavy. As a result, it is found to the right of the phrase, after its head noun, in accordance with the Heaviness Principle of Hawkins 1983:90f.; see the discussion of this same example at ex. (116) in Ch. 3 §4.2 above. Almost all of the NGen examples of third person pronouns, thus, can be explained in terms of some other factor than the animacy of the genitive. As for the hypothesis that the relative animacy of the head noun and the dependent genitive determines the arrangement of the constituents, the head nouns in each of these examples are all less animate than the genitives: *animus* “spirit”, *cibus* “food”, *facinus* “crime” and *frons* “forehead”.

Turning now to the more common GenN order, examples follow:

- (155) Gallia est omnis divisa in partes tres, quarum unam incolunt Belgae, aliam Aquitani, tertiam qui *ipsorum lingua* Celtae, nostra Galli appellantur.

Gaul is a whole divided into three parts, of which one the Belgae are the inhabitants, another the Aquitani, and the third those who in *their own tongue* are called the Celts, and in ours the Gauls.

Caes. *BG* 1.1.1

- (156) immo vero etiam in senatum venit, fit publici consili particeps, notat et designat oculis ad caedem unum quemque nostrum, nos autem fortes viri satis facere rei publicae videmur, si *istius furorem ac tela* vitemus.

In fact he even attends meetings of the Senate, is a participant in public affairs, notes and singles out with his eyes each and every one of us for death, we brave men however seem to fulfil our obligations to the state, if we manage to evade *this man's madness and weapons*.

Cic. *Cat.* 1.2

- (157) ... C. Baebium tribunum plebis magna mercede parat, *quoius impudentia* contra ius et iniurias omnis munitus foret.

... he bought C. Baebius, the tribune of the plebs, with a great bribe, *by whose impudence* he might be protected against the law and all punishment.

Sall. *Iug.* 33.2

(158) tertio Cererem et Liberum, quod *horum fructus* maxime necessary ad victum ...

Third, Ceres and Liber, because *their fruits* are most necessary for life ...

Varro *Rust.* 1.1.5

Examples (155) and (156) both have emphatic genitives. In (155), *ipsorum* “their” contrasts with *nostra* “our”, and in (156) *istius* “this man” is deictic, as Cicero refers to Catiline who is currently present in the Senate. In (157), the genitive is a *wh*-pronoun, which automatically precedes, see Ch. 3 §4.3 above. When the *wh*-pronouns are excluded, the proportions of GenN found in third person pronominal genitives drop in all authors, most dramatically in Sallust and Varro as seen in Table 5.2b below. As for (158), the genitive is a demonstrative pronoun, which, as demonstrated in Ch. 3 §4.2 above, is more likely to precede. Picking up on Ceres and Liber, it is also a clear instance of new anaphora, which is another priority factor, see Ch. 3 §4.2.1 above.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	27	28.4%	68	71.6%	<b>95</b>
Cic. <i>Att.</i> 1-3	27	38.6%	43	61.4%	<b>70</b>
Cic. <i>Cat.</i> 1-2	6	22.2%	21	77.8%	<b>27</b>
Sall. <i>Cat.</i>	27	64.3%	15	35.7%	<b>42</b>
Sall. <i>Iug.</i>	47	61%	30	39%	<b>77</b>
Varro <i>Rust.</i>	19	54.3%	16	45.7%	<b>35</b>

**Table 5.2b: distribution of NGen and GenN in third person genitives when *wh*-pronouns are excluded**

Given that all four of the GenN examples can be explained in terms of other factors, and that the same can be said for the NGen examples, this would leave the neutral order for the third person pronouns unresolved, were it not for the fact that they overlap with Ch. 3 §4.2 above, where pronominal genitives are shown to precede their head noun most often. This ties in with the numerical prevalence of GenN order for the third person pronominal genitives seen here, suggesting that the more animate pronominal genitives precede their head nouns, as predicted by the first hypothesis.

Glancing at the hypothesis that it is the relative animacy of the constituents that determines their order, for the GenN examples, the third person genitive is more animate than the head nouns *lingua* “language”, *furor ac tela* “madness and weapons”, *impudentia* “impudence” and *fructus* “fruits”. However, whilst this looks promising, the genitives were also more animate than the head nouns in the NGen examples, making this hypothesis somewhat uncertain.

### 5.3 Proper nouns

The proper nouns are all names, personal names, e.g. *domi C. Caesaris* “the house of C. Caesar” Cic. *Att.* 1.12.3, *Damasippi mors* “Damasippus’s death” Sall. *Cat.* 51.34, the names of peoples and nations, e.g. *Romanorum avaritiae* “the Romans’ greed” Sall. *Iug.* 103.5, *in vico Veragrorum* “in the lands of the Veragri” Caes. *BG* 3.1.4, and the names of gods, e.g. *in aedem Telluris* “in the temple of Tellus” Varro *Rust.* 1.2.1, *in aedem Iovis Statoris* “in the temple of Jove the Stayer” Cic. *Cat.* 2.12. The names of cities, countries and rivers, although proper nouns, have been classified with inanimates, on the grounds that as they refer to inanimate entities, they are not in the same category of animacy as people.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	95	58.6%	67	41.4%	<b>162</b>
Cic. <i>Att.</i> 1-3	53	50%	53	50%	<b>106</b>
Cic. <i>Cat.</i> 1-2	12	63.2%	7	36.8%	<b>19</b>
Sall. <i>Cat.</i>	29	54.7%	24	45.3%	<b>53</b>
Sall. <i>Iug.</i>	72	57.6%	53	42.4%	<b>125</b>
Varro <i>Rust.</i>	20	48.8%	21	51.2%	<b>41</b>

**Table 5.3: distribution of NGen and GenN in proper noun genitives**

In Table 5.3 we can see that NGen is the most frequent order for proper nouns, except for Cic. *Att.* 1-3 and Varro, where, respectively, both orders are in equal distribution and GenN occurs most often.

The NGen examples are again given first:

- (159) †qui ut† hesterno die, Quirites, cum domi meae paene interfectus essem, senatum *in aedem Iovis Statoris* convocavi, rem omnem ad patres conscriptos detuli.

Yesterday, Quirites, after I had almost been killed at home, I called a meeting of the Senate *in the temple of Jove Stator*, and I laid out the entire matter before the conscript fathers.

Cic. *Cat.* 2.12

- (160) qua re concessa laeti, ut explorata victoria, sarmentis virgultisque collectis, quibus *fossas Romanorum* compleant, ad castra pergunt.

Rejoicing that permission had been given, as though at a sure victory, they collected brushwood and branches with which they filled *the trenches of the Romans*, and went straight to the camp.

Caes. *BG* 3.18.8

- (161) ac maxume eos *potentia Scauri*, quod is auctor et socius Bestiae ferebatur, a vero bonoque inpediebat.

And most of all *the power of Scaurus*, because he was said to be the supporter and ally of Bestia, kept them from acting honourably and well.

Sall. *Iug.* 30.2

- (162) quis enim propter nobilitates ignorat *piscinas Philippi, Hortensi, Lucullorum?*

And, indeed, who does not know, on account of their fame, *the fish-ponds of Philippus, Hortensius, and the Luculli?*

Varro *Rust.* 3.3.10

The genitive in example (159) is the name of a god, which follows *aedes* “temple”, an order that Adams 1976:76 observes is often found in archaizing texts and “official religious language”. As the order of the genitive construction in Old Latin was GenN, postposing the name of the god was a stylistically marked order, with the genitive gaining prominence from its new position after the noun. So it would seem that the NGen order in this example is the result of an old idiom.

On the other hand, examples (160)-(161) are apparently unmotivated. Example (162) has a dependent genitive comprised of a list of noblemen who have fishponds. As seen with exx. (13) in Ch. 3 §1.2 above and (77) in Ch. 3 §3.1 above, the list overrides the pragmatic marking, leading to NGen order. Given that the other lists also follow the head noun, it is likely that in (162) it is the weight of the list, rather than animacy, that causes the genitive to follow its head noun.

When the genitive precedes, the order can almost always be explained in terms of other factors:

- (163) sed Axius eiusdem diei scribens ad me acta non ita laudat Curionem. at potest ille aliquid praetermittere; tu, nisi quod erat, profecto non scripsisti. *Varronis sermo* facit exspectationem Caesaris.

But Axius, in giving me an account of the same day's proceedings, doesn't praise Curio so highly. However, he may be leaving something out, whereas you of course will not have written anything but what was fact. *What Varro says* [lit.: *Varro's speech*] gives some hope of Caesar.

Cic. *Att.* 3.15.3

- (164) petierunt, ut sibi concilium totius Galliae in diem certam indicere idque *Caesaris voluntate* facere liceret ...

They asked that they might proclaim an assembly of the whole of Gaul on a certain day, and that it might be done *with Caesar's permission* ...

Caes. *BG* 1.30.4

- (165) sed eodem illo tempore *Graeciae morem* imitati verberibus animadvortebant in civis, de condemnatis summum supplicium sumebant.

But at that same time, imitating the *customs of Greece*, they punished citizens with scourges, and inflicted the ultimate punishment on the condemned.

Sall. *Cat.* 51.39

- (166) et simul *Vituli libertus* in urbem veniens ex hortis devertitur ad nos et, "Ego ad te missus," inquit, "ibam domum rogatum ne diem festum faceres breviorum et mature venires."

At the same time *a freedman of Vitulus*, on his way to the city from the park, turned aside to us and said: "I was sent to you, and was on my way to your house to ask you not to make the holiday shorter but to come early."

Varro *Rust.* 2.11.12

The genitive in example (163) is topical, not only because Cicero switches from his discussion of Curio's speech to Varro's. It is also the point at which Cicero moves on to reply to the fourth of the letters he received from Atticus, which he earlier summarises as *quartum de eo quod a Varrone scribis tibi esse confirmatum de voluntate Pompei* "the fourth in which you write that Varro has confirmed Pompey's good will" Cic. *Att.* 3.15.1. The mention of Varro instantly signals the topic shift, between speakers as well as between letters. Moreover, *Varronis* is a subjective genitive, as is *Caesaris* in (164); see Ch. 3 §2.5.1 above.

In example (165), the genitive is once again emphatic, this time because Caesar, speaking out against the execution of the conspirators, wishes to point out that inflicting harsh penalties on citizens is not a Roman custom but one borrowed from Greece. He goes on to contrast it with the Porcian law, a Roman law allowing exile instead of death, which the proposal to execute the conspirators without a trial violated. Being emphatic, the genitive precedes its head noun.

Finally, the genitive in (166) identifies the unnamed freedman, specifying from whom the invitation has come. Throughout the corpus, freedmen are most often referred to in the form master's name.GEN + *libertus*, e.g. *Crassi libertum* "Crassus's freedman", Cic. *Att.* 3.15.1, 3.15.3, *L. Reguli libertus* "L. Regulus's freedman" Cic. *Att.* 3.17.1. This may be idiomatic, or it might reflect the unimportance of the freedman relative to his master – in all these examples, it is not important to know who the freedman is, but rather who has sent him.

Since the GenN examples can be explained in terms of other features, this supports NGen being the overall order for proper names, again in keeping with Devine and Stephens rather than with the hypothesis that the more animate constituents will precede, in keeping with observations made of other languages. As for the relative animacy of the head noun and the dependent genitive, *aedes* "temple", *fossa* "ditch", *potentia* "power" and *piscina* "fish pond" are all less animate than their proper noun genitives, yet they still precede.

#### 5.4 Human common nouns

The human common nouns are nouns which refer to people, e.g. *studia tribunorum* "the enthusiasm of the tribunes" Cic. *Att.* 3.24.1, *multitudine hominum* "a great number of people" Caes. *BG* 2.6.2, *rogatio aeditumi* "at the invitation of the

sacristan” Varro *Rust.* 1.2.2. They can also include adjectives, e.g. bonorum consensio “the agreement of the good men” Cic. *Att.* 1.16.9, nostrorum impetus “the attack of our men” Caes. *BG* 1.26.1. Whilst they are found both preceding and following their head noun, proportionately they are found GenN more frequently than the animacy hierarchy would predict, which is once again in keeping with Devine and Stephens’ observation.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	78	51%	75	49%	<b>153</b>
Cic. <i>Att.</i> 1-3	59	50%	59	50%	<b>118</b>
Cic. <i>Cat.</i> 1-2	49	61.2%	31	38.8%	<b>80</b>
Sall. <i>Cat.</i>	57	49.6%	58	50.4%	<b>115</b>
Sall. <i>Iug.</i>	164	62.1%	100	37.9%	<b>264</b>
Varro <i>Rust.</i>	47	57.3%	35	42.7%	<b>82</b>

**Table 5.4: distribution of NGen and GenN in human common noun genitives**

Examples of NGen order are given below:

- (167) cum in Italiam profisceretur Caesar, Servium Galbam cum legione XII et *parte equitatus* in Nantuates, Veragros Sedunosque misit ...

When he set out for Italy, Caesar sent Servius Galba with the Twelfth Legion and *part of the cavalry* to the district of Nantuates, Veragri and Seduni ...

Caes. *BG* 3.1.1

- (168) etenim si summi viri et clarissimi cives Saturni et Gracchorum et Flacci et superiorum complurium sanguine non modo se non contaminarunt sed etiam honestarunt, certe verendum mihi non erat ne quid *hoc parricida civium* interfecto invidiae in posteritatem redundaret.

And in fact, if the most noble men and distinguished citizens not only did not defile but actually dignified themselves with the blood of Saturnus and the Gracchi and Flaccus and a good many others, then indeed I should not fear that upon the death of *this murderer of fellow citizens* there will be an excess of ill-will in the future.

Cic. *Cat.* 1.29

- (169) ac postea saepius eadem postulanti fertur dixisse ne festinaret abire, satis mature illum cum filio suo consulatum petiturum. is eo tempore *contubernio patris* ibidem militabat, annos natus circiter viginti.

And when Marius still kept up his demands, Metellus reportedly said that he should not hurry to depart, as the time would be right for him to seek the consulship along with his son, who at that time was serving there as *a junior staff-officer* of his father, about twenty years old.

Sall. *Iug.* 64.4

- (170) quo et pecus ab prato ablegandum et omne iumentum, etiam hominem. *solum enim hominis* exitium herbae et semitae fundamentum.

For this reason flocks and every sort of animal, including even man, must be kept off a meadow; for *the foot of man* is death to grass, and marks the beginning of a path.

Varro *Rust.* 1.47.1

Example (167) is a partitive genitive, so the NGen order is to be expected; see Ch. 3 §2.2 above. The function of the genitive may play a rôle in the order of the genitive construction in (168) as well, as *civium* “citizens” is objective. Also, the head noun *parricida* “murderer of a parent”, “traitor” is a highly charged and emotive term, which may carry emphasis. The combination of objective genitive and an emotive, emphatic head noun is again one which is expected to produce NGen order; see Ch. 3 §1.1 and §2.5.2 above.

In (169) the head noun *contubernium* “service as a junior staff-officer” is a focus constituent, which gives more information about the age of Metellus’s son. Metellus wishes to insult the forty-nine year old Marius and put him in his place by telling him that he will only be fit to run for consul in another twenty years time with his son, who is currently only a youngster starting out on his political career. The head noun in (170), however, carries no pragmatic marking, nor any other feature that will explain its NGen order. Although it is split by the clitic *enim*, this is simply an example of a Wackernagel particle occurring in clause-second position, rather than one of the clitics discussed by Adams 1994a which usually follow focal elements.

Most of the examples of NGen order above have been explained by interaction with other factors. What then of GenN order?

- (171) postridie eius diei Caesar praesidio utrisque castris, quod satis esse visum est, reliquit, alarios omnes in conspectu hostium pro castris minoribus constituit, quo<d> minus multitudine militum legionariorum pro *hostium numero* valebat, ut ad speciem alariis uteretur.

The next day Caesar left a garrison which he deemed sufficient in both camps, and drew up all the auxiliaries in the sight of the enemies in front of the smaller camp, so that he might use them for show, as the total strength of his legionary troops was none too great in view of *the enemy's numbers*.

Caes. *BG* 1.51.1<sup>3</sup>

- (172) *introducitur Curio filius dixit ad ea quae Vettius dixerat, maximeque in eo tum quidem Vettius est reprehensus quod <id> dixerat adulescentium consilium ut in foro [cum] gladiatoribus Gabini Pompeium adorirentur ...*

Curio junior was brought into the House and made a reply to what Vettius had said. Fault was then found with Vettius' story on one point in particular. He had stated that *the young men's plan* had been to attack Pompey in the forum during Gabinius' gladiator show ...

Cic. *Att.* 2.24.3

- (173) *Pavo surgit, quod eius candidati custos dicebatur deprensus.*

Pavo arose, as it was *the watcher for his candidate* who was reported to have been arrested.

Varro *Rust.* 3.5.18

- (174) *nam si digna poena pro factis eorum reperitur, novom consilium adprobo; sin magnitudo sceleris omnium ingenia exsuperat, iis utendum censeo quae legibus comparata sunt.*

For if a punishment equivalent to their deeds is found, then I support an unprecedented course of action; but if the magnitude of their wickedness exceeds *all men's imagination* then I advise that those penalties should be used which are laid down by the laws.

Sall. *Cat.* 51.8

In example (171), the genitive *hostium* "enemies" is contrastive, as Caesar compares the number of the Germans with the number of his own troops, and so *hostium* precedes its head noun. Note as well the chiasmus in *minus multitudine militum legionariorum pro hostium numero* "a lesser number of legionary troops proportional to the enemy's numbers", with the first genitive following its head noun and the second preceding. The contrast and chiasmus, as well as the alliteration in *minus multitudine militum*, make it quite clear that the word order in this passage is determined by aesthetic considerations and that animacy is unlikely to play much of a rôle.

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<sup>3</sup> This translation is adapted from Edwards 1917:83.

The genitive *adulescentium* “the young men” in example (172) is subjective, a function which carries priority; see Ch. 3 §2.5.1 above. In (173) *eius candidati* “his candidate” is emphatic, specifying that it is Pavo’s candidate who is involved in electoral fraud, rather than Varro’s or Merula’s or Appius Claudius’s. It also serves to identify the watcher who has been surreptitiously adding extra votes to the ballot boxes, in much the same way that freedmen are identified by reference to their masters; see example (166) in Ch. 3 §5.3 above. The actual genitive *candidati* is itself enclosed by the new anaphoric personal pronoun *eius* that modifies it and the head noun *custos* “watcher”, another possible reason for the genitive to precede the noun.

As for example (174), the genitive *omnium* “all men” has no immediately apparent reason for preceding the noun. However, it is a quantifying adjective, and as such is highly extensional, the sort of adjective that is likely to precede its noun (de Sutter 1986:172); see Ch. 3 §2.4 above.

Whether the genitive precedes or follows for human common nouns, most of the examples can be explained in terms of other factors, nor is there a clear order for these nouns, be it NGen or GenN. This might suggest that human common nouns are the turning point between NGen and GenN orders, though it can also be added to the mounting evidence that the animacy of the genitive alone has very little effect on word order. A quick glance at the head nouns shows that of the preceding head nouns, two of them refer to humans, namely *pars* “part” and *parricida* “murderer”, whilst the other two refer to the somewhat more abstract concept of *contubernium* “service as a junior officer” and a part of the body, *solum* “foot”. On the other hand, when the head nouns follow, three of them are less animate, namely *numerus* “number”, *consilium* “plan” and *ingenia* “imagination”, whilst one, *custos* “watcher”, is also a human common noun. As for the examples quoted at the beginning of this section, *studia*

*tribunorum* “the enthusiasm of the tribunes” Cic. *Att.* 3.24.1, *multitudine hominum* “a great number of people” Caes. *BG* 2.6.2, *rogatio aeditumi* “at the invitation of the sacristan” Varro *Rust.* 1.2.2, *bonorum consensio* “the agreement of the good men” Cic. *Att.* 1.16.9 and *nostrorum impetus* “the attack of our men” Caes. *BG* 1.26.1, *studia*, *multitudo* and *rogatio* are all less animate than human nouns, and precede their human common noun genitives, though *consensio* and *impetus* follow their genitives.

### 5.5 Non-human animates

There are relatively few references to non-human animates, unsurprising given that my corpus contains only one agricultural work, Varro’s *De Re Rustica*. However, in that one work, there are more than a hundred examples of these non-human nouns, all of which refer to animals, e.g. *asinorum iugum* “a team of donkeys” Varro *Rust.* 1.19.3, *greges ovium* “flocks of sheep” Varro *Rust.* 2.1.16, *genera cochlearum* “kinds of snails” Varro *Rust.* 3.14.4, *propter piscium multitudinem* “on account of the great number of fish” Varro *Rust.* 3.17.3. I have also included pronominal genitives referring to animals in this section.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	1	50%	1	50%	2
Cic. <i>Att.</i> 1-3	0	NA	0	NA	0
Cic. <i>Cat.</i> 1-2	0	NA	0	NA	0
Sall. <i>Cat.</i>	0	0%	1	100%	1
Sall. <i>Iug.</i>	4	44.4%	5	55.6%	9
Varro <i>Rust.</i>	83	51.6%	78	48.4%	161

**Table 5.5: distribution of NGen and GenN in animate nonhuman genitives**

A glance at the table shows that animate nonhuman genitives are found both NGen and GenN with roughly equal frequency. Since neither order is found overwhelmingly more frequently than the other, the only way to determine which of the two orders, if either, is the basic one is through an analysis of individual examples. The examples of NGen order follow:

- (175) si quo erat longius prodeundum aut celeries recipiendum, tanta erat horum exercitatione celeritas, ut *iubis equorum* sublevati cursum adaequarent.

If they needed to advance further to some point or to retreat swiftly, their speed was so great, thanks to practice, that, holding onto *the manes of the horses*, they could match paces with them.

Caes. *BG* 1.48.7

- (176) quippe etiam frumenti inopia temptabatur, quia Numidiae *pabulo pecoris* magis quam arvo student et quodcumque natum fuerat iussu regis in loca munita contulerant ...

Indeed, he was even plagued by a lack of corn, because the Numidians preferred *pastures for animals* to ploughed land and by the king's orders they had gathered whatever grain they had grown into fortified places ...

Sall. *Iug.* 90.1

- (177) duo enim genera earum in peristrophio esse solent: unum agreste, ut alii dicunt, saxatile .... *alterum genus columbarum* est clementius, quod cibo domestico contentum intra limina ianuae solet pasci.

For in a dove-cote there are usually two species of these: one the wild, or as some call them, the rock-pigeon ... *The other species of pigeon* is gentler, and being content with the food from the house usually feeds around the doorstep.

Varro *Rust.* 3.7.2

Example (175) appears to be unmotivated, unless it is that the horses, mentioned previously, are old information now whilst their manes are new. However, despite this difference in information status, there does not appear to be any emphasis or contrast or other form of pragmatic marking that would lead to one constituent preceding the other in the genitive construction.

In example (176), the head noun *pabulo* “fodder”, “grazing” contrasts with *arvo* “cultivated land”, with the phrase *magis quam* “more than” making the opposition quite clear. Since the noun carries pragmatic marking, it is not surprising that it precedes the genitive, which is almost extraneous; see the discussion of this same example at ex. (6) in Ch. 3 §1.1 above. As for (177), *alterum genus* “another kind” is a new topic, as Merula turns from describing the behaviour of rock pigeons to that of the more domesticated white pigeons. It is also contrastive, as the one sort of pigeon is placed in an antithetical relationship with the other.

Turning to GenN, examples of the order are given below:

- (178) his rebus adducti et auctoritate Orgetorigis permoti constituerunt ea, quae ad proficiscendum pertinerent, comparare, *iumentorum et carrorum quam maximum numerum* coemere, sementes quam maximas facere, ut in itinere copia frumenti suppeteret, cum proximis civitatibus pacem et amicitiam confirmare.

Persuaded by these things and roused by the influence of Orgetorix they decided to prepare those things which were needed for travelling, to buy *the greatest possible number of draught animals and wagons*, to sow as much seed as possible, so that on the journey there would be a sufficient store of corn, and to make peace and friendly pacts with the nearest nations.

Caes. *BG* 1.3.1

- (179) si ita esset, multo pulcherrumam eam nos haberemus, quippe sociorum atque civium, praeterea armorum atque *equorum maior copia* nobis quam illis est.

If that were so, we should have a far more beautiful state, as indeed we have more allies and citizens, as well as *a greater number of horses* and weapons than they did.

Sall. *Cat.* 52.20

- (180) de reliqua parte instrumenti, quod semivocale appellavi, Saserna ad iugera CC arvi *boum iuga duo* satis esse scribit, Cato in olivetis CCXL iugeris boves trinos.

With regard to the second division of equipment, to which I have given the name of inarticulate, Saserna says that *two yoke of oxen* are enough for two hundred iugera of cultivated land, while Cato states that three yoke are needed for two hundred and forty iugera of olive yard.

Varro *Rust.* 1.19.1

In example (178), Caesar lists the preparations that the Helvetii undertook before setting out on their march. In the phrase *iumentorum et carrorum quam maximum numerum* “the greatest possible number of draught animals and wagons”, both the genitive and the noun are emphatic. Because the Helvetii deemed transport and provisions, specifically corn, important for their march (*quae ad proficiscendum pertinerent*), the genitive *iumentorum et carrorum* which refers to their mode of transport, is highlighted, along with *sementes* which specifies the type of provisions that the Helvetii will be taking with them. The superlative adjective *maximus* in the head noun phrase emphasises the quantity of animals and carts that they need. In Ch. 3 §1.3 above it was noted that when both head and dependent genitive are emphatic, the usual order is NGen, but here the genitive precedes.

In (179) the genitive *equorum* “horses” precedes despite being partitive. However, at this point in his speech to the Senate, Cato is listing the things of which his Rome has an abundance compared to the Rome of his forefathers. Unlike the lists in examples (13), (77) and (162) previously discussed, here the listed items precede their head noun. This may be the result of another difference between this list and the others, which is the way that the listed items are arranged.

- (13) Certe, inquit Merula; nam ibi vidi *greges magnos anserum, gallinarum, columbarum, gruum, pavonum, nec non glirium, piscium, aprorum, ceterae venationis.*

“You are quite right,” said Merula; “for I have seen there *large flocks of geese, chickens, pigeons, cranes, and peafowl, not to speak of numbers of dormice, fish, boars, and other game.*”

Varro *Rust.* 3.2.14

- (77) *habes ubi ostentes tuam illam praeclaram patientiam famis, frigoris, inopiae rerum omnium ...*

You have an opportunity to demonstrate *your famous ability to endure hunger, cold, a scarcity of all things ...*

Cic. *Cat.* 1.26

- (162) *quis enim propter nobilitates ignorat piscinas Philippi, Hortensi, Lucullorum?*

And, indeed, who does not know, on account of their fame, *the fish-ponds of Philippus, Hortensius, and the Luculli?*

Varro *Rust.* 3.3.10

In the earlier examples, the lists are all strings of the listed items, and notable for their asyndeton. The only conjunction is the *nec non* in (13). In (179) on the other hand, the listed items are arranged in the pairs *sociorum atque civium* “allies and citizens” and *armorum atque equorum* “weapons and horses”, with the two genitives in each pair separated from each other by *atque*, and the pairs themselves separated from each other by *praeterea* “besides”, “moreover”. Cato’s list has been very deliberately arranged, emphasising the things in which his Rome excels.

As for example (180) the partitive *boum* “oxen” precedes once more. It is unlikely that *boum* is stressed to distinguish it from the donkeys, as they are mentioned so

much later, and in fact from the context it might be expected that *iugum duo* “two yokes” would be emphatic, contrasting with *boves trinos* “three oxen”, “three yoke of oxen” as the two different recommendations laid down by the two authors.

Seeing that the partitive genitive’s tendency to follow the head noun has been overridden by the GenN examples, it might seem that GenN may be the more common order for non-human animate genitives, again in keeping with Devine and Stephens’ observation. However, it must be remembered that these examples are not exhaustive, so without investigating every instance of non-human animate genitives, no certain conclusions can be drawn. As for the relative animacy of the head noun and the dependent genitive, *iuba* “mane” and *pabulum* “fodder” are inanimate common nouns, yet they precede, though, on the other hand, the inanimates *numerus* “number”, *copia* “supply” and *iugum* “yoke” follow their animate head nouns.

## 5.6 Inanimate common nouns

The last category in the animacy hierarchy is that of the inanimate common nouns, which may refer to concrete objects, e.g. *altitudo puppium* “the height of the sterns” Caes. *BG* 3.14.4, *piscinarum genera* “kinds of fishponds” Varro *Rust.* 3.17.2, or to abstract concepts, e.g. *pacis spes* “hope of peace” Sall. *Iug.* 65.4, *poenam sui sceleris* “punishment for his wickedness” Cic. *Cat.* 2.28.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	201	60.5%	131	39.5%	<b>332</b>
Cic. <i>Att.</i> 1-3	191	64.7%	104	35.3%	<b>295</b>
Cic. <i>Cat.</i> 1-2	67	51.9%	62	48.1%	<b>129</b>
Sall. <i>Cat.</i>	120	61.2%	76	38.8%	<b>196</b>
Sall. <i>Iug.</i>	213	57.9%	155	42.1%	<b>368</b>
Varro <i>Rust.</i>	236	53%	209	47%	<b>445</b>

**Table 5.6: distribution of NGen and GenN in inanimate common noun genitives**

These are found NGen most often for all authors, though in the case of Cic. *Cat.* 1-2 and Varro the proportions hover near equal distribution across both orders. As NGen

is the order predicted by the animacy hierarchy for these inanimates, it seems that the inanimate common nouns contradict Devine and Stephens' observation that in Latin the order of the raising hierarchy is reversed. An analysis of examples in context should provide insight into the situation.

Examples of the most frequent order, NGen, follow:

- (181) at Germani celeriter ex consuetudine sua phalange facta *impetus gladiatorum* exceperunt.

But the Germans, according to custom, formed a phalanx and parried *the attack of the swords*.

Caes. *BG* 1.52.4

- (182) alterum genus columbarum est clementius, quod cibo domestico contentum intra *limina ianuae* solet pasci.

The other species of pigeon is gentler, and being content with the food from the house usually feeds around *the doorstep* [lit.: *the threshold of the door*].

Varro *Rust.* 3.7.2

- (183) quod quamquam et saevitia temporis et *opportunitate loci* neque capi neque obsideri poterat ...

However, thanks both to the severity of the weather and the *strength of the place*, he could neither capture nor lay siege to it ...

Sall. *Iug.* 37.4

- (184) quod si iam sint id quod cum summo furore cupiunt adepti, num illi in *cinere urbis* et in sanguine civium, quae mente conscelerata ac nefaria concupiverunt, consules se aut dictators aut etiam reges sperant futuros?

And if they had already obtained that which they desire with utmost madness, do those men hope that in *the ashes of the city* and in the blood of its citizens, which they long for with their wicked and evil minds, they will be consuls or dictators or even kings?

Cic. *Cat.* 2.19

In examples (181)-(183) there is no apparent reason for the order; they are all pragmatically unmarked, and in fact (181) and (182) as subjective and possessive genitives respectively have functions associated with GenN order. The genitives in all three examples are also concrete objects: swords, doors and places. As for (184) both the head noun *cinere* "ashes" and the dependent genitive *urbis* "the city" are emotive, the phrase being paralleled with *in sanguine civium* "in the blood of its citizens" to

show the utter ruin of Rome in the power of the conspirators. When both head noun and dependent genitive carry pragmatic marking, the most common order is NGen, which is reflected here. Whilst the genitive *urbis* is concrete, referring to the collection of buildings and roads and constructions that make up the city, it may also connote the more abstract concept of the city as a community.

The head nouns themselves are all inanimate, with *limina* “threshold” and *cinere* “ashes” being concrete objects, whilst *impetus* “attack” and *opportunitate* “strength” are somewhat more abstract. In (182), *limina* and *ianuae* are both concrete objects, so there is no difference in animacy between the head noun and genitive, whilst in (181) and (183) the abstract head noun may be considered less animate than the concrete genitive. As for (184), the head noun *cinere* and genitive *urbis* are either both concrete, with no difference in animacy, or *urbis* is abstract, and thus less animate. Whatever the case, these four examples show that the animacy hierarchy does not explain the NGen order found most frequently for inanimate common nouns.

With NGen order inexplicable, it is necessary to turn to GenN order to see what explanatory power, if any, the animacy hierarchy has. A selection of GenN examples is given below:

(185) *quarum rerum magnam partem temporis brevitatis et incursus hostium impediēbat.*

A great part of these preparations was hindered by *the lack of time* and the enemy’s attack.

Caes. *BG* 2.20.2

(186) *iam vero (o di boni, rem perditam!) etiam noctes certarum mulierum atque adulescentulorum nobilium introductiones non nullis iudicibus pro mercedis cumulo fuerunt.*

On top of that (it’s really too abominable!) some jurors actually received *a bonus* [lit.: *an increase of their reward*] in the form of assignations with certain ladies and introductions to youths of noble families.

Cic. *Att.* 1.16.5

- (187) sciebam saepenumero parva manu cum magnis legionibus hostium contendisse; cognoveram parvis copiis bella gesta cum opulentis regibus, ad hoc saepe *fortunae violentiam* toleravisse, facundia Graecos, gloria belli Gallos ante Romanos fuisse.

I knew that often with a small force the Romans contended with great enemy armies; I known that they waged wars with few resources against rich kings, that they had often endured *the cruelty of fortune*, and that the Greeks surpassed them in eloquence and the Gauls in feats of arms.

Sall. *Cat.* 53.3

- (188) nam non modo ovum illud sublatum est, quod ludis circensibus *novissimi curriculi finem* facit quadrigis, sed ne illud quidem ovum vidimus, quod in cenali pompa solet esse primum.

Not only has that egg which shows *the last lap* [lit.: *the end of the latest lap*] of the chariot race at the games in the circus not been taken down, but we have not even seen that other egg which usually heads the procession at dinner.

Varro *Rust.* 1.2.11

In (185)-(187) there is no apparent reason for the order. The genitives in (185) and (187) are abstract, referring to time and fortune; that of (186) could be either abstract or concrete, depending on how *mercedis* is to be interpreted: a tangible monetary bribe, or just the notion of some sort of compensation for the jurors' actions. Given that throughout the letter, Cicero complains that the poverty and greed of the jurors is to blame, and also relates that Catulus asked one of the bribed jurors whether they had wanted bodyguards to protect their wallets – *an ne nummi vobis eriperentur timebatis?* “Was it because you were afraid that your money would be snatched from you?” *Att.* 1.16.5 – the bribe clearly involved money, and so *mercedis* presumably has a concrete reference. As for (188) the genitive *curriculi* “lap” is enclosed between the head noun *finem* “end” and the adjective *novissimi* “last”, which modifies the genitive. As discussed in Ch. 3 §2.4 above, enclosed genitives most often precede their head noun, hence the GenN order in this particular example.

The head nouns in these examples are largely abstract as well, with the exception of *finem* in (188). Consequently, (185) and (187) have no difference in animacy between head noun and dependent genitive, whilst in (186) the concrete genitive precedes the

abstract head noun, and in (188) the abstract genitive precedes a concrete head noun. As with the NGen examples for inanimate nouns, the animacy hierarchy is once again an unsatisfactory explanation of the order exhibited.

It would appear that the fact that the genitive is an inanimate common noun does not have much impact on the order of the constituents in the genitive construction. The analysis of the examples above shows no compelling reason to pick one order over another as the basic one for inanimate nouns. In fact, it supports the hypothesis that animacy is simply not an important factor in determining word order. However, one interesting point is the fact that in these examples three of the four GenN inanimates had abstract genitives, whilst three of the NGen inanimates were definitely concrete; cf. Viti 2010, who notes that in her study of genitive ordering in Caesar's *Bellum Gallicum* “non-human (i.e. animal or inanimate) concrete (i.e. non-abstract) items” are consistently postposed (p. 88). On the other hand, she also observes that abstract nouns are also found after their head noun (p. 81), which conflicts with the examples I have discussed here.

### **5.7 Animacy of the head noun**

In addition to the more comprehensive survey of the animacy of the genitive, I also performed a pilot analysis looking at the animacy of the head noun and the relative animacy of the head noun and dependent genitive in Varro *Rust.* 2 and Caes. *BG* 1. The results of this study are just as confused as the results for the animacy of the genitive.

In Varro *Rust.* 2, the distribution of NGen and GenN for head nouns with differing degrees of animacy closely paralleled the distribution for dependent genitives, shown in Table 5.7a below. In order for either of the hypotheses based on the animacy

hierarchy to hold, though, genitives and head nouns should exhibit inverse ordering patterns. Take the human common nouns as an example. When the head noun is a human common noun NGen is the most frequent order, which is predicted by the hypothesis that more animate constituents precede less animate constituents, but NGen is also the most frequent order when the genitive is a human common noun, which is the prediction of Devine and Stephens 2006. Both hypotheses cannot be simultaneously true as they are mutually contradictory – unless these orders are the result of human common nouns being found most often with less animate genitives, and genitives with a human reference being found most often with less animate head nouns.

	NGen		GenN		Total
		%		%	
<b>Pronominals</b>					
Genitive	7	58.3%	5	41.7%	<b>12</b>
Noun	2	50%	2	50%	<b>4</b>
<b>Human common nouns</b>					
Genitive	12	70.6%	5	29.4%	<b>17</b>
Noun	9	75%	3	25%	<b>12</b>
<b>Animate nouns</b>					
Genitive	42	45.7%	50	54.3%	<b>92</b>
Noun	17	44.7%	21	55.3%	<b>38</b>
<b>Inanimate nouns</b>					
Genitive	55	50.5%	54	49.5%	<b>109</b>
Noun	94	48.7%	99	51.3%	<b>193</b>

**Table 5.7a: distribution of NGen and GenN for different degrees of animacy in Varro *Rust. 2***

Table 5.7b compares the distribution of NGen and GenN orders for instances of more animate head nouns, more animate genitives, and cases where head noun and genitive have equal animacy.

	NGen		GenN		Total
		%		%	
Noun more animate	4	57.1%	3	42.9%	<b>7</b>
Genitive more animate	49	46.7%	56	53.3%	<b>105</b>
Equal animacy	69	51.1%	66	48.9%	<b>135</b>

**Table 5.7b: distribution of NGen and GenN for different relative animacies of head noun and dependent genitive in Varro *Rust. 2***

The results of this comparison look rather more promising at first glance, with NGen found more often when the noun is more animate and GenN more often when it is the genitive. When noun and genitive are equally animate, both orders are found almost as often as each other. However, the relative proportions of NGen and GenN when there is a difference in animacy between the head noun and dependent genitive are not all that distinct from each other, so this distribution offers the hypothesis that it is the relative animacy of the head noun and dependent genitive that affects the position of the genitive only tentative support.

Turning now to the results from Caes. *BG* 1, the figures found in Table 5.7c again show the same correspondence seen in Varro between the distribution of NGen and GenN for nouns and genitives. Once again, this does not really support either animacy hierarchy hypothesis.

	NGen		GenN		Total
		%		%	
<b>Pronominals</b>					
Genitive	15	19.7%	61	80.3%	<b>76</b>
Noun	0	0%	2	100%	<b>2</b>
<b>Proper nouns</b>					
Genitive	67	59.8%	45	40.2%	<b>112</b>
Noun	1	50%	1	50%	<b>2</b>
<b>Human common nouns</b>					
Genitive	42	55.3%	34	44.7%	<b>76</b>
Noun	46	55.4%	37	44.6%	<b>83</b>
<b>Animate nouns</b>					
Genitive	68	58.6%	48	41.4%	<b>116</b>
Noun	146	49.5%	149	50.5%	<b>295</b>

**Table 5.7c: distribution of NGen and GenN for different degrees of animacy in Caes. *BG* 1**

The comparison of the orders found in Caes. *BG* 1 when the head noun and dependent genitive differ in degree of animacy is given in Table 5.7d below:

	NGen		GenN		Total
		%		%	
Noun more animate	6	46.2%	7	53.8%	13
Genitive more animate	114	46%	134	54%	248
Equal animacy	73	60.3%	48	39.7%	121

**Table 5.7d: distribution of NGen and GenN for different relative animacies of head noun and dependent genitive in Caes. BG 1**

This table shows that GenN is more common both when the head noun is more animate and when the genitive is more animate. On the other hand, when both are equally animate, the basic order for the genitive construction, NGen, is found most often. This does not tally at all with the distribution seen in Varro. In fact, this inconsistency between the two authors, taken together with the low difference in the proportions of NGen and GenN for Varro seen in Table 5.7b, supports the suggestion that even the relative animacy of the head noun and dependent genitive has no real effect on genitive position.

## 5.8 Conclusion

The hypothesis that more animate genitives are more likely to precede the head noun does not fit the data at all. On the other hand, Devine and Stephens' observation that less animate genitives are more likely to be anteposed holds well enough. There appears to be an overall trend for more animate genitives to be found NGen proportionately more often, and for less animate ones to be found GenN. However, the inanimate common nouns, the least animate of all the genitives, are most often found NGen, which presents a problem for this hypothesis as well. The relative animacy of the head noun and dependent genitive does not seem to have much effect on the ordering of the constituents either.

Perhaps broader categories of animacy may be more helpful; further research on this topic will be necessary to resolve whether or not animacy has any effect on the word order of the Latin genitive construction.

## **6. PREPOSITIONS**

On a few occasions in the preceding sections I have noted that certain examples of word order within the genitive construction may have been influenced by the fact that it was governed by a preposition, e.g. exx. (64) and (66) in Ch. 3 §2.5.1. Elerick 1994:69f. shows that in Caesar the harmonic order preposition + NGen occurs far more often than the disharmonic order preposition + GenN in accordance with his principle of harmonic phenotypic linearization; see Ch. 1 and Ch. 3 §2.4 above for further discussion of this principle and the concept of typological harmony. Unlike the previous sections, with multiple factors, which sometimes overlap or have fuzzy definitions, this one involves a simple binary distinction, since the noun phrase either is not governed by a preposition, e.g. *naturae infirmitas* “the weakness of their nature” Sall. *Iug.* 1.4, or it is, e.g. *in consulis corpore* “in the body of the consul” Cic. *Cat.* 1.16. However, it is also possible for the genitive to stand outside the preposition phrase, e.g. *quorum in fines* “in whose territory” Caes. *BG* 2.10.4.

### **6.1 No preposition phrase**

When the genitive construction is not part of a preposition phrase, the distribution of NGen and GenN are roughly equal, just as they were in Table 1. This is hardly surprising, as “not part of a preposition phrase” is not the most stringent of selection criteria, and a variety of other factors determine the word order in these examples.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	285	49.2%	294	50.8%	<b>576</b>
Cic. <i>Att.</i> 1-3	280	56.6%	215	43.4%	<b>495</b>
Cic. <i>Cat.</i> 1-2	111	51.6%	104	48.4%	<b>215</b>
Sall. <i>Cat.</i>	185	53.3%	162	46.7%	<b>347</b>
Sall. <i>Iug.</i>	393	55.9%	310	44.1%	<b>703</b>
Varro <i>Rust.</i>	288	51.2%	274	48.8%	<b>562</b>

**Table 6.1: distribution of NGen and GenN when not part of a preposition phrase**

## 6.2 Preposition phrases

On the other hand, when the genitive construction is governed by a preposition phrase, there are some striking differences in word order:

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	118	63.8%	67	36.2%	<b>185</b>
Cic. <i>Att.</i> 1-3	58	49.2%	60	50.8%	<b>118</b>
Cic. <i>Cat.</i> 1-2	25	49%	26	51%	<b>51</b>
Sall. <i>Cat.</i>	51	70.8%	21	29.2%	<b>72</b>
Sall. <i>Iug.</i>	109	66.5%	55	33.5%	<b>164</b>
Varro <i>Rust.</i>	119	55.6%	95	44.4%	<b>214</b>

**Table 6.2: distribution of NGen and GenN when governed by a preposition**

As predicted by Elerick's 1994 principle of harmonic phenotypic linearization, almost every author shows a notable increase in NGen frequency. The exception is Cicero, whose proportions of NGen decrease so that this order is found roughly as often as GenN order when the head noun is governed by a preposition.

Examples of the more numerous NGen order follow:

- (189) *re frumentaria provisa castra movet diebusque circiter XV ad fines Belgarum pervenit.*

After securing the grain supply, he struck camp and in roughly twenty-five days he came *to the territory of the Belgae*.

Caes. *BG* 2.2.6

- (190) *tune eum quem esse hostem comperisti, quem ducem belli futurum vides, quem exspectari imperatorem in castris hostium sentis, auctorem sceleris, principem coniurationis, evocatorem servorum et civium perditorum, exire patiere ...*

Will you allow that man to depart, even though you have ascertained that he is an enemy, whom you see will be a leader in civil war, whom you know is expected

as the general *in the camp of the enemy*, the author of wickedness, the driving force of the conspiracy, the rouser of slaves and the citizen rabble ...

Cic. *Cat.* 1.27

- (191) *ad hoc populo Romano iam a principio imperi melius visum amicos quam servos quaerere, tutiusque rati volentibus quam coactis imperitare.*

Added to this, it has seemed better to the Roman people, *from the beginning of their empire*, to seek friends rather than slaves, and they have thought it safer to rule the willing rather than the forced.

Sall. *Iug.* 102.6

- (192) *in grege mulorum parando spectanda aetas et forma, alterum, ut in vecturis sufferre labores possint; alterum, ut oculos aspectu delectare queant.*

*In assembling a herd of mules* both age and build must be watched – the former that they may be strong enough to bear the labour of hauling, and the latter that they may please the eyes with their appearance.

Varro *Rust.* 2.8.5

The word order in the genitive constructions in examples (189) and (190) are both apparently unmotivated. In (189) Caesar has just finished describing his preparations for the Belgian campaign, in which he discusses the Belgae in detail, making them old and expected information in the preposition phrase *ad fines Belgarum* “to the territory of the Belgae”. In (190) Cicero imagines that the state is upbraiding him for his clemency towards Catiline, who is characterised as a dangerous enemy and a rabble-rouser. As Catiline is explicitly described as *hostis* “an enemy”, it follows that the army which he is to be general of is one full of enemies, and so the genitive *hostium* is predictable information. It could be argued that *hostium* is an emotive word, carrying perhaps emphasis, in which case the NGen order is unexpected, and suggests that information structure has been overridden here. Both *hostium* in this example and *Belgarum* in (189) are possessive genitives, which are frequently found in both NGen and GenN orders, so the NGen orders here are unlikely to be caused by the genitives’ grammatical functions.

In examples (191) and (192), on the other hand, whilst neither of the genitives carries any pragmatic marking, they are both partitives. As noted in Ch. 3 §2.2 above,

partitive genitives are most often found following the head noun, so it is possible that the grammatical function of the genitives has played a part in the NGen order. Also, in (192) the genitive *mulorum* “of mules” is enclosed by the head noun *grege* “herd” and a gerundive *parando* “assembling” modifying it. Since the modifier follows the head noun, the genitive too follows the head noun; see Ch. 3 §2.4 above.

The increase of NGen order in preposition phrases most likely has to do with the fact that the combination of preposition + NGen order is harmonic, as stated in the second of Greenberg’s typological universals (1963:88). Elerick’s 1994 principle of harmonic phenotypic linearization predicts that in a language with variable ordering of constituents, harmonic orders will occur more frequently than disharmonic orders, and this is certainly the case in my corpus when the head noun of the genitive construction is governed by a preposition.

When the genitive precedes the head noun, however, the word order, for the most part, can be explained in terms of other factors:

- (193) *postquam, ut dixi, senatus in Catonis sententiam discessit, consul optimum factu ratus noctem quae instabat antecapere, ne quid eo spatio novaretur, triumviros quae [ad] supplicium postulabat parare iubet.*

After, as I have said, the senate voted *for Cato’s proposal*, the consul, thinking it best to take measures for the approaching night, lest anything new be attempted in that time, ordered the triumvirs to prepare for the punishment that had been demanded.

Sall. *Cat.* 55.1

- (194) *Lentulus suo in nos officio, quod et re et promissis et litteris declarat, spem nobis non nullam adfert Pompei voluntatis; saepe enim tu ad me scripsisti eum totum esse in illius potestate.*

Lentulus’ friendly attitude, evinced in actions, promises, and letters, makes me somewhat hopeful of Pompey’s good will, as you have often told me that he is completely *under Pompey’s thumb*.

Cic. *Att.* 3.22.2

- (195) alii pro coagulo addunt *de fici ramo* lac et acetum, aspargunt item aliis aliquot rebus, quod Graeci appellant alii ο)ρo/n, alii da/kruon.

Others use, instead of rennet, the milk *from the stem of a fig*, and vinegar; they also curdle with various other substances – a thing which, in Greek, is sometimes called ο)ρo/n, and sometimes da/kruon.

Varro *Rust.* 2.11.4

- (196) deiectis, ut diximus, antennis, cum singulas binae ac ternae naves circumsisterent, milites summa vi transcendere *in hostium naves* contendebant.

Once the sail-yards had been cast down, as we said, and when each of the enemy's ships had been surrounded by two or three of ours, the soldiers strove with their utmost strength to scramble up *onto the enemy's ships*.

Caes. *BG* 3.15.1

Example (193) takes up the narrative of the debate of the conspirators' fate in the Senate after a digression in which Sallust compares Cato and Caesar, their different characters, ways of life, and ambitions. Following on from this digression as it does, *Catonis* is definitely emphatic and contrastive, reminding the reader of whose opinion swayed the majority of the Senate. As for example (194), the genitive *illius* "of that man" is new anaphora, referring to Pompey, and so precedes its head noun; see Ch. 3 §4.2.1 above.

In (195), Cossinius discusses different ways of making cheese, paying attention to the coagulating agent in particular. The acidic sap of the fig is an alternative to rennet, and Cossinius makes it quite clear that it is specifically the fig that has this effect by quoting the Greek term ο)ρo/v "sap", which when used of a specific plant refers to the fig; see its entry in Liddell and Scott p. 1241. As a result, the genitive *fici* "fig" carries contrast, being opposed to *coagulum* "rennet", as well as emphasis to show that it is this one particular kind of plant that can be used in cheesemaking.

Whilst examples (193)-(195) could all have their GenN word order explained in terms of other factors, the word order of the genitive construction in (196) is apparently unmarked. At best, there may be a contrast between *milites* and *hostium*,

the Roman soldiers versus the enemy. For the most part, however, GenN word order in preposition phrases can be explained in terms of other factors.

As for the increase in GenN in preposition phrases seen in Cicero this may be due either to a higher number of, say, pragmatically marked genitives in these phrases, or one of the other factors discussed above that is associated with GenN. This explanation is somewhat unsatisfactory, as it relies on a chance distribution of factors that give GenN order. Another possible explanation is the fact that the presence of a preposition guarantees that it will be followed by a head noun in the case that the preposition governs. As a result, this gives the genitive more freedom to precede the head noun, since a genitive which occurs before its head noun under such circumstances can be instantly construed as depending on the head noun that must be governed by the preposition.

### 6.2.1 Genitives outside the preposition phrase

There are very few examples of this subsection of the genitive constructions governed by a preposition phrase, with only a handful of instances in Caesar and Sallust's *Iugurtha*, and none at all in Cicero. It should come as little surprise that a genitive that stands outside the preposition phrase governing the head noun invariably precedes the preposition and thus the head noun.

Texts	NGen		GenN		Total
		%		%	
Caes. <i>BG</i> 1-3	0	0%	3	100%	<b>3</b>
Cic. <i>Att.</i> 1-3	0	NA	0	NA	<b>0</b>
Cic. <i>Cat.</i> 1-2	0	NA	0	NA	<b>0</b>
Sall. <i>Cat.</i>	0	NA	0	NA	<b>0</b>
Sall. <i>Iug.</i>	0	0%	4	100%	<b>4</b>
Varro <i>Rust.</i>	0	0%	1	100%	<b>1</b>

**Table 6.2.1a: distribution of NGen and GenN when genitive stands outside preposition**

What is of interest, though, is the fact that only one kind of genitive does so: the *wh*-pronouns.

The external genitives are given below:

- (197) quod ubi Caesar rescit, *quorum per fines* ierant, his uti conquirent et reducerent, si sibi purgati esse vellent, imperavit.

When Caesar learned of this, he ordered those *through whose territory* the Helvetii had marched, to search for them and bring them back, if they wished to exculpate themselves to him.

Caes. *BG* 1.28.1

- (198) ... consilio convocato constituerunt optimum esse domum suam quemque reverti et *quorum in fines* primum Romani exercitum introduxissent, ad eos defendendos undique convenire[nt] ...

... calling an assembly, they decided that it was best for each of them to return to their own homes and to come from all around to defend the tribe *into whose territory* the Romans first led their army ...

Caes. *BG* 2.10.4

- (199) eorum fines Nervii attingebant. *quorum de natura moribusque* Caesar cum quaereret, sic reperiebat: nullum esse aditum ad eos mercatoribus; nihil pati vini reliquarumque rerum ad luxuriam pertinentium inferri, quod iis rebus relanguescere animos eorum virtutemque remitti existimarent ...

The Ambiani's neighbours were the Nervii. When Caesar asked *about their nature and customs*, he learned the following: no merchants visited them, nor did they allow any wine or other trappings of luxury to be imported, because they thought that through such things their spirits were made feeble and their bravery diminished ...

Caes. *BG* 2.15.3

- (200) ceterum ex aliis negotiis quae ingenio exercentur in primis magno usui est memoria rerum gestarum. *quoius de virtute* quia multa dixere, praetereundum puto, simul ne per insolentiam quis existimet memet studium meum laudando extollere.

For the rest, of the other pursuits which are the domain of intellect, the most useful by far is the recounting of great events and deeds. *Concerning the worth of which*, since many things are already said of it, I think that I should skip over it, so that nobody may think that through arrogance I exalt my study, praising it.

Sall. *Iug.* 4.2

- (201) in quis fuit Scaurus, *quoius de natura et habitu* supra memoravimus.

Amongst them was Scaurus, *concerning whose nature and character* we have already spoken above.

Sall. *Iug.* 28.4

- (202) at C. Memmius, *quodius de libertate ingeni et odio potentiae nobilitatis* supra diximus, inter dubitationem et moras senatus contionibus populum ad vindicandum hortari ...

But while the senate doubted and hesitated, C. Memmius, *about whose independence of mind and hatred of the power of the nobility* we have spoken above, exhorted the assembled to vengeance ...

Sall. *Iug.* 30.3

- (203) tum Marius ... collis duos propinquos inter se occupat, *quorum in uno* castris parum amplo fons aquae magnus erat, alter usui opportunus, quia magna parte editus et praeceps pauca munimenta quaerebat.

Then Marius ... occupied two neighbouring hills, *on one of which* there was not enough space for a camp but did have a large spring of water, whilst the other was more suitable for use, since it was high and steep for the most part and needed little fortification.

Sall. *Iug.* 98.3

- (204) Circum caveas eorum incendendum cornum cervinum, ne quae serpens accedat, *quarum bestiarum ex odore* solent interire.

Around their houses stag horns should be burned, to keep snakes from coming in; *for the smell of these animals* is usually fatal to them.

Varro *Rust.* 3.9.14

All of these genitives contain *wh*-relatives, which invariably precede the head noun; see Ch. 3 §4.3 above. Since the *wh*-pronouns are always found at the start of their clause or phrase, it is perfectly natural for them to precede even the preposition, though they do not always do so.

The most unusual of these genitives is (204), where the genitive itself is not a *wh*-pronoun, but a noun modified by a *wh*-adjective. The genitive precedes the head noun giving the harmonic combination of genitive + noun and adjective + noun orders, see Ch. 3 §2.4 above, and since the modifier is a *wh*-adjective that stands before even the preposition, the genitive too stands outside the preposition phrase.

As there are so few examples of these genitives outside the preposition phrase, it is possible that this is an artificial literary pattern; note that it is not found in Cicero's letters to Atticus, but rather in Caesar and Sallust in particular. There may also be

very few of these genitives as they are a subsection both of preposition phrases and *wh*-relatives, so they need to meet two criteria instead of one.

Since it is only the *wh*-relatives that precede the preposition, it may be of interest to look at the instances where they do not precede the preposition. In the entirety of my corpus, there are only five of them, found in Cicero and Varro, but never in Sallust, nor in Caesar. Being *wh*-genitives, they invariably precede their head noun.

Texts	Number of <i>wh</i> -genitives
Caes. <i>BG</i> 1-3	0
Cic. <i>Att.</i> 1-3	1
Cic. <i>Cat.</i> 1-2	1
Sall. <i>Cat.</i>	0
Sall. <i>Iug.</i>	0
Varro <i>Rust.</i>	3

**Table 6.2.1b: number of *wh*-genitives that follow the preposition**

The five genitives are given below in context:

- (205) *nosti Calvum ex Nanneianis illum, illum laudatorem meum, de cuius oratione erga me honorifica ad te scripseram.*

You know Baldhead, him of the Nanneius sale (?), my encomiast, *of whose* complimentary *speech* I wrote to you.

Cic. *Att.* 1.16.5

- (206) *tu ut illa carere diutius possis quam venerari ad caedem proficiscens solebas, a cuius altaribus saepe istam impiam dexteram ad necem civium transtulisti?*

Are you able to go without that which you were accustomed to worship on your way to slaughter, from *whose altar* you often transferred your impious right hand to the murder of citizens?

Cic. *Cat.* 1.24

- (207) *neque patiar Sibyllam non solum cecinisse quae, dum viverent, prodessent hominibus, sed etiam quae cum perisset ipsa, et id etiam ignotissimis quoque hominibus; ad cuius libros tot annis post publice solemus redire, cum desideramus, quid faciendum sit nobis ex aliquo portento ...*

And I cannot allow the Sibyll to have uttered prophecies which benefited mankind not only while she lived, but even after she had passed away, and that too people whom she never knew – for so many years later we are wont officially to consult *her books* when we desire to know what we should do after some portent ...

Varro *Rust.* 1.1.3

- (208) de seminio dico eadem, quae Atticus in ovibus; hoc aliter, ovium semen tardius esse, quo eae sint placidiores; contra caprile mobilius esse, de *quorum velocitate* in Originum libro Cato scribit haec: “in Sauracti ac Fisello caprae ferae sunt, quae saliant e saxo pedes plus sexagenos.”

As to the breed, I make the remark which Atticus made with regard to sheep; with this exception, that the race of sheep is more quiet, inasmuch as they are gentler, while on the other hand that of goats is more nimble. As to *their activity*, Cato says in his *Origines*: “On Soracte and Fiscellum there are wild goats which make leaps of more than sixty feet from the cliffs.”

Varro *Rust.* 2.3.3

- (209) Graecia enim antiqua, ut scribit Timaeus, tauros vocabat italos, a *quorum multitudine et pulchritudine* et fetu vitulorum Italiam dixerunt.

For the ancient Greeks, according to Timaeus, called bulls *itali*, and the name Italy was bestowed because of the *number and beauty of its cattle*, and the great number of calves.

Varro *Rust.* 2.5.3

When these examples are compared with exx. (197)-(204) above, it can be seen that there is no real contextual explanation as to why a *wh*-genitive should precede or follow the preposition governing the head noun. It might be thought that a *wh*-relative that carries some sort of pragmatic marking is more likely to precede the preposition – exx. (197)-(199), for instance, all have *wh*-genitives which contrast with some other element in the sentence, be it the Helvetii versus their victims, the respective tribes of the Belgae versus the individual tribe whose territory is invaded by the Romans, or the Ambiani versus the Nervii, whilst (200) and (201) have *wh*-genitives which refer to one specific individual, and are thus emphatic. On the other hand, the *wh*-genitives in (205) and (206) are topical: in the first example, the genitive refers to Crassus, who is the subject of the sentence and whose attributes Cicero is listing, whilst in the second, Cicero is at this point discussing the Marian eagle which Catiline owns and for which he has created a shrine. Example (208), referring to the goats, could be argued to be in a contrastive relationship with the sheep. Nor does the function of the different genitives have much of an effect, as most of the genitives in both sets of examples are possessive or miscellaneous.

This leaves the most striking difference between the two sets of *wh*-genitives, namely author. In my corpus, Cicero never places a *wh*-relative before a preposition governing its head noun, and Varro only does so on one occasion. However, they both have examples of *wh*-relatives occurring after the preposition, whilst in Caesar and Sallust, who contribute the bulk of the *wh*-genitives before the preposition, there are no instances of *wh*-relatives after the preposition. So is *wh*-preposition a literary trait, seeing that it is never found in the letters to Atticus? Is it found in historical works? Or is it just a matter of personal taste? Since there are so few examples of *wh*-relatives occurring either before or after the preposition, it is hard to say. Note that there is a fixed expression with *wh*-preposition, *quemadmodum* “how”, which is found as early as Cato the Elder and Plautus.

### **6.3 Conclusion**

When the genitive construction is governed by a preposition, NGen order increases noticeably in most of the authors, as predicted by Elerick’s 1994 principle of harmonic phenotypic linearization. Cicero is the exception to the rule, though for what reason is hard to say. The *wh*-relatives and their ordering relative to the prepositions are also noteworthy in that there seems to be no underlying linguistic reason for their distribution, but rather a clear division according to author, and possibly genre, with Sallust’s histories and Caesar’s commentaries only ever exhibiting *wh*-relative + preposition order, while preposition + *wh*-relative order is only found in Cicero and Varro. Taking this into account, perhaps Cicero’s anomalous increase of GenN order in preposition phrases is another quirk of one author’s personal style.

## 7. SPEECH

In my corpus there are few instances of speech, be it direct or indirect. In Caes. *BG* 1-3 there is no direct speech whatsoever, though there are several passages of reported speech, whilst in Cic. *Att.* 1-3 and *Cat.* 1-2 there are sprinklings of direct and indirect speech throughout. In both of these authors, however, these passages of speech are simply not long enough to give a satisfactory idea of genitive ordering patterns. As for Varro, although most of the *Res Rusticae* is narrated by men discussing and advising each other on agriculture, their conversation is not a true example of direct speech. Instead, Varro uses the dialogue as a way of framing and presenting his treatise on farming practices – much of the speech is less spoken and more like a written treatise (which it is) than a conversation (which it purports to be).

Sallust's histories are the exception here, since in both *Cat.* and *Iug.* he includes several lengthy speeches. These are supposed to be historical, delivered by a variety of characters ranging from Cato the Younger and Caesar to the Numidian prince Adherbal and Gaius Marius. The extent to which Sallust has adapted the speech has been debated. Sklenár 1998:205 argues that Sallust “retain[s] the unique characteristics of his own language rather than ... duplicat[ing] that of the speakers themselves”. On the other hand, Nelson 1950:67 argues that while Cato's speech before the Senate has been adapted to omit the letter from Servilia to Caesar and his praise of Cicero mentioned in other sources, his “use of abstract nouns, usually in pairs” is comparable to “the concentration of abstract words” in Cato's letter to Cicero *Fam.* 15.5, and the speech itself is largely free from rhetorical techniques such as chiasmus. Nelson also points out that Sallust “does not pretend to quote Cato verbatim” but instead says that he delivered a speech *huiusce modi*. In fact, almost each and every one of the speeches that are made in the *Iugurtha* and the *Catilina* are

qualified by *huiusce modi* (Sall. *Iug.* 9.4, 30.4, 32.1, 86.1, 102.4, *Cat.* 20.1, 32.3, 50.5, 52.1, 57.6) or *hoc modo* (Sall. *Iug.* 13.9, 84.5). It would seem, then, that the speeches are for the most part adaptations, which may or may not retain stylistic and linguistic features of the original.

In this section I shall look briefly at what effect switching to direct speech might have on the genitive construction in Sallust. If the speeches are faithful to the source material, it is possible that the word order within the genitive construction may vary from speaker to speaker. However, if the speeches are loose adaptations, then it is more likely that there will be little difference between speech and narrative, with the speeches reflecting Sallust's own style.

Texts	NGen		GenN		Total
		%		%	
Sall. <i>Cat.</i>	163	53.6%	141	46.4%	<b>304</b>
Sall. <i>Iug.</i>	437	59.2%	301	40.8%	<b>738</b>

**Table 7a: distribution of NGen and GenN in narrative in Sallust**

Texts	NGen		GenN		Total
		%		%	
Sall. <i>Cat.</i>	73	63.5%	42	36.5%	<b>115</b>
Sall. <i>Iug.</i>	65	48.9%	68	51.1%	<b>133</b>

**Table 7b: distribution of NGen and GenN in direct speech in Sallust**

From a comparison of Tables 7a and 7b, it turns out that the genitive behaves very differently in each of Sallust's works. The narrative genitives are similar, as might be expected, with NGen being the more common order. However, the genitives found in direct speech have a very different distribution. In the *Catilina* they occur more frequently in NGen order than they do when in narrative, but in direct speech in the *Iugurtha* the opposite holds true, and GenN is the more common order. Whilst this appears to support the hypothesis that dependent genitive ordering patterns vary from speaker to speaker, it is necessary to look at the individual speeches to see if this is indeed the case.

There are numerous small speeches in the two works, each with a handful of genitives. Since there are relatively few genitives in these small speeches, the figures do not present an accurate picture of genitives in direct speech.

Texts	NGen		GenN		Total
		%		%	
Sall. <i>Cat.</i> 20.2-17	3	42.9%	4	57.1%	<b>7</b>
Sall. <i>Cat.</i> 31.7-9 o.o.	1	33.3%	2	66.7%	<b>3</b>
Sall. <i>Cat.</i> 33.1-5	10	83.3%	2	16.7%	<b>12</b>
Sall. <i>Cat.</i> 35.1-6 letter	4	66.7%	2	33.3%	<b>6</b>
Sall. <i>Cat.</i> 51.1-43	25	61%	16	39%	<b>41</b>
Sall. <i>Cat.</i> 52.2-36	21	61.8%	13	38.2%	<b>34</b>
Sall. <i>Cat.</i> 58.1-21	9	75%	3	25%	<b>12</b>
Sall. <i>Iug.</i> 10.1-8	3	75%	1	25%	<b>4</b>
Sall. <i>Iug.</i> 14.1-25	13	35.1%	24	64.9%	<b>37</b>
Sall. <i>Iug.</i> 31.1-29	15	57.7%	11	42.3%	<b>26</b>
Sall. <i>Iug.</i> 49.2 oratio obliqua	1	25%	3	75%	<b>4</b>
Sall. <i>Iug.</i> 81.1, 83.1 oratio obliqua	4	50%	4	50%	<b>8</b>
Sall. <i>Iug.</i> 85.1-50	23	54.8%	19	45.2%	<b>42</b>
Sall. <i>Iug.</i> 102.5-11	3	50%	3	50%	<b>6</b>
Sall. <i>Iug.</i> 110.1-8	3	60%	2	40%	<b>5</b>

**Table 7c: distribution of NGen and GenN in individual speeches in Sallust**

There are, however, a number of longer speeches, with rather more genitives, which may give a better idea of genitive ordering patterns in direct speech. The major speeches in the *Catilina* are Caesar and Cato's speeches to the Senate at *Cat.* 51 and 52.2-36, whilst those of the *Iugurtha* are Adherbal's speech, Memmius' speech and Marius' speech at *Iug.* 14, 31 and 85.

Texts	NGen		GenN		Total
		%		%	
Sall. <i>Cat.</i> 51.1-43	25	61%	16	39%	<b>41</b>
Sall. <i>Cat.</i> 52.2-36	21	61.8%	13	38.2%	<b>34</b>
Sall. <i>Iug.</i> 14.1-25	13	35.1%	24	64.9%	<b>37</b>
Sall. <i>Iug.</i> 31.1-29	15	57.7%	11	42.3%	<b>26</b>
Sall. <i>Iug.</i> 85.1-50	23	54.8%	19	45.2%	<b>42</b>

**Table 7d: distribution of NGen and GenN in major speeches in Sallust**

It is clear from Table 7d that NGen is the most common order and that Adherbal's speech at *Iug.* 14 is anomalous. Why? All four of the other speeches have a similar distribution of NGen and GenN, which would rule out the speeches differing

according to speaker and support the hypothesis that they are instead loose adaptations, so why should Adherbal's speech differ so greatly?

Du  2000 argues that this speech has its roots in tragedy, in particular the "desperation speech" discussed by Fowler 1987. The characteristics of the speech are an opening question asking what course of action is left open to the speaker, followed by a series of possible options, each rejected one after the other, and a conclusion in which the speaker may either pray for death, or resolve upon some drastic action (Fowler 1987:6). Adherbal's speech before the Senate includes the question *quid agam?* "what shall I do?" Sall. *Iug.* 14.15, which is followed by a series of questions suggesting and rejecting other ways out of his predicament (Sall. *Iug.* 14.17), and at last, a wish that *emori fortunis meis honestus exitus esset* "to die might be an honourable ending in my current situation" Sall. *Iug.* 14.24. It clearly hits the key points of the desperation speech.

For Du , the literary echoes of Adherbal's speech do not stop there, as she argues that it draws on the desperation speeches made by Medea in Euripides and Ennius' works, and by Ariadne in Catullus 64 (2000:311f., 318-20). Just as Medea in Euripides opens her speech by reminding Jason that she saved him (Eur. *Medea* 476-87), Adherbal starts by mentioning the services his family has rendered to Rome (Sall. *Iug.* 14.3, 5, 8, 12-13). Like both Medea and Ariadne, he is concerned not so much with what he should do, but where he should go (Sall. *Iug.* 14.17, Eur. *Medea* 502, Catul. 64.177), for his family has made enemies throughout Africa thanks to their support of the Romans (Sall. *Iug.* 14.17), just as Medea has made enemies for herself by helping Jason (Eur. *Medea* 506-8). Adherbal also points out that he can expect no help from his dead father, nor his brother, killed by Jugurtha's treachery (Sall. *Iug.* 14.15), just as Medea and Ariadne cannot rely on their fathers, whom they have

betrayed (Eur. *Medea* 502-3, Ennius *Medea* 285, Catul. 64.80-81). Even his situation is similar, for, like the women, Adherbal is a barbarian in a foreign land, exiled from his own as the result of family treachery, though, unlike the women, he is the victim rather than the traitor.

Thanks to these parallels, Adherbal and his speech before the Senate, Dué argues, are crucial to Sallust’s theme of “the moral decline of Rome” (p. 322): Adherbal is a “tragic figure” (p. 320) whose desperate appeal tests Rome’s moral mettle, only to find it wanting, “thereby highlighting Roman corruption and wrong-doing” and thus “vivifying” the narrative (p. 322). In other words, Adherbal’s speech is highly literary and emotive. Would this be a good enough reason for the anomalous GenN order to occur more often in this speech? It is possible that in an emotional appeal such as this, emphasis and contrast would be used extensively, with the consequence that the word order in the genitive construction would be determined by information structure unusually frequently.

Texts	NGen		GenN		Total	
		% of <i>total</i> <i>NGen</i>		% of <i>total</i> <i>GenN</i>	<b>Pragmatic</b>	% of <i>total in</i> <i>31b</i>
Sall. <i>Cat.</i> 51.1-43	3	12%	7	43.8%	<b>10</b>	<b>24.4%</b>
Sall. <i>Cat.</i> 52.2-36	1	4.8%	4	30.8%	<b>5</b>	<b>14.7%</b>
Sall. <i>Iug.</i> 14.1-25	6	46.2%	10	40%	<b>16</b>	<b>42.1%</b>
Sall. <i>Iug.</i> 31.1-29	2	13.3%	6	54.5%	<b>8</b>	<b>30.8%</b>
Sall. <i>Iug.</i> 85.1-50	9	39.1%	15	78.9%	<b>24</b>	<b>57.1%</b>

**Table 7e: distribution of pragmatically-determined NGen and GenN in major speeches in Sallust**

Table 7e reveals that the speeches of Caesar (*Cat.* 51), Cato (*Cat.* 52) and Memmius (*Iug.* 31) have substantially fewer genitives arranged according to information structure than those of Adherbal (*Iug.* 14) and Marius (*Iug.* 85). In fact, Marius’ speech has more emphasis and contrast than even Adherbal’s, with pragmatically-determined orders making up over half of his genitives, thanks to the parallels he keeps drawing between himself and the Roman nobility, particularly Metellus

Numidicus. The fact that Adherbal's speech has GenN order more often overall and Marius' NGen is in keeping with the fact that information structure prioritises the element carrying a pragmatic function, regardless as to whether it is the head noun or the dependent genitive. So, information structure can explain the anomalous GenN order in Adherbal's speech.

One other factor that has led to GenN being the more frequent order in Adherbal's speech is the presence of an increased number of *wh*-pronouns. Four of the twenty-four instances of GenN order in Adherbal's appeal to the Senate are *wh*-relatives in the genitive: *quorum progeniem* "their descendant" Sall. *Iug.* 14.6, *quousquam regnum* "whoever's power" Sall. *Iug.* 14.7, *quous in pio facinore* "through whose impious crime" Sall. *Iug.* 14.21, *quous vitae necisque* "whose life and death" Sall. *Iug.* 14.23. In the rest of the speeches, there is only one other *wh*-pronoun, the relative pronoun *quous lubido* "whose whims" Sall. *Cat.* 51.25.

It would seem that the direct speeches in Sallust do not have a consistent effect on word order in the genitive construction. Whilst NGen was the most common order for the majority of the speeches, Adherbal's appeal to the Senate has GenN most often. Does the fact that Adherbal's speech is modelled upon a particular type of tragic speech and draws on specific literary parallels affect the order of the head noun and dependent genitive? At first glance, it would seem to do so, given the anomalous GenN order, but a closer look suggests that the order is due to a combination of information structure and *wh*-pronouns instead. At best, the literary parallels have increased the use of pragmatic features. However, the comparison between Marius and Adherbal's speeches makes it clear that in emotive speeches, the frequent use of emphasis and contrast can result in NGen as well as GenN order, as the ordering patterns of information structure are, after all, determined by the presence of

pragmatic features rather than by grammatical relationship. As for the speeches by Caesar, Cato and Memmius, there were fewer instances of pragmatic marking, and so the genitive construction often defaulted to the neutral NGen order.

## 8. FORMULAIC EXPRESSIONS, IDIOMS AND PHRASAL TERMS

Most of the genitive constructions found in my corpus are phrases which occur once, maybe twice. Those that reoccur will often be found in both NGen and GenN order, with the arrangement of the constituents dependent on a variety of factors, e.g. *pacis spes* “hope of peace” Sall. *Iug.* 65.4 and *spe pacis* “hope of peace” Sall. *Iug.* 65.4, *loci natura* “the place’s nature” Caes. *BG* 1.2.3 and *natura loci* “the nature of the place” Caes. *BG* 3.9.3, *Hortensi consilio* “Hortensius’s plan” Cic. *Att.* 1.16.2 and *consilium Hortensi* “the plan of Hortensius” Cic. *Att.* 1.16.3. However, there are some that crop up time and again and are almost invariably found in one particular order, be it NGen, e.g. *mos maiorum* “the customs of the ancestors” Cic. *Cat.* 2.3, *tribunus plebis* “tribune of the people” Sall. *Cat.* 43.1, or GenN, e.g. *agri cultura* “agriculture” Varro *Rust.* 1.1.6, *senatus consultum* “senatorial decree” Cic. *Cat.* 1.3. It is these that I shall discuss in this section.

In his work on medical Latin, Langslow 2000 discusses phrasal terms, i.e. terms which have been lexicalized, so that “knowledge of the meanings of its constituent words is not sufficient for predicting the meaning of the whole phrase” (p. 210f.). In other words, the terms now express one concept. A good, non-genitive example of such a term is the expression *res publica*, originally “matters of the people”, but increasingly taken to refer to the state itself. The lexicalization of this particular term was ultimately completed when the two separate words *res* and *publica* merged to give the Italian *repubblica*, the Spanish and Portuguese *república*, and by way of a

borrowing from French *république*, the English word *republic*. Note that full lexicalisation of a term does not necessarily require the merging of the separate words which make it up.

Since these phrases are lexicalized and have become idiomatic figures of speech, their constituents are unlikely to be affected by the factors that determine word order. This is why *senatus consultum* and *tribunus plebis* are almost always found in one particular order. However, even if they are not affected by other factors, they themselves can have quite dramatic effects on the apparent word order associated with the other factors. For an example, see Table 8a below:

Texts	NGen		GenN		Total
		%		%	
Varro <i>Rust.</i> + idioms	47	40.9%	68	59.1%	<b>115</b>
Varro <i>Rust.</i> - idioms	43	59.7%	29	40.3%	<b>72</b>

**Table 8a: distribution of NGen and GenN in the objective genitive in Varro *Rust.***

The most frequently occurring phrasal term in Varro *Rust.* is *agri cultura*, an objective genitive where the genitive precedes the noun. It occurs 39 times in the order *agri cultura* and three times *cultura agri*. Because it is found so often, and because it is a phrasal term with a preferred order, it biases the figures for objective genitives in favour of GenN order. It also skews the distribution for inanimate genitives towards GenN order. Once *agri cultura* and the rest of the phrasal terms are removed, the figures for the objective genitive in Varro come in line with those in the rest of the authors. For this reason, I have excluded them from the preceding sections.

The expressions that I have identified as formulae, phrasal terms or idioms range from certain through to tentative. They usually occur multiple times in one particular order in my corpus, and may be found in a number of authors. On occasion, a term only occurs once or twice, but may still be considered a phrasal term either because it corresponds in structure to another, indisputably fixed expression, e.g. *tribunis*

*legionum* “tribune of the legions” (Sall. *Iug.* 46.7) which corresponds to *tribunus plebis* “tribune of the people” (Cic. *Att.* 1.18.4, 2.15.2, 3.12.1, Sall. *Iug.* 27.2, 40.1, 73.7, Varro *Rust.* 1.2.9), or because it occurs frequently in other texts outside my corpus, e.g. *hominum memoria* (Caes. *BG* 3.22.3, Cic. *Cat.* 1.16, 2.28) is also found a further forty times in the Packhard Humanities Institute (PHI) database of texts, e.g. *Bell. Hisp.* 15.6, Cic. *Agr.* 1.6, Cic. *Clu.* 140.6, Cic. *Fam.* 11.5.1, Cic. *Man.* 62.15, Cic. *Rab. Perd.* 4.5, Cic. *Ver.* 1.1.32, 2.1.9, 2.3.44, Nep. *Ar.* 1.2, Nep. *Them.* 5.3, Nep. *Reg.* 1.3, Apul. *Fl.* 7, Gel. 1.3.1, 6.20.1, 15.7.1.

The most definite of my fixed and phrasal terms include *agri cultura* “agriculture” Caes. *BG* 3.17.4, Varro *Rust.* 1.1.5, 2.10.8, 3.6.5, *milia passuum* “mile” Caes. *BG* 1.2.5, 1.48.1, 2.6.1, *mos maiorum* “the customs of the ancestors”, “the true Roman way” Cic. *Att.* 1.1.1, Cic. *Cat.* 1.28, Sall. *Cat.* 11.5, Sall. *Iug.* 33.3, and *senatus consultum* “senatorial decree” Caes. *BG* 1.43.7, Cic. *Att.* 1.13.3, Cic. *Cat.* 1.3, 1.4, Sall. *Cat.* 42.3. The other terms are titles – *pater familiae* “head of the family” Varro *Rust.* 2.P.3, 3.3.5, *tribunus plebis* “tribune of the people” Cic. *Att.* 1.18.4, Cic. *Cat.* 1.4, Sall. *Cat.* 43.1, Sall. *Iug.* 27.2, Varro *Rust.* 1.2.9, *tribunus militum* “tribune of the soldiers” Caes. *BG* 1.39.2, 2.26.1, 3.5.2, *tribunus legionum* “tribune of the legions” Sall. *Iug.* 46.7, and *magister pecoris* “head herdsman” Varro *Rust.* 1.2.14, 2.2.20, 2.3.8, 2.10.2. There is a variant of *pater familiae*, namely *mater familiae*, found at Caes. *BG* 1.50.4 and Varro *Rust.* 2.10.8, as well as *matres familiarum* Sall. *Cat.* 51.9; *magister pecoris* also has a variant, *magister pecorum*, found at Varro *Rust.* 2.1.23.

Terms, including variants	My corpus		PHI database	
	normal	inverse	normal	inverse
<i>agri cultura</i>	40	3	64	7
<i>milia passuum</i>	15	0	154	6
<i>mos maiorum</i>	8	0	111	7
<i>senatus consultum</i>	18	0	1151	5
<i>pater familiae</i>	5	0	109	1? Enn. And.
<i>tribunus plebis</i>	29	0	586	4
<i>tribunus militum</i>	7	0	350	1
<i>tribunus legionum</i>	1	0	3	1? Caes
<i>magister pecoris</i>	5	0	9	3

**Table 8b: distribution of definite phrasal terms and idioms in my corpus and the PHI database**

Table 8b shows that most of these expressions do indeed occur with overwhelming frequency in one order, the exceptions being *tribunus legionum* and *magister pecoris*, which I have identified as phrasal terms on the grounds that they are titles formed in the same way as *pater familiae*, *tribunus plebis* and *tribunus militum*. Admittedly, the evidence provided by the PHI database could be taken to suggest that neither of these is a genuine phrasal term, as they simply do not occur often enough.

Whilst *agri cultura* and *pater familiae* are fairly definite phrasal terms, there are other expressions which I have identified as possible formulae, phrasal terms and idioms. They occur less frequently in my corpus than do the previous group of expressions, though again identification as a phrasal or an idiomatic term rests on a mixture of frequency of occurrence within my corpus and distribution across other authors. They are *hominum memoria* “men’s memory” Caes. *BG* 3.22.3, Cic. *Cat.* 1.16, 2.28, *orbis terrae* “the whole world” Cic. *Cat.* 1.3, 1.9, Sall. *Iug.* 17.3, Varro *Rust.* 1.2.3, 1.9.1 and *summa imperii* “high command” Caes. *BG* 2.23.4, 3.17.2, 3.17.7, 3.22.1. The first two of these terms have variants: *patrum nostrorum memoria* “our fathers’ memory” Caes. *BG* 2.4.2 for *hominum memoria*, and *orbis terrarum* “the world” Cic. *Att.* 1.19.7, Cic. *Cat.* 1.9, Sall. *Cat.* 8.3 for *orbis terrae*, though if

truth be told, in the PHI corpus, *orbis terrarum* occurs more often overall than *orbis terrae*, which suggests that *orbis terrae* is the variant.

Terms, including variants	My corpus		PHI database	
	normal	inverse	normal	inverse
<i>hominum memoria</i>	4	0	54	9
<i>orbis terrae</i>	7	1	280	89
<i>summa imperii</i>	4	0	39	1

**Table 8c: distribution of possible phrasal terms and idioms in my corpus and the PHI database**

The table shows quite clearly that not only do these terms occur less frequently in my corpus, but also in the PHI database, the exception being *orbis terrae*, which is actually found more frequently than some of the definite phrasal terms in Table 8b above. However, in the PHI database, it is also found in the reverse GenN order *terrae orbis* or *terrarum orbis* 89 times, which is substantially more often than for any of the other expressions I have looked at so far. The increased frequency of variation, though, does not disqualify it from being considered idiomatic, or even a phrasal term, as the chief criterion for defining a phrasal term is that the meaning of the expression as a whole cannot be straightforwardly determined from the meaning of its constituent parts. The fact that *orbis terrae* is understood as “the world” rather than the literal “the globe of the earth” means that it qualifies as a phrasal term on these semantic grounds. It does not show the same degree of lexicalisation as *agri cultura*, but it remains an idiomatic expression.

Amongst the more tentative identifications of these terms are expressions which seem to have been formed by analogy with the more common phrases. So, from *senatus consultum* come *senatus auctoritas* “senatorial authority” Cic. *Att.* 1.14.2, 1.16.1, Sall. *Cat.* 38.3, Sall. *Iug.* 43.4, *senatus decretum* “senatorial decree” Sall. *Cat.* 51.36, Sall. *Iug.* 28.3, with the variants *senati decretum* Sall. *Cat.* 53.1, Sall. *Iug.* 40.1 and *consili decretum* “consular decree” Sall. *Iug.* 62.5, and possibly *ordinum*

*concordia* “harmony of the orders” Cic. *Att.* 1.17.9, while *mos regum* “the customs of kings” Sall. *Iug.* 65.2 may be modelled on *mos maiorum*, and *tribunatum plebis* “tribunate of the plebs” Cic. *Att.* 2.1.5, 2.12.2, 2.18.2 is related to *tribunus plebis*. As well as these potentially analogous phrases there are a handful of infrequently occurring terms, namely *ius belli* “the law of war” Caes. *BG* 1.36.1, 1.44.2, Sall. *Iug.* 91.7, 102.13, *ius gentium* “the law of peoples” Sall. *Iug.* 22.4, 35.7, and *terrae filius* “son of the earth” Cic. *Att.* 1.13.4.

Terms, including variants	My corpus		PHI database	
	normal	inverse	normal	inverse
<i>senatus auctoritas</i>	6	1	81	85
<i>senatus decretum</i>	5	0	18	12
<i>ordinum concordia</i>	1	0	1	8
<i>mos regum</i>	1	0	2	3
<i>tribunatum plebis</i>	3	0	5	0
<i>ius belli</i>	4	0	38	26
<i>ius gentium</i>	2	0	91	15
<i>terrae filius</i>	1	0	4	0

**Table 8d: distribution of tentative phrasal terms and idioms in my corpus and the PHI database**

The statistics from the PHI corpus suggest that most of these are unlikely to be phrasal terms – and also show that for a number of these phrases, the orders that were most frequent in my corpus and thus termed basic were not necessarily the most common orders for the phrases in the PHI texts. Out of all the expressions in Table 8d, the ones most likely to be formulae or phrasal terms or idiomatic expressions are *tribunatum plebis*, as the link with *tribunus plebis* is very strong, *ius gentium* and, by analogy with it, *ius belli*, as well as *terrae filius*. There are eleven examples of the phrase *Terrae filius* in the PHI corpus, where *Terra* is the earth as a goddess and is quite literally the parent, making the phrase *Terrae filius* a patronymic. It is possible that the instances where *terra* is simply a common noun are modelled on the patronymic, and have become an idiomatic expression akin to the English “salt of the earth”.

Alongside the phrasal terms and fixed expressions, I have included the patronymics and other kinship terms, as they are almost always found in the sequence genitive + *filius*, e.g. *Orgetorigis filiam* Caes. BG 1.9.3, *Auli filium* Cic. Att. 1.16.12, *Masinissae nepos* Sall. Iug. 35.1; cf. Adams 1976:75. This is strikingly similar to the identification of freedmen mentioned in Ch. 3 §5.3 above, which is also genitive + *libertus*. This may be because the constituent that differs from patronymic to patronymic is not the type of relationship, but the people involved, so that who is related to whom is the most salient information.

	NGen		GenN		Total
		%		%	
Patronymics	2	11.8%	15	88.2%	17

**Table 8e: distribution of NGen and GenN in patronymics in my corpus**

There are two exceptions to the genitive + *filius* order for the patronymics. They are given in context below:

- (210) nam cum dies venisset rogationi ex senatus consulto ferendae, concursabant barbatuli iuvenes, totus ille grex Catilinae duce *filiola Curionis*, et populum ut antiquaret rogabant.

When the day came for the bill to be put to the Assembly under the terms of the senatorial decree, there was a flocking together of our goateed young bloods, the whole Catilinarian gang with *little Miss Curio* [lit. *Curio's little girl*] at their head, to plead for its rejection.

Cic. Att. 1.14.5

- (211) sed in itinere quinto denique die Volux, *filius Bocchi*, repente in campis patentibus cum mille non amplius equitibus sese ostendit, qui temere et effuse euntes Sullae aliisque omnibus et numerum amplio rem vero et hostilem metum efficiebant.

But on the fifth day of the journey, Volux, *the son of Bocchus*, suddenly appeared on the open plains with no more than a thousand horsemen, who, riding heedlessly and in open order, they seemed to Sulla and all the others to be greater in number and made them fear an enemy attack.

Sall. Iug. 105.3

In example (210), Cicero refers to Clodius's friends and supporters in derisive and sarcastic terms as the diminutives *barbatuli* "with small beards" and *filiola* "little girl" show. Not only is the reference to the younger Curio as a girl an insult, cf. the

reference to Clodius as *illa popula Appuleia* “the People’s Appuleia” Cic. *Att.* 4.11.2, pointed out by Shackleton Bailey 1965:310, it is also unexpected and so the noun precedes the genitive. As for example (211), it is possible that Bocchus is such old information, having been continuously intriguing with the Romans from Sall. *Iug.* 102.2 on, that for once it is not as important to stress whose son Volux is. It may also be worth noting that Volux has been introduced previously as Bocchus’s son at *Iug.* 101.5, so the patronymic at *Iug.* 105.3 may be no more than a reminder.

As has been shown in the tables in this section, patronymics are not the only formulaic expressions that vary in their order. Even a phrasal term as lexicalised as *agri cultura* is found with its constituents reversed. Below, the three instances of *cultura agri* in Varro *Rust.* are given in their original context:

(212) dixi de quadripertita forma in *cultura agri*.

I have discussed the fourfold division in *agriculture*.

Varro *Rust.* 1.37.3

(213) itaque in qua terra *culturam agri* docuerunt pastores progeniem suam, qui condiderunt urbem, ibi contra progenies eorum propter avaritiam contra leges ex segetibus fecit frata, ignorantes non idem esse agri culturam et pastionem.

And so, in a land where the shepherds who founded the city taught their offspring *the cultivation of the earth*, there, on the contrary, their descendants, from greed and in the face of the laws, have made pastures out of grain lands – not knowing that agriculture and grazing are not the same thing.

Varro *Rust.* 2.P.4

(214) neque solum antiquior *cultura agri*, sed etiam melior.

And not only is *the tilling of the fields* more ancient – it is more noble.

Varro *Rust.* 3.1.4

Example (212) comes at the conclusion of the discussion of the four chief divisions of agriculture laid out by Scrofa at *Rust.* 1.5.3, namely the farm, equipment, how to farm, and when to farm. Tremelius wraps up the discussion of the fourth topic with this sentence, and then Stolo launches into a new but related topic, this one on the seasons. It is possible that as we are at the end of the first big discussion, which has

lasted thirty-two chapters, the phrasing *cultura agri* has been chosen because it is striking and unusual, and so draws attention to the fact that the first overarching topic has finished.

Examples (213) and (214) are somewhat different from (212). At the start of both books two and three of the *Res Rusticae*, Varro discusses the history of farming practices. In both these examples, *cultura agri* is not the lexicalised phrase meaning “agriculture”, but rather, as the translations make clear, the acts of cultivating crops that developed into agriculture. He is literally talking about “the cultivating of the fields”, the first scatterings of seed and tillings of earth, and so the objective genitive still retains its force, leading to the NGen order; see Ch. 3 §2.5.2 above. By contrast, *agri cultura* is reserved for organised farming.

Further, in (213), Varro is making a distinction between the growing of crops and the keeping of herds, stressing the difference with the phrase *non idem esse agri culturam et pastionem* “agriculture and grazing are not the same”. Note that he uses the lexicalised *agri culturam* when drawing the contrast with herding, but in order to make his point clear, he has used *culturam agri* just a little before, drawing attention to the meanings of the individual constituents that make up the phrase and so underscoring his assertion that *agri cultura* refers only to the cultivation of crops.

Given that (213) and (214) do not actually translate to “agriculture”, it is doubtful that they should even be included with the phrasal terms and other formulae. As for the other examples of inverted order, namely the two patronymics (210) and (211) and the instance of *cultura agri* in (212), they show that even formulaic expressions in Latin, even lexicalised phrases that are on their way to becoming single words in their own right can still be subject to the influence of that most pervasive of all the word order factors, information structure, the communicative intent of the speaker.

## 9. LEXICAL ITEMS

In this section, I look at the five head nouns *pars*, *genus*, *spes*, *animus*, *castra* which occurred relatively frequently in my corpus. Whilst each of the words has its own particular distribution, it turns out that it is not entirely the result of the word itself. Instead, it is the result of the kind of genitive that depends on the word. The semantic properties of the head noun are involved inasmuch as the type of genitive that a noun takes is influenced by the meaning of the noun. However, there is little to no point in investigating the influence of individual lexical items for two main reasons: firstly, they overlap extensively with function of the genitive, and second, the infrequency with which each item occurs in my corpus. For example, *pars* occurred most often, with 91 tokens, but *castra* had only 23. There are hundreds more head nouns in my corpus that occur once or maybe twice. Also, certain words were not found in certain authors, e.g. *castra* and *animus*, neither of which was found in Varro.

Of the five head nouns I chose to examine, *pars* almost always takes a partitive genitive, *genus* either a defining or partitive genitive, *spes* almost always an objective genitive, and *animus* and *castra* almost always a possessive. Their orders reflect the orders found in these genitives

Words	NGen		GenN		Total
		%		%	
<i>animus</i>	14	31.8%	30	68.2%	<b>44</b>
<i>castra</i>	13	56.5%	10	43.5%	<b>23</b>
<i>genus</i>	44	67.7%	21	32.3%	<b>65</b>
<i>pars</i>	62	68.1%	29	31.9%	<b>91</b>
<i>spes</i>	39	78%	11	22%	<b>50</b>

**Table 9a: distribution of NGen and GenN for different lexical items**

Order	NGen		GenN		Total
		%		%	
<b>Possessive</b>	372	46.7%	425	53.3%	<b>797</b>
<i>Animus</i>	14	31.8%	30	68.2%	<b>44</b>
<i>Castra</i>	13	56.5%	10	43.5%	<b>23</b>
<b>Defining</b>	100	67.1%	49	32.9%	<b>149</b>
<i>Genus</i>	44	67.7%	21	32.3%	<b>65</b>
<b>Partitive</b>	401	63%	236	37%	<b>637</b>
<i>Pars</i>	62	68.1%	29	31.9%	<b>91</b>
<b>Objective</b>	310	58.8%	217	41.2%	<b>527</b>
<i>Spes</i>	39	78%	11	22%	<b>50</b>

**Table 9b: comparison of distribution of NGen and GenN for different lexical items and the type of genitive that most often depends on them**

As can be seen from the table, there is a correlation between the order predicted by the type of genitive that each of these words takes and the word order patterns of the words. The correlation is strongest for *pars* and *genus*, and whilst *animus* and *castra* may both seem to be quite far off the figures for the possessive genitive, the sum of their scores matches the possessive almost exactly. Note that there are relatively few tokens of *castra*, and that *animus* itself has the second fewest number of tokens.

## 10. NUMBER OF THE GENITIVE

Viti 2010 discusses the effect of the grammatical number of the nominal genitive on its position relative to the head noun in Caesar *Bellum Gallicum* 1-7, arguing that plural genitives are correlated with postposition, and singular genitives with anteposition. Singular genitives which follow their head nouns, she says, are generally non-specific collective nouns – another sort of plural.

I have looked at singular and plural in Sallust's *Iugurtha*, with one major difference in methodology from Viti, who includes formulaic phrases such as *tribunus plebis*. I exclude these formulae and other lexicalised phrases on the grounds that they can bias the distribution of the genitive, and thus obscure the patterns of truly variable phrases; see Ch. 3 §8 above. Also, as Viti discusses abstract and collective nouns separately

from singular and plural in the text, I have made that distinction as well in the table below, rather than the simple binary split between singular and plural given in Viti's own tables. The results for the effect of grammatical number on nominal genitives in Sall. *Iug.* are given in the table following:

Texts	NGen		GenN		Total
		%		%	
Singular	158	57.9%	115	42.1%	<b>273</b>
Plural	143	64.4%	79	35.6%	<b>222</b>
Abstract	129	58.1%	93	41.9%	<b>222</b>
Collective	22	61.1%	14	38.9%	<b>36</b>

**Table 10a: distribution of NGen and GenN for grammatical number in Sall. *Iug.***

Whilst plural, abstract and collective nouns are most often postposed, as Viti predicts, so are the singular nouns. They may not be postposed proportionately as often as plural nouns, but they are very close to abstract nouns in their proportions. The higher frequency of NGen in Sallust than in the other authors has been noted before, so it is possible that the results of this table are reflecting this.

However, I also looked at Caes. *BG* 1, even though this book formed part of Viti's original study, removing the formulae and lexicalised phrases to see if that changed the results.

Texts	NGen		GenN		Total
		%		%	
Singular	52	59.1%	36	40.9%	<b>88</b>
Plural	95	57.2%	71	42.8%	<b>166</b>
Abstract	22	53.7%	19	46.3%	<b>41</b>
Collective	10	76.9%	3	23.1%	<b>13</b>

**Table 10b: distribution of NGen and GenN for grammatical number in Caes. *BG*. 1**

This table differs noticeably from Viti's, as do the results. All four types of nominal genitive once again follow their head noun, with singular and plural showing similar proportions of NGen:GenN. Based on these results as well as those from Sallust, I would argue that grammatical number is unlikely to have any effect on genitive word order. Further, Viti links grammatical number to a distinction between human and non-human nouns (2010:81, 84, 88f.), which is essentially a broad animacy

distinction. As I have shown in Ch. 3 §5 above, animacy does not provide a good explanation of genitive order. It is possible, though, that my animacy analysis is too fine-grained, with too many separate categories, and that a simple binary distinction between human and non-human may have some effect.

Animacy aside, I believe that grammatical number is not a satisfactory explanation of genitive ordering patterns, as singular and plural, when formulae are removed, and abstract and collective nouns are separated out, have very similar proportions of the two orders to each other in each of the authors examined here.

## 11. CONCLUSION

This chapter has looked at a variety of the factors that have been previously suggested to govern word order in Latin in general, as well as in the genitive construction in particular. Although some of these factors clearly do have an effect on the order of the dependent genitive and its head noun – information structure and the *wh*-relatives and interrogatives, for instance – not all of them do, animacy most spectacularly of all. Even amongst the factors which influence the order of the genitive, not all of them are of equal importance, as is plainly demonstrated by a comparison of the *wh*-relatives and interrogatives, found invariably before their head nouns, with, say the subjective and objective genitives, which are found in both NGen and GenN orders.

It is also worth noting that the motivating factors for word order are not necessarily represented by the main sections into which the chapter has been divided, but rather by certain of the subsections within them. Take, for example, the presence or absence of a preposition governing the head noun. The lack of a preposition has no effect on the order of the genitive and head noun – both orders NGen and GenN are found nearly as often as each other – but when the head noun is governed by a preposition,

the proportions of NGen increase noticeably, so it is the presence rather than the absence of the preposition that has an effect on the order of the constituents, though this effect can only be seen by comparing it to the order when there is no preposition.

According to the qualitative analysis, the factors that influence word order are *wh*-pronouns and information structure, as well as certain functions of the genitive, these being partitive and defining genitives, genitive of quality, and subjective and objective genitives, pronominal genitives and gerundives, preposition phrases, and idiomatic expressions and phrasal terms. Animacy and grammatical number appear to have little effect, whilst discontinuity is almost certainly linked to information structure, given the fact that pragmatically marked constituents tended to precede pragmatically unmarked constituents in discontinuous noun phrases. Perhaps a more realistic picture of the arrangement of the genitive and head noun would be one with four different orders Gen\_N, GenN, NGen and N\_Gen.

One factor not considered individually, but which certainly appears to have some effect on the order of the constituents, is authorial preference. The most consistent example is found in Sallust, who time and again uses NGen order where the others use GenN; the most striking example is the split between authors of the orders *wh*-genitive + preposition and preposition + *wh*-genitive. There are also differences between genres, which can be clearly seen in Cicero's two works, one informal correspondence, the other public and emotive speeches, which frequently vary more in their distribution of NGen and GenN orders with each other than they do with the works of the other authors.

Word order in the Latin genitive is not straightforward and simple, but is instead the result of a combination of many considerations. I have operated on the assumption that there is a hierarchy of factors, with some being given precedence over others.

However, as the discussion of examples above has shown, even factors like information structure can be overridden by others – so if there is a hierarchy, it is not linear. The only invariable factor is the *wh*-pronoun. As it is, since there are so many different factors, it is possible that Viti 2010 and Spevak 2010 are correct in suggesting that there is no basic genitive order for the construction as a whole, but rather that there are basic word orders for certain types of genitive.

## CHAPTER FOUR

### QUANTITATIVE ANALYSIS

The qualitative analysis in Chapter Three provided an in-depth discussion of an array of different factors that might influence the order of the dependent genitive and its head noun; this chapter looks at the statistical analyses of the genitive constructions in my corpus. Whereas the qualitative analysis went into great detail and made many fine-grained distinctions, the statistical analyses discussed below deal with somewhat broader categories. On the other hand, each statistical analysis is tested for statistical significance – a measure of the probability of such results being found when the null hypothesis is true and the order of the constituents is random; see Ch. 2 §3.3.2 above – as well as for model fit, i.e. its ability to predict the actual data observed; see Ch. 2 §3.3.1. My pilot study suggested that Latin word order is determined by not one factor but by multiple factors working simultaneously, particularly information structure, which predicts that pragmatically marked constituents precede unmarked ones, and lexical category, where not only do *wh*-genitives invariably precede their head nouns but pronominal genitives are often found before their head nouns also. I have used the programme GoldVarb to perform a multivariate analysis, a statistical analysis which considers multiple independent variables and their effect on the dependent variable simultaneously; see Ch. 2 §3.3. The specific factors tested are listed in Ch. 4 §1 below.

#### 1. METHODOLOGY

I began by recording every instance of a genitive dependent upon a head noun in my corpus (Caes. *BG* 1-3, Cic. *Att.* 1-3, *Cat.* 1-2, Sall. *Cat.*, *Iug.*, Varro *Rust.*). Genitives

dependent on verbs were not included, whilst some genitives dependent on adjectives were, depending on whether or not the adjective was treated like a noun, e.g. *tui ... amantem* “one who loves you” Cic. *Att.* 1.5.1, see Ch. 3 §5.1.

For each instance or token of the genitive construction recorded, I noted down the following potential influences: (1) position, i.e. was the order in the construction NGen or GenN; (2) information structure, i.e. which constituent of the genitive construction, if any, carried pragmatic marking; (3) the function of the genitive, i.e. was the genitive possessive, partitive, subjective, etc; (4) the lexical category of the genitive, i.e. was the genitive a noun, pronoun, *wh*-pronoun, etc; (5) the continuity of the genitive construction, i.e. whether or not the head noun and dependent genitive were separated by some constituent not belonging to the genitive construction; (6) the animacy of the genitive, i.e. was the genitive a first or second person pronoun, a noun with a human referent, a noun with an inanimate referent, etc; (7) speech, i.e. whether or not the genitive was found in speech, direct or reported; (8) the language of genitive, i.e. was it Latin or Greek; (9) the author, i.e. which of the authors this particular genitive was found in; (10) the genre, i.e. was the genitive found in a commentary, a letter, an oration, a history or a didactic tract; (11) the presence of a preposition phrase, i.e. whether or not the genitive construction was governed by a preposition (phrase).

Individual lexical items (see Ch. 3 §9 above) were not included, as this would have taken a very long time and produced an extremely unwieldy data set. The grammatical number of the genitive (see Ch. 3 §10 above) was also excluded, as Viti’s 2010 article came out only after I had finished recording and coding the tokens. Also, the discussion of grammatical number in Ch. 3 §10 suggests that it is unlikely to have any actual effect on word order. As for the language of the genitive, this was originally

coded on the basis of a previous study I had done regarding noun and adjective position in Cicero's letters to Atticus, where Greek descriptive adjectives almost always followed their head nouns. However, as there were only two examples of Greek genitives in my corpus, again in *Cic. Att.* 1-3, this group was never included in the actual statistical analyses.

Each of these possible influences was recorded as follows:

(1) Position was recorded in the first column as follows:

- when the dependent genitive preceded the head noun, it was coded as 0,
- when the head noun preceded the dependent genitive, it was coded as 1;

(2) information structure was recorded in the second column as follows:

- when the dependent genitive was pragmatically marked, it was coded as G,
- when the head noun was pragmatically marked, it was coded as N,
- when both constituents were pragmatically marked, it was coded as b,
- when neither was pragmatically marked, it was coded as u;

(3) the function of the genitive was recorded in the third column as follows:

- when the dependent genitive was possessive, it was coded as g,
- when the dependent genitive was partitive, it was coded as p,
- when the dependent genitive was defining, it was coded as d,
- when the dependent genitive was a genitive of quality, it was coded as q,
- when the dependent genitive was subjective, it was coded as s,
- when the dependent genitive was objective, it was coded as o,
- when the dependent genitive was miscellaneous, it was coded as m;

(4) the lexical category of the genitive was recorded in the fourth column as follows:

- when the dependent genitive was a noun, it was coded as N,

- when the dependent genitive was a pronoun, it was coded as P,
- when the dependent genitive was a *wh*-pronoun, it was coded as W,
- when the dependent genitive was a noun derived from an adjective, it was coded as A,
- when the dependent genitive was a gerund(ive), it was coded as G;

(5) the continuity of the genitive phrase was recorded in the fifth column as follows:

- when the dependent genitive was continuous, it was coded as c,
- when the dependent genitive was separated from the head noun by a modifier of the head noun, it was coded as h,
- when the dependent genitive was separated from the head noun by a modifier of the genitive, it was coded as m,
- when modifiers of both the head noun and the dependent genitive separated them from each other, it was coded as b,
- when the head noun and dependent genitive were truly discontinuous, it was coded as d;

(6) the animacy of the genitive was recorded in the sixth column as follows:

- when the dependent genitive was a first or second person pronoun, it was coded as 1,
- when the dependent genitive was a third person pronoun with a human referent, it was coded as 3,
- when the dependent genitive was a proper noun with a human referent, it was coded as P,
- when the dependent genitive was a common noun with a human referent, it was coded as H,

- when the dependent genitive was a noun with an animate non-human referent, it was coded as A,

- when the dependent genitive was a noun with an inanimate referent, it was coded as I;

(7) speech was recorded in the seventh column as follows:

- when the genitive construction was found in direct or reported speech, it was coded as d,

- everywhere else the genitive construction was coded as n;

(8) the language of the genitive was recorded in the eighth column as follows:

- when the dependent genitive was in Latin, it was coded as L,

- when the dependent genitive was in Greek, it was coded as G;

(9) the author was recorded in the ninth column as follows:

- all genitive constructions in Caesar were coded as J,

- all genitive constructions in Cicero were coded as C,

- all genitive constructions in Sallust were coded as S,

- all genitive constructions in Varro were coded as V;

(10) the genre was recorded in the tenth column as follows:

- all genitive constructions in Caesar's commentaries were coded as c,

- all genitive constructions in Cicero's letters were coded as l,

- all genitive constructions in Cicero's orations were coded as s,

- all genitive constructions in Sallust's histories were coded as h,

- all genitive constructions in Varro's didactic were coded as d;

(11) the presence of a preposition phrase was coded in the eleventh column as follows:

- when the genitive construction was governed by a preposition, it was coded as p,

- when the genitive construction was governed by a preposition and the dependent genitive preceded the preposition, it was coded as e,

- when the genitive construction was not governed by a preposition, it was coded as n.

An example of a coded token is given below:

(0upWcInLJcn *quarum unam* Caes. *BG* 1.1.1

where the coding string 0upWcInLJcn tells us that the genitive precedes the noun (0), there is no pragmatic marking (u), the genitive is a partitive genitive (p), it is a *wh*-pronoun (W), the genitive and head noun are continuous (c), the genitive is inanimate (I), it is not direct or reported speech (n), the genitive is Latin (L), in Caesar's work (J), in a commentary (c), and not in a preposition phrase (n). The actual token *quarum unam* and its reference Caes. *BG* 1.1.1 are recorded as well.

Or, another example:

(1ugNcPdLShp *ex patribus Albini aut Bestiae* Sall. *Iug.* 85.16

where the coding string 1ugNcPdLShp tells us that the genitive follows the noun (1), there is no pragmatic marking (u), the genitive is possessive (g), it is a noun (N), the genitive and head noun are continuous (c), the genitive is a proper noun (P), it is in speech (d), the genitive is Latin (L), in Sallust's work (S), in a history (h), and the construction is governed by a preposition phrase (p).

Once I had collected all the instances of genitives dependent on head nouns, I went through the list excluding the lexical phrases *agri cultura*, *senatus consultum*, *tribunus plebis*, *pater familias*, etc, and patronymics. For the full list see Ch. 3 §8 above. This was done because lexical phrases are generally found in one order to the (near) exclusion of the other order, and as a result can seriously skew the distribution

of the factors; see the discussion of *agri cultura* in Ch. 3 §8. This left me with a total of 3712 tokens split across six works by four different authors.

I then used GoldVarb to create frequency distributions, cross tabulations, and variable rule analyses for these tokens. These are discussed below in their own sections.

## **2. FREQUENCY DISTRIBUTIONS**

Frequency distributions are the simplest numerical analyses of my data. As their name implies, the frequency distributions compare the distribution of each individual factor across the two positions NGen and GenN, i.e. they compare how often each factor is found in each position. Whilst simple, it is a useful analysis, as it allows patterns of distribution to be picked out and gives some ideas as to what the outcome of the variable rule analysis may be. The tables given in the qualitative analysis are frequency distributions for individual factors.

In the sub-sections below I provide the frequency distributions for my data once more. However, instead of each table providing distributions of individual factors across all six texts, in this chapter the tables give distributions of all the factors within the factor groups for each individual work, author, and the corpus as a whole. Although it is a recapitulation of the data, this makes it easier to see the effects of the different factors within the factor groups.

### **2.1 Information structure**

The distribution of NGen and GenN orders for information structure is given in the table below:

	NGen		GenN		Total
		%		%	
<b>All authors</b>					
Marked genitive	119	19.5%	491	80.5%	<b>610</b>
Marked noun	208	83.9%	40	16.1%	<b>248</b>
Both constituents marked	104	49.3%	107	50.7%	<b>211</b>
Neither constituent marked	1588	60.1%	1055	39.9%	<b>2643</b>
<b>Caesar BG 1-3</b>					
Marked genitive	28	28.3%	71	71.7%	<b>99</b>
Marked noun	29	85.3%	5	14.7%	<b>34</b>
Both constituents marked	18	60%	12	40%	<b>30</b>
Neither constituent marked	326	54.2%	276	45.8%	<b>602</b>
<b>Cicero Att. 1-3</b>					
Marked genitive	14	13.5%	90	86.5%	<b>104</b>
Marked noun	46	90.2%	5	9.8%	<b>51</b>
Both constituents marked	32	51.6%	30	48.4%	<b>62</b>
Neither constituent marked	245	61.7%	152	38.3%	<b>397</b>
<b>Cicero Cat. 1-2</b>					
Marked genitive	6	10.5%	51	89.5%	<b>57</b>
Marked noun	13	76.5%	4	23.5%	<b>17</b>
Both constituents marked	13	52%	12	48%	<b>25</b>
Neither constituent marked	104	62.3%	63	37.7%	<b>167</b>
<b>Cicero</b>					
Marked genitive	20	12.4%	141	87.6%	<b>161</b>
Marked noun	59	86.8%	9	13.2%	<b>68</b>
Both constituents marked	45	51.7%	42	48.3%	<b>87</b>
Neither constituent marked	349	61.9%	215	38.1%	<b>564</b>
<b>Sallust Cat.</b>					
Marked genitive	13	21.3%	48	78.7%	<b>61</b>
Marked noun	7	77.8%	2	22.2%	<b>9</b>
Both constituents marked	4	26.7%	11	73.3%	<b>15</b>
Neither constituent marked	212	63.5%	122	36.5%	<b>334</b>
<b>Sallust Jug.</b>					
Marked genitive	21	21.9%	75	78.1%	<b>96</b>
Marked noun	31	70.5%	13	29.5%	<b>44</b>
Both constituents marked	28	49.1%	29	50.9%	<b>57</b>
Neither constituent marked	421	62.5%	253	37.5%	<b>674</b>
<b>Sallust</b>					
Marked genitive	34	21.7%	123	78.3%	<b>157</b>
Marked noun	38	71.7%	15	28.3%	<b>53</b>
Both constituents marked	32	44.4%	40	55.6%	<b>72</b>
Neither constituent marked	633	62.8%	375	37.2%	<b>1008</b>
<b>Varro Rust.</b>					
Marked genitive	37	19.2%	156	80.8%	<b>193</b>
Marked noun	82	88.2%	11	11.8%	<b>93</b>
Both constituents marked	9	40.9%	13	59.1%	<b>22</b>
Neither constituent marked	280	59.7%	189	40.3%	<b>469</b>

**Table 2.1: distribution of NGen and GenN for information structure**

The overall pattern is one where marked constituents frequently precede unmarked ones, where either can precede with roughly equal frequency when both constituents are marked, and where the order when there is no pragmatic marking is most often NGen. The authors all follow much the same pattern, though in Cicero the individual marked constituents are more extreme in their tendency to be found in one order rather than the other. Sallust consistently has higher proportions of unmarked NGen order than the other authors, though in the case of Sall. *Jug.* and Cic. *Cat.* 1-2, the difference is a mere 0.2%, which is so small that it makes it clear that we should not place too much weight upon the fact that he has NGen more frequently in unmarked genitive constructions.

It is interesting to note that Cicero and Caesar use NGen more often when both constituents are marked, whilst for both Varro and Sallust GenN is found more frequently. I would suggest that this is due to the fact that when both constituents are marked, priority will be given to the constituent that carries a pragmatic function that operates at the level of the sentence (see Ch. 3 §1.3 above), in effect making this factor a kind of combination of the three other factors, with the sentence-level pragmatic function acting like pragmatic function does for marked genitives and nouns, and instances where no sentence-level pragmatic function is involved behaving like unmarked genitive constructions. Aside from the situation where both constituents are marked, though, there are no real differences between the authors.

## 2.2 Function of the genitive

Most of the factors within this group were seen by the qualitative analysis to be associated with one particular order rather than the other, with subjective genitives and genitives of quality being found GenN more often than NGen, and partitives, defining and objective genitives being most commonly found NGen. However, they were none of them as strong as the information structure factors discussed in Ch. 4 §2.1 above, nor as the *wh*-pronouns in Ch. 4 §2.3 below.

Whilst there was a fair amount of consistency between the authors for information structure, there is a little more variation found in the syntactic function of the genitive. Overall, the partitives and defining genitives in the corpus are found largely NGen, genitives of quality GenN, and objective genitives more frequently follow the noun whilst subjectives more frequently precede. Possessives are found GenN most often, and miscellaneous genitives, from which no real conclusions can be drawn, NGen.

	NGen		GenN		Total
		%		%	
<b>All authors</b>					
Possessive genitive	375	47.1%	422	52.9%	<b>797</b>
Partitive genitive	400	63.1%	234	36.9%	<b>634</b>
Defining genitive	102	67.5%	49	32.5%	<b>151</b>
Genitive of quality	42	41.2%	60	58.8%	<b>102</b>
Subjective genitive	268	45%	328	55%	<b>596</b>
Objective genitive	309	59.1%	214	40.9%	<b>523</b>
Miscellaneous genitive	523	57.5%	386	42.5%	<b>909</b>
<b>Caesar BG 1-3</b>					
Possessive genitive	72	43.1%	95	56.9%	<b>167</b>
Partitive genitive	92	61.3%	58	38.7%	<b>150</b>
Defining genitive	18	64.3%	10	35.7%	<b>28</b>
Genitive of quality	7	35%	13	65%	<b>20</b>
Subjective genitive	44	38.6%	70	61.4%	<b>114</b>
Objective genitive	47	60.3%	31	39.7%	<b>78</b>
Miscellaneous genitive	121	58.2%	87	41.8%	<b>208</b>
<b>Cicero Att. 1-3</b>					
Possessive genitive	44	41.1%	63	58.9%	<b>107</b>
Partitive genitive	67	72%	26	28%	<b>93</b>
Defining genitive	10	66.7%	5	33.3%	<b>15</b>
Genitive of quality	8	42.1%	11	57.9%	<b>19</b>
Subjective genitive	66	44%	84	56%	<b>150</b>
Objective genitive	79	61.2%	50	38.8%	<b>129</b>
Miscellaneous genitive	63	62.4%	38	37.6%	<b>101</b>

<b>Cicero Cat. 1-2</b>					
Possessive genitive	21	38.2%	34	61.8%	<b>55</b>
Partitive genitive	19	65.5%	10	34.5%	<b>29</b>
Defining genitive	5	38.5%	8	61.5%	<b>13</b>
Genitive of quality	0	0%	4	100%	<b>4</b>
Subjective genitive	25	49%	26	51%	<b>51</b>
Objective genitive	31	60.8%	20	39.2%	<b>51</b>
Miscellaneous genitive	35	55.6%	28	44.4%	<b>63</b>
<b>Cicero</b>					
Possessive genitive	65	40.1%	97	59.9%	<b>162</b>
Partitive genitive	86	70.5%	36	29.5%	<b>122</b>
Defining genitive	15	53.6%	13	46.4%	<b>28</b>
Genitive of quality	65	40.1%	97	59.9%	<b>162</b>
Subjective genitive	91	45.3%	110	54.7%	<b>201</b>
Objective genitive	110	61.1%	70	38.9%	<b>180</b>
Miscellaneous genitive	98	59.8%	66	40.2%	<b>164</b>
<b>Sallust Cat.</b>					
Possessive genitive	42	46.7%	48	53.3%	<b>90</b>
Partitive genitive	30	66.7%	15	33.3%	<b>45</b>
Defining genitive	13	65%	7	35%	<b>20</b>
Genitive of quality	8	47.1%	9	52.9%	<b>17</b>
Subjective genitive	30	49.2%	31	50.8%	<b>61</b>
Objective genitive	30	55.6%	24	44.4%	<b>54</b>
Miscellaneous genitive	83	62.9%	49	37.1%	<b>132</b>
<b>Sallust Jug.</b>					
Possessive genitive	95	57.9%	69	42.1%	<b>164</b>
Partitive genitive	77	63.1%	45	36.9%	<b>122</b>
Defining genitive	27	84.4%	5	15.6%	<b>32</b>
Genitive of quality	14	56%	11	44%	<b>25</b>
Subjective genitive	76	56.7%	58	43.3%	<b>134</b>
Objective genitive	79	56.8%	60	43.2%	<b>139</b>
Miscellaneous genitive	133	52.2%	122	47.8%	<b>255</b>
<b>Sallust</b>					
Possessive genitive	137	53.9%	117	46.1%	<b>254</b>
Partitive genitive	107	64.1%	60	35.9%	<b>167</b>
Defining genitive	40	76.9%	12	23.1%	<b>52</b>
Genitive of quality	22	52.4%	20	47.6%	<b>42</b>
Subjective genitive	106	54.4%	89	45.6%	<b>195</b>
Objective genitive	109	56.5%	84	43.5%	<b>193</b>
Miscellaneous genitive	216	55.8%	171	44.2%	<b>387</b>
<b>Varro Rust.</b>					
Possessive genitive	101	47.2%	113	52.8%	<b>214</b>
Partitive genitive	115	59%	80	41%	<b>195</b>
Defining genitive	29	67.4%	14	32.6%	<b>43</b>
Genitive of quality	5	29.4%	12	70.6%	<b>17</b>
Subjective genitive	27	31.4%	59	68.6%	<b>86</b>
Objective genitive	43	59.7%	29	40.3%	<b>72</b>
Miscellaneous genitive	88	58.7%	62	41.3%	<b>150</b>

**Table 2.2: distribution of NGen and GenN for syntactic function of the genitive**

The distributions for Caesar, Cicero and Varro are for the most part unremarkable.

However, it is notable that the figures for genitive function in Cic. *Cat.* 1-2 are in

some instances more extreme than in Cic. *Att.* 1-3, due in part to the lower number of tokens – fewer tokens means that distributions like that for the genitive of quality are more likely to be seen, as small sample sizes lead to larger fluctuations in the distributions. On the other hand, the fact that the genitive of quality is only found preceding the head noun here is interesting, given the discussion of typologically harmonic combinations of genitives, adjectives and nouns after Elerick 1994 in Ch. 3 §3.2.4. Note also that Varro’s figures for subjective genitive and genitive of quality are very strongly GenN, more so than for any author.

Sallust, however, has some interesting differences in order from the other three. The three genitive functions which are GenN in the other authors – possessive, quality and subjective – are still GenN, but weakly so, in Sallust’s *Catiline*, but NGen in the *Jugurtha*. It has been observed several times already in the qualitative analysis that Sallust uses NGen more frequently than the other authors, see Ch. 3 §2.1, §2.4, §4.2, which may be a result of his relatively plain style reflecting the spoken language more closely than, say, Cicero’s formal orations or Varro’s idiosyncratic mixture of clear but technical language and rhetoric. See also the discussion of pronominal genitives in §2.3 below. It is noteworthy that Cicero’s private and informal correspondence has some of the highest proportions of NGen order for the partitive, defining, objective and miscellaneous genitives, which could be taken to support the assertion that NGen order was more prevalent in everyday speech than the largely literary surviving texts suggest.

### **2.3 Lexical category of the genitive**

This factor group contained the most striking of all factors influencing word order, the *wh*-pronominal genitives, which were invariably found preceding their head nouns.

Pronouns as well appeared to have some effect on the word order, along with the heavy gerund(ive)s.

	NGen		GenN		Total
		%		%	
<b>All authors</b>					
Noun	1613	58.9%	1126	41.1%	<b>2739</b>
Pronoun	190	43.7%	245	56.3%	<b>435</b>
Wh-pronoun	0	0%	143	100%	<b>143</b>
Adjective	146	51.4%	138	48.6%	<b>19</b>
Gerund(ive)	70	63.1%	41	36.9%	<b>111</b>
<b>Caesar BG 1-3</b>					
Noun	338	58.5%	240	41.5%	<b>578</b>
Pronoun	26	28%	67	72%	<b>93</b>
Wh-pronoun	0	0%	24	100%	<b>24</b>
Adjective	18	50%	18	50%	<b>36</b>
Gerund(ive)	19	55.9%	15	44.1%	<b>34</b>
<b>Cicero Att. 1-3</b>					
Noun	261	59.4%	179	40.6%	<b>441</b>
Pronoun	26	39.4%	40	60.6%	<b>93</b>
Wh-pronoun	0	0%	22	100%	<b>22</b>
Adjective	36	54.5%	30	45.5%	<b>66</b>
Gerund(ive)	13	68.4%	6	31.6%	<b>19</b>
<b>Cicero Cat. 1-2</b>					
Noun	112	56%	88	44%	<b>200</b>
Pronoun	4	16.7%	20	83.3%	<b>24</b>
Wh-pronoun	0	0%	12	100%	<b>12</b>
Adjective	18	69.2%	8	30.8%	<b>26</b>
Gerund(ive)	2	50%	2	50%	<b>4</b>
<b>Cicero</b>					
Noun	374	58.3%	267	41.7%	<b>641</b>
Pronoun	30	33.3%	60	66.7%	<b>90</b>
Wh-pronoun	0	0%	34	100%	<b>34</b>
Adjective	54	58.7%	38	41.3%	<b>92</b>
Gerund(ive)	15	65.2%	8	34.8%	<b>23</b>
<b>Sallust Cat.</b>					
Noun	176	59.5%	120	40.5%	<b>296</b>
Pronoun	29	61.7%	18	38.3%	<b>47</b>
Wh-pronoun	0	0%	12	100%	<b>12</b>
Adjective	20	40.8%	29	59.2%	<b>49</b>
Gerund(ive)	11	73.3%	4	26.7%	<b>15</b>
<b>Sallust Jug.</b>					
Noun	394	61.1%	251	38.9%	<b>645</b>
Pronoun	49	60.5%	32	39.5%	<b>81</b>
Wh-pronoun	0	0%	37	100%	<b>37</b>
Adjective	42	50.6%	41	49.4%	<b>83</b>
Gerund(ive)	16	64%	9	36%	<b>25</b>
<b>Sallust</b>					
Noun	570	60.6%	371	39.4%	<b>941</b>
Pronoun	78	60.9%	50	39.1%	<b>128</b>
Wh-pronoun	0	0%	49	100%	<b>49</b>
Adjective	62	47%	70	53%	<b>132</b>
Gerund(ive)	27	67.5%	13	32.5%	<b>40</b>

<b>Varro Rust.</b>					
Noun	331	57.2%	248	42.8%	<b>579</b>
Pronoun	56	45.2%	68	54.8%	<b>124</b>
Wh-pronoun	0	0%	36	100%	<b>36</b>
Adjective	12	50%	12	50%	<b>24</b>
Gerund(ive)	9	64.3%	5	35.7%	<b>34</b>

**Table 2.3: distribution of NGen and GenN for lexical category of the genitive**

The most noticeable feature of this table is that *wh*-pronouns are invariable in their order. Pronouns in general are also found GenN more often, whilst the three groups of nominals – nouns, nouns derived from adjectives, and gerund(ive)s – are found NGen most often. The gerund(ive)s follow the head noun nearly two-thirds of the time, possibly due to their weight as suggested in Ch. 3 §4.5. In both of Sallust’s works, though, pronominal genitives in both of Sallust’s works are found NGen most often, and by quite a substantial margin; see Ch. 3 §4.2 and Ch. 4 §2.2 above. Interestingly, though, the pronominal genitives in Varro, whilst found GenN most often, do not precede their head noun proportionately as frequently as the pronominal genitives in Caesar and Cicero do.

## 2.4 Discontinuity

In the qualitative analysis, four different hypotheses, related to information structure, prosody and the minimising of markedness, were discussed, with the evidence coming down largely on the side of the information structure hypothesis that predicted that pragmatically marked constituents will precede pragmatically unmarked constituents in discontinuous genitive constructions. The frequency distributions are given again in Table 2.4 below.

The figures for the corpus as a whole show that discontinuity does not make much difference to the order, as continuous genitives are found NGen 55% of the time, whilst discontinuous ones are found NGen just 4% less often.

It is interesting to note that in each of the authors when the head noun has a modifier that separates it from the genitive, GenN is by far the more frequent of the two orders; see Ch. 3 §3.2.1 above, where I suggested that the combination head noun + modifier is heavy and so is postposed within the phrase.

	NGen		GenN		Total
		%		%	
<b>All authors</b>					
Continuous	1677	55.4%	1349	44.6%	<b>3026</b>
Head noun modified	23	21.7%	83	78.3%	<b>106</b>
Genitive modified	152	58.9%	106	41.1%	<b>258</b>
Both constituents modified	9	56.2%	7	43.8%	<b>16</b>
Discontinuity	158	51.6%	148	48.4%	<b>306</b>
<b>Caesar BG 1-3</b>					
Continuous	335	53%	297	47%	<b>632</b>
Head noun modified	6	25%	18	75%	<b>24</b>
Genitive modified	32	64%	18	36%	<b>50</b>
Both constituents modified	3	100%	0	0%	<b>3</b>
Discontinuity	25	44.6%	31	55.4%	<b>56</b>
<b>Cicero Att. 1-3</b>					
Continuous	246	53.7%	212	46.3%	<b>458</b>
Head noun modified	2	22.2%	7	77.8%	<b>9</b>
Genitive modified	32	46.7%	32	53.3%	<b>60</b>
Both constituents modified	3	100%	0	0%	<b>3</b>
Discontinuity	54	64.3%	30	35.7%	<b>84</b>
<b>Cicero Cat. 1-2</b>					
Continuous	108	51.5%	102	48.5%	<b>210</b>
Head noun modified	3	30%	7	70%	<b>10</b>
Genitive modified	15	55.6%	12	44.4%	<b>27</b>
Both constituents modified	0	NA	0	NA	<b>0</b>
Discontinuity	10	52.6%	9	47.4%	<b>19</b>
<b>Cicero</b>					
Continuous	354	53%	314	47%	<b>668</b>
Head noun modified	5	26.3%	14	73.7%	<b>19</b>
Genitive modified	47	54%	40	46%	<b>87</b>
Both constituents modified	3	100%	0	0%	<b>3</b>
Discontinuity	64	62.1%	39	37.9%	<b>103</b>
<b>Sallust Cat.</b>					
Continuous	211	57.7%	155	42.3%	<b>366</b>
Head noun modified	1	8.3%	11	91.7%	<b>12</b>
Genitive modified	17	73.9%	6	26.1%	<b>23</b>
Both constituents modified	1	50%	1	50%	<b>2</b>
Discontinuity	6	37.5%	10	62.5%	<b>16</b>
<b>Sallust Jug.</b>					
Continuous	454	60.5%	296	39.5%	<b>750</b>
Head noun modified	4	13.3%	26	86.7%	<b>30</b>
Genitive modified	31	51.7%	29	48.3%	<b>60</b>
Both constituents modified	0	0%	4	100%	<b>4</b>
Discontinuity	12	44.4%	15	55.6%	<b>27</b>

<b>Sallust</b>					
Continuous	665	59.6%	451	40.4%	<b>1116</b>
Head noun modified	5	11.9%	37	88.1%	<b>42</b>
Genitive modified	48	57.8%	35	42.2%	<b>83</b>
Both constituents modified	1	16.7%	5	83.3%	<b>6</b>
Discontinuity	18	41.9%	25	58.1%	<b>43</b>
<b>Varro Rust.</b>					
Continuous	323	53%	287	47%	<b>610</b>
Head noun modified	7	33.3%	14	66.7%	<b>21</b>
Genitive modified	25	65.8%	13	34.2%	<b>38</b>
Both constituents modified	2	50%	2	50%	<b>4</b>
Discontinuity	51	49%	53	51%	<b>104</b>

**Table 2.4: distribution of NGen and GenN for discontinuity**

Whilst the head noun modifier patterns hold in all four authors, discontinuous noun phrases exhibit different ordering patterns in each of the authors. So, in both Caesar and Sallust, GenN is the most common order for discontinuous noun phrases. In Cic. *Att.* 1-3, though, discontinuity leads to increased proportions of NGen, whilst in Varro discontinuous genitives are roughly equally distributed between both orders. This remarkable discrepancy in the distribution of discontinuous genitives from one author to the next, especially in light of the consistent GenN order for head noun modifiers and NGen order for continuous noun phrases, supports the hypothesis that discontinuity may not be an independent variable that has an effect on word order within the genitive construction, but that word order in discontinuous genitives is the result of some other influence, such as information structure; see Ch. 3 §3.3, §3.4 above. The way discontinuity jumps around from author to author makes it fairly clear that discontinuity does not have much effect of its own, but rather appears to be affected by something else.

## **2.5 Animacy of the genitive**

My pilot study suggested that animacy did not have a straightforward effect on the order of the constituents of the genitive construction, if it had any effect at all, and the qualitative analysis shows that whatever effect animacy may have, it is unlikely to be

the animacy of the genitive alone that determines its order relative to its head noun. It is possible that a broader distinction – human vs non-human, or animate vs non-animate – would provide a better explanation than the multiple smaller categories I looked at, or that the animacy of the head noun itself is also involved.

	NGen		GenN		Total
		%		%	
<b>All authors</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	16	80%	4	20%	<b>20</b>
3 <sup>rd</sup> person pronouns	153	34.9%	285	65.1%	<b>438</b>
Proper nouns	282	55.7%	224	44.3%	<b>506</b>
Human common nouns	452	55.8%	358	44.2%	<b>810</b>
Non-human animate nouns	89	51.1%	85	48.9%	<b>174</b>
Inanimate common nouns	1027	58.2%	737	41.8%	<b>1764</b>
<b>Caesar BG 1-3</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	0	NA	0	NA	<b>0</b>
3 <sup>rd</sup> person pronouns	27	22.9%	91	77.1%	<b>118</b>
Proper nouns	95	58.6%	67	41.4%	<b>162</b>
Human common nouns	78	51%	75	49%	<b>153</b>
Non-human animate nouns	1	50%	1	50%	<b>2</b>
Inanimate common nouns	200	60.6%	130	39.4%	<b>330</b>
<b>Cicero Att. 1-3</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	8	66.7%	4	33.3%	<b>12</b>
3 <sup>rd</sup> person pronouns	27	32.5%	56	67.5%	<b>83</b>
Proper nouns	53	50%	53	50%	<b>106</b>
Human common nouns	59	50%	59	50%	<b>118</b>
Non-human animate nouns	0	NA	0	NA	<b>0</b>
Inanimate common nouns	190	64.6%	105	35.6%	<b>295</b>
<b>Cicero Cat. 1-2</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	2	100%	0	0%	<b>2</b>
3 <sup>rd</sup> person pronouns	6	16.7%	30	83.3%	<b>36</b>
Proper nouns	12	63.2%	7	36.8%	<b>19</b>
Human common nouns	48	60.8%	31	39.2%	<b>79</b>
Non-human animate nouns	0	NA	0	NA	<b>0</b>
Inanimate common nouns	68	52.3%	62	47.7%	<b>130</b>
<b>Cicero</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	10	71.4%	4	28.6%	<b>14</b>
3 <sup>rd</sup> person pronouns	33	27.7%	86	72.3%	<b>119</b>
Proper nouns	65	52%	60	48%	<b>125</b>
Human common nouns	107	54.3%	90	45.7%	<b>197</b>
Non-human animate nouns	0	NA	0	NA	<b>0</b>
Inanimate common nouns	258	60.7%	167	39.3%	<b>425</b>
<b>Sallust Cat.</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	3	100%	0	0%	<b>3</b>
3 <sup>rd</sup> person pronouns	27	52.9%	24	47.1%	<b>51</b>
Proper nouns	29	54.7%	24	45.3%	<b>53</b>
Human common nouns	57	49.6%	58	50.4%	<b>115</b>
Non-human animate nouns	0	0%	1	100%	<b>1</b>
Inanimate common nouns	120	61.2%	76	38.8%	<b>196</b>

<b>Sallust <i>Iug.</i></b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	1	100%	0	0%	<b>1</b>
3 <sup>rd</sup> person pronouns	47	45.2%	57	54.8%	<b>104</b>
Proper nouns	73	58.4%	52	41.6%	<b>125</b>
Human common nouns	164	62.1%	100	37.9%	<b>264</b>
Non-human animate nouns	4	44.4%	5	55.6%	<b>9</b>
Inanimate common nouns	212	57.6%	156	42.4%	<b>368</b>
<b>Sallust</b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	4	100%	0	0%	<b>4</b>
3 <sup>rd</sup> person pronouns	74	47.7%	81	52.3%	<b>155</b>
Proper nouns	102	57.3%	76	42.7%	<b>178</b>
Human common nouns	221	58.3%	158	41.7%	<b>379</b>
Non-human animate nouns	4	40%	6	60%	<b>10</b>
Inanimate common nouns	332	58.9%	232	41.1%	<b>564</b>
<b>Varro <i>Rust.</i></b>					
1 <sup>st</sup> and 2 <sup>nd</sup> person pronouns	2	100%	0	0%	<b>2</b>
3 <sup>rd</sup> person pronouns	19	41.3%	27	58.7%	<b>46</b>
Proper nouns	20	48.8%	21	51.2%	<b>41</b>
Human common nouns	46	56.8%	35	43.2%	<b>81</b>
Non-human animate nouns	84	51.9%	78	48.1%	<b>162</b>
Inanimate common nouns	237	53.3%	208	46.7%	<b>445</b>

**Table 2.5: distribution of NGen and GenN for the animacy of the genitive**

This table effectively confirms that the orders associated with genitives of differing degrees of animacy are all over the place and not predictable in terms of any animacy hierarchy. The figures for Cic. *Cat.* 1-2 contradict Att. 1-3, and whilst there may appear in some authors to be a general trend from more animate genitives being found before their head nouns to less animate genitives following them, Sall. *Iug.* does not follow even a general trend. The animacy of the genitive, as presented here, has no real effect on its order relative to its head noun.

## 2.6 Speech

Whilst all authors have examples of speech, direct or indirect, interspersed throughout their works, only Sallust had sufficiently lengthy stretches of speech for study; see Ch. 3 §7. The results for Sallust are given in the table below:

	NGen		GenN		Total
		%		%	
<b>Sallust <i>Cat.</i></b>					
Speech	73	63.5%	42	36.5%	<b>115</b>
Narrative	163	53.6%	141	46.4%	<b>304</b>
<b>Sallust <i>Iug.</i></b>					
Speech	73	49.3%	75	50.7%	<b>148</b>
Narrative	428	59.2%	295	40.8%	<b>723</b>
<b>Sallust</b>					
Speech	146	55.5%	117	44.5%	<b>263</b>
Narrative	591	57.5%	436	42.5%	<b>1027</b>

**Table 2.6: distribution of NGen and GenN for speech in Sallust**

The proportions of NGen:GenN are not consistent in Sallust’s two histories – speech is found most often NGen in *Sall. Cat.* but in *Sall. Iug.* the most frequent order for the genitives in speech is GenN. I suggested in Ch. 3 §7 that speeches are emotive and governed by information structure, which means that the proportion of NGen:GenN order will vary from speech to speech, as happens here. When the figures from the individual works are combined to establish the overall ordering patterns of speech versus narrative, they quite unsurprisingly balance each other out. As a result, speech and narrative overall in Sallust have virtually identical patterns of distribution, which tallies well with Syme’s observation that “[n]arration or oration, the style is uniform” (1964:266). This table shows that speech has no independent influence on word order patterns in the genitive in Sallust.

## 2.7 Language of the genitive

There were only two instances of the genitive being in Greek rather than Latin, and both were found in *Cic. Att.* 1-3.

	NGen		GenN		Total
		%		%	
Latin	277	45.3%	335	54.7%	<b>612</b>
Greek	0	0%	2	100%	<b>2</b>

**Table 2.7: distribution of NGen and GenN for language of the genitive in *Cic. Att.* 1-3**

It is obvious that the language of the genitive is not worth investigating any further. However, it is interesting that the only Greek genitives were found in Cicero’s informal letters, and both were Cicero’s nickname for Clodia: *lituis bo≈pidow* “the signals of Lady Oxeyes” Cic. *Att.* 2.12.2, *colloquio bo≈pidow* “the conversation of Lady Oxeyes” Cic. *Att.* 2.14.1. Greek was considered “the language of high culture” by the Romans (Adams 2003:10), but switching between Latin and Greek was often criticised (*ibid.*, pp. 19f.). In the letters to Atticus, in addition to the Greek nickname for Clodia, Cicero uses Greek idioms, e.g. *prŭw tŭ pròteron* “back to the beginning” Cic. *Att.* 1.16.2, and quotes passages in the original Greek, e.g. *ŬEspete nĒn moi, MoĒsai ... ~ppvw dØ pr«ton pĒr ¶mpese* “Tell me now, Muses ... how first the fire fell” Cic. *Att.* 1.16.5, a stark contrast to his refusal to quote Epicharmus in Greek at *Tusc.* 1.15. The presence of Greek in the letters indicates how relaxed and informal they are in register in contrast to the public and formal orations and literary works, in which Cicero deliberately avoids Greek. Of course, the use of Greek may also have something to do with the fact that the letters are addressed to Atticus, who was, after all, renowned for his fluency in Greek (Nepos *Att.* 4.2).

## 2.8 Author

As mentioned on several occasions previously, Sallust has a tendency to use NGen more often than the other authors.

	NGen		GenN		Total
		%		%	
Caesar	401	52.4%	364	47.6%	<b>765</b>
Cicero	473	53.8%	407	46.2%	<b>880</b>
Sallust	737	57.1%	553	42.9%	<b>1290</b>
Varro	408	52.5%	369	47.5%	<b>777</b>

**Table 2.8: distribution of NGen and GenN for authors**

This table shows that there is very little difference between the authors for overall word order. Whilst Caesar, Cicero and Varro differ by no more than 1.3%, Sallust uses NGen even more often. Nonetheless, the difference between Sallust and Cicero is only 3.3%, a difference so small it is hardly worth mentioning.

## 2.9 Genre

In my corpus genre and author overlap almost entirely; see further Ch. 4 §3 below. However, Cicero's works are split into the formal orations (*Cat.* 1-2) and the informal letters (*Att.* 1-3), which allows us to see for Cicero at least how much of the word order in the genitive is determined by personal preference and how much by register and genre.

	NGen		GenN		Total
		%		%	
Commentary	401	52.4%	364	47.6%	<b>765</b>
Letter	337	54.9%	277	45.1%	<b>614</b>
Oration	136	51.1%	130	48.9%	<b>266</b>
History	737	57.1%	553	42.9%	<b>1290</b>
Didactic	408	52.5%	369	47.5%	<b>777</b>

**Table 2.9: distribution of NGen and GenN for genre**

Whilst in Table 2.8 above Cicero used NGen order 53.8% of the time, the second most frequent user of this order after Sallust, in Table 2.9 it can be seen just how different his letters and orations are from each other. There is actually more variation between Cicero's two works than there is between individual authors. The orations have the lowest percentage of NGen of all the works, whilst the informal letters use NGen just 2% less often than Sallust does. This suggests that the increased proportions of NGen may be associated with more colloquial, less literary language, though Sallust's histories, which have the highest proportions of NGen order of all, are themselves literary texts, using such rhetorical features as brevity, archaic vocabulary as well as innovations, chiasmus and antitheses, see Syme 1964:257-67,

Scanlon 1980:63, Büchner 1982:276-84. However, Syme 1964 characterises Sallust's style as "plain" and "vigorous" (p. 260), as well as "anti-Ciceronian" (p. 257) and intent on avoiding "the conventional or tainted language of contemporary eloquence" (p. 261). How much of this can be safely transferred to the word order of a single grammatical construction is hard to say, but Cicero's orations and Sallust's histories do mark the opposite ends of the range in variability of genitive order in my corpus.

However, although the word order of the genitive differs in Cicero's letters and orations, the difference is not exactly dramatic. In fact, Tables 8 and 9 together show that in my corpus genre and author have very little effect on word order in the genitive construction, with the largest difference in the frequency with which NGen is found – that between Sallust and Cic. *Cat.* 1-2 – being no more than 6%. There may be personal quirks of style, there may be generic conventions, and differences in register, but they are unlikely to have a major effect on this one small grammatical construction.

## **2.10 Preposition phrases**

When the genitive depends on a head noun governed by a preposition, Elerick 1994 predicts that the most common order will be preposition + NGen. However, my pilot study, based on Cicero, found that the reverse happened – the proportions of GenN order increased – though the qualitative analysis, including Caesar, Sallust and Varro as well as Cicero, shows that Cicero is anomalous in this respect and that indeed NGen order is found more frequently when the head noun is governed by a preposition.

	NGen		GenN		Total
		%		%	
<b>All authors</b>					
Preposition phrase	480	59.6%	325	40.4%	<b>805</b>
Genitive outside PP	0	0%	8	100%	<b>8</b>
No preposition phrase	1539	53.1%	1360	46.9%	<b>2899</b>
<b>Caesar BG 1-3</b>					
Preposition phrase	117	62.9%	69	37.1%	<b>186</b>
Genitive outside PP	0	0%	3	100%	<b>3</b>
No preposition phrase	284	49.3%	292	50.7%	<b>576</b>
<b>Cicero Att. 1-3</b>					
Preposition phrase	58	49.2%	60	50.8%	<b>118</b>
Genitive outside PP	0	NA	0	NA	<b>0</b>
No preposition phrase	279	56.2%	217	43.8%	<b>496</b>
<b>Cicero Cat. 1-2</b>					
Preposition phrase	25	49%	26	51%	<b>51</b>
Genitive outside PP	0	NA	0	NA	<b>0</b>
No preposition phrase	111	51.6%	104	48.4%	<b>215</b>
<b>Cicero</b>					
Preposition phrase	83	49.1%	86	50.9%	<b>169</b>
Genitive outside PP	0	NA	0	NA	<b>0</b>
No preposition phrase	390	54.9%	321	45.1%	<b>711</b>
<b>Sallust Cat.</b>					
Preposition phrase	51	70.8%	21	29.2%	<b>72</b>
Genitive outside PP	0	NA	0	NA	<b>0</b>
No preposition phrase	185	53.3%	162	46.7%	<b>347</b>
<b>Sallust Jug.</b>					
Preposition phrase	110	67.1%	54	32.9%	<b>164</b>
Genitive outside PP	0	0%	4	100%	<b>4</b>
No preposition phrase	391	55.6%	312	44.4%	<b>703</b>
<b>Sallust</b>					
Preposition phrase	161	68.2%	75	31.8%	<b>236</b>
Genitive outside PP	0	0%	4	100%	<b>4</b>
No preposition phrase	576	54.9%	474	45.1%	<b>1050</b>
<b>Varro Rust.</b>					
Preposition phrase	119	55.6%	95	44.4%	<b>214</b>
Genitive outside PP	0	0%	1	100%	<b>1</b>
No preposition phrase	289	51.4%	273	48.6%	<b>562</b>

**Table 2.10: distribution of NGen and GenN for preposition phrases**

In the corpus as a whole, preposition phrases are associated with an increase in the frequency of NGen order, though, as already mentioned, the reverse happens in Cicero, possibly because the presence of the preposition demands that there be a noun in the case it governs, making it easier to parse a preceding genitive as belonging to a following head noun; see Ch. 3 §6.2, Ch. 4 §5.4. The genitives that are found outside the preposition phrase have to precede their head noun, as they also precede the

preposition that governs the head noun, and are invariably GenN. Moreover, as discussed in Ch. 3 §6.2.1, they are all *wh*-pronominals, or, in the case of *quarum bestiarum* Varro *Rust.* 3.9.14, a noun modified by a *wh*-relative, and as such will always precede their head noun. The other point of interest regarding these *wh*-genitives is that they are split according to author – Caesar and Sallust always place the *wh*-genitive outside the preposition phrase, whilst Cicero never does.

### 3. CROSS TABULATIONS

Frequency distributions show the basic patterns, but cannot show the relationship between the independent variables, whether they act independently of each other, or whether they interact. A cross tabulation, on the other hand, can do this. A cross tabulation shows the frequency distribution of the tokens across two sets of independent variables.

The cross tabulation of author and genre is given below. As mentioned in §2.9 above, these two categories overlap almost entirely. This can be seen clearly in the table, with the authors found in the columns, and the genres the rows.

		Caesar		Cicero		Sallust		Varro	
			%		%		%		%
Commentary	NGen	401	52%	0	NA	0	NA	0	NA
	GenN	364	48%	0	NA	0	NA	0	NA
Letter	NGen	0	NA	337	55%	0	NA	0	NA
	GenN	0	NA	277	45%	0	NA	0	NA
Oration	NGen	0	NA	136	51%	0	NA	0	NA
	GenN	0	NA	130	49%	0	NA	0	NA
History	NGen	0	NA	0	NA	737	57%	0	NA
	GenN	0	NA	0	NA	553	43%	0	NA
Didactic	NGen	0	NA	0	NA	0	NA	408	53%
	GenN	0	NA	0	NA	0	NA	369	47%

**Table 3.1: cross tabulation of author and genre**

In a cross tabulation, if all the cells in the table are filled with a number other than 0, then the chances are good that the variables act independently of each other. However, the vast majority of the cells in this table are filled with 0, which tells us that in my corpus Cicero, for example, is only represented by letters and orations, and never by commentaries, histories or didactic treatises, whilst Varro is only represented by didactic works, and never by commentaries, letters, orations or histories. Since most combinations of author and genre do not occur, the cross tabulation is said to be non-orthogonal, and there is interaction or overlap between the variables of author and genre. In other words, the variables are testing the same thing.

Another type of interaction can be seen when the *wh*-pronominal genitives are cross tabulated with any other factor. Below they are cross tabulated with animacy.

		<i>wh</i> -pronoun	
			%
1 <sup>st</sup> /2 <sup>nd</sup> person pronoun	NGen	0	<i>NA</i>
	GenN	0	<i>NA</i>
3 <sup>rd</sup> person pronoun	NGen	0	0%
	GenN	96	100%
Proper noun	NGen	0	<i>NA</i>
	GenN	0	<i>NA</i>
Human common noun	NGen	0	<i>NA</i>
	GenN	0	<i>NA</i>
Non-human animate noun	NGen	0	0%
	GenN	13	100%
Inanimate common noun	NGen	0	0%
	GenN	34	100%

**Table 3.2: cross tabulation of *wh*-pronominal genitives and animacy of the genitive**

In this table, the combinations of *wh*-pronouns with third person pronouns, non-human animate nouns and inanimate common nouns only ever exhibit one order, GenN. When a particular combination of independent variables is only found in one order, as here, it is said to be categorical. A categorical cell in a cross tabulation

usually shows that there is some sort of relationship or interaction between the two variables plotted in that cell, though in Table 3.2 the categorical cells reflect the fact that *wh*-pronominal genitives override all other factors.

Categorical or non-orthogonal cross tabulations generally show that there is interaction between the independent variables, which means that they are either testing the same thing, or there is some other relationship between them. Whatever the case may be, these interactions need to be identified and removed from the data before running the variable rule analysis, as they prevent the model from reaching convergence; see further Ch. 2.

Beside author and genre, there are a number of other factor groups which exhibit interaction, particularly the animacy of the genitive and lexical category of the genitive. As mentioned in Ch. 3 §5.1 above, animacy of the genitive and the lexical category of the genitive overlap, thanks to the animacy hierarchy including a distinction between pronominals and nominals. When these two groups are cross tabulated, this overlap is instantly obvious:

		Noun		Pronoun		<i>Wh</i> -pronoun		Adjective		Gerund(ive)	
			%		%		%		%		%
1 <sup>st</sup> /2 <sup>nd</sup> person pronoun	NGen	0	NA	12	80%	0	NA	1	100%	0	NA
	GenN	0	NA	3	20%	0	NA	0	0%	0	NA
3 <sup>rd</sup> person pronoun	NGen	0	NA	140	44%	0	0%	16	46%	0	NA
	GenN	0	NA	179	56%	96	100%	19	54%	0	NA
Proper noun	NGen	280	56%	0	NA	0	NA	2	25%	0	NA
	GenN	218	44%	0	NA	0	NA	6	75%	0	NA
Human common noun	NGen	360	59%	0	NA	0	NA	90	48%	1	100%
	GenN	254	41%	0	NA	0	NA	96	52%	0	0%
Non-human animate noun	NGen	62	59%	22	45%	0	0%	5	71%	0	NA
	GenN	43	41%	27	55%	13	100%	2	29%	0	NA
Inanimate common noun	NGen	911	60%	16	31%	0	0%	32	68%	69	63%
	GenN	611	40%	36	69%	34	100%	15	32	41	37%

**Table 3.3: cross tabulation of lexical category and animacy of the genitive for all authors**

As the table above shows, there is a great deal of overlap between the lexical category and animacy of the genitive. Gerund(ive)s for example are never pronominals, but always nominals, most frequently inanimate nouns at that. First and second person pronouns, on the other hand, are always pronouns, whilst the lexical category of nouns naturally does not contain any nouns which are pronominals. The overlap between pronouns and animate non-human and inanimate nouns, though, is due to the way I coded animacy. When a third person pronoun referred to a human, I coded it as a third person pronoun, but when it referred to an animal or an object, I coded it as animate non-human or inanimate. I made this distinction based on the fact that the animacy hierarchy itself makes a distinction between humans and animals. For example, in English, a grammatical distinction between people and objects can be seen by the use of the pronoun *who* for people but *which* for animals and objects.

The fact that so many of the possible combinations of factors found in Table 3.3 do not actually exist makes it clear that animacy and lexical category are both operating on a pronominal vs nominal distinction, just testing for it in two different ways. As a result, one of the two categories must be abandoned before performing a variable rule analysis. Since the pilot study, qualitative analysis in Ch. 3 §5, and the frequency distributions in Ch. 4 §2.5 above, showed that animacy was extremely inconsistent and that the animacy hierarchy was in turmoil, not patterning in either of the two ways that might be expected (most to least animate, and least to most animate), animacy is the group that it makes more sense to discard.

Discontinuity is another factor group which was suspected of interaction in the qualitative analysis, particularly with information structure, see Ch. 3 §3.3. In the cross tabulation of discontinuity with information structure in Table 3.4 below, the continuous and truly discontinuous noun phrases are neither non-orthogonal nor

categorical with the individual information structure factors – there is no interaction. In fact, from Table 3.4 it can be seen that the proportions of NGen:GenN order are similar in continuous and discontinuous phrases for both marked nouns and marked genitives. This does not undermine the hypothesis that genitives and their head nouns are arranged according to information structure in discontinuous noun phrases; if anything, it supports it.

On the other hand, in all four cross tabulations of discontinuity below – with information structure in Table 3.4, syntactic function (Table 3.5), lexical category (Table 3.6) and prepositions (Table 3.7) – the distribution of tokens across the cells is very uneven, and in the three central columns for genitives separated from their head nouns by modifiers of either constituent, there are so few tokens as to make the tables consistently non-orthogonal. This is a problem for the variable rule analysis.

		Continuous		Noun modified		Genitive modified		Both modified		Discontinuous	
			%		%		%		%		%
Marked noun	NGen	148	83%	0	0%	5	100%	0	NA	55	86%
	GenN	30	17%	1	100%	0	0%	0	NA	9	14%
Genitive marked	NGen	80	18%	3	9%	13	26%	3	75%	20	23%
	GenN	356	82%	30	91%	37	74%	1	25%	67	77%
Both marked	NGen	89	51%	0	0%	7	39%	1	100%	7	70%
	GenN	84	49%	9	100%	11	61%	0	0%	3	30%
Neither marked	NGen	1360	61%	20	32%	127	69%	5	45%	76	52%
	GenN	879	39%	43	68%	58	31%	6	55%	69	48%

**Table 3.4: cross tabulation of discontinuity and information structure**

		Continuous		Noun modified		Genitive modified		Both modified		Discontinuous	
		%		%		%		%		%	
Possessive	NGen	354	50%	3	25%	5	22%	0	NA	13	25%
	GenN	355	50%	9	75%	18	78%	0	NA	40	75%
Partitive	NGen	301	64%	10	26%	25	71%	1	50%	63	69%
	GenN	167	36%	28	74%	10	29%	1	50%	28	31%
Defining	NGen	77	68%	1	25%	14	82%	0	NA	10	59%
	GenN	36	32%	3	75%	3	18%	0	NA	7	41%
Quality	NGen	18	26%	0	0%	11	73%	5	100%	8	80%
	GenN	52	74%	2	100%	4	27%	0	0%	2	20%
Subjective	NGen	237	46%	2	10%	14	41%	0	0%	15	52%
	GenN	274	54%	19	90%	20	59%	1	100%	14	48%
Objective	NGen	248	60%	0	0%	37	65%	0	0%	24	57%
	GenN	168	40%	6	100%	20	35%	2	100%	18	43%
Miscellaneous	NGen	442	60%	7	30%	46	60%	3	50%	25	39%
	GenN	297	40%	16	70%	31	40%	3	50%	39	61%

**Table 3.5: cross tabulation of discontinuity and syntactic function of the genitive**

		Continuous		Noun modified		Genitive modified		Both modified		Discontinuous	
		%		%		%		%		%	
Noun	NGen	1328	60%	18	25%	138	64%	8	67%	121	58%
	GenN	903	40%	53	75%	77	36%	4	33%	89	42%
Pronoun	NGen	177	46%	1	8%	1	9%	0	0%	11	41%
	GenN	205	54%	12	92%	10	91%	2	100%	16	59%
<i>wh</i> -pronoun	NGen	0	0%	0	0%	0	0%	0	NA	0	0%
	GenN	96	100%	12	100%	3	100%	0	NA	32	100%
Adjective	NGen	125	52%	3	38%	4	27%	0	0%	14	70%
	GenN	115	48%	5	62%	11	73%	1	100%	6	30%
Gerund(ive)	NGen	47	61%	1	50%	9	64%	1	100%	12	71%
	GenN	30	39%	1	50%	5	36%	0	0%	5	29%

**Table 3.6: cross tabulation of discontinuity and lexical category of the genitive**

		Continuous		Noun modified		Genitive modified		Both modified		Discontinuous	
			%		%		%		%		%
No preposition	NGen	1234	54%	20	22%	134	59%	5	45%	146	50%
	GenN	1047	46%	69	78%	93	41%	6	55%	145	50%
Preposition phrase	NGen	443	60%	3	23%	18	58%	4	80%	12	80%
	GenN	298	40%	10	77%	13	42%	1	20%	3	20%
Before preposition	NGen	0	NA	0	0%	0	NA	0	NA	0	0%
	GenN	0	NA	1	100%	0	NA	0	NA	7	100%

**Table 3.7: cross tabulation of discontinuity and preposition phrases**

The fact that the central three columns are consistently non-orthogonal is not necessarily the result of interaction, but more likely the result of drawing too fine a distinction between the different kinds of discontinuity. There are several ways of resolving this in the variable rule analysis. One would be to merge the three different categories of genitives separated from head nouns by modifiers. However, both the qualitative analysis and the frequency distribution suggest that there are different ordering patterns for these categories, see Ch. 3. §3.2. Another way would be to merge all instances of continuous NPs, i.e. the genitives separated from their head nouns by modifiers would be included in the same category as the genitives immediately continuous with their head nouns. The third way would be to simply remove the separated genitives from the discontinuity factor group and test continuous nouns and dependent genitives against discontinuous nouns and genitives. This third method is the one I have chosen, because it excludes the genitives separated from their head nouns by modifiers, which have specific ordering patterns of their own, distinct from both continuous and discontinuous genitive constructions.

So far, I have been showing the cross tabulations for all authors and works as a whole. The cross tabulations for individual authors and individual works show much the same patterns, with a few differences in places. Due to their overall similarity,

there is not much point discussing them in detail here; all cross tabulations are included in Appendix C.

#### **4. VARIABLE RULE ANALYSIS RESULTS**

In Ch. 4 §1 above I listed the factor groups that were coded for when I went through my corpus, collecting tokens of the genitive construction. These were, in addition to the position of the genitive, (1) information structure, (2) the syntactic function of the genitive, (3) the lexical category of the genitive, (4) discontinuity, (5) the animacy of the genitive, (6) speech, (7) the language of the genitive, (8) author, (9) genre, (10) presence of a preposition phrase. The qualitative analysis also examined (11) phrasal terms and formulaic phrases, (12) individual head nouns, and (13) grammatical number of the genitive. Of these thirteen different factor groups, I ultimately discarded seven from the variable rule analysis for a variety of reasons.

The language of the genitive was jettisoned because only two genitives out of some three thousand seven hundred are not in Latin, not the most promising distribution of tokens. Speech was also discarded as it is only ever found in large stretches in Sallust, and even there it has little effect by itself, as both the qualitative analysis in Ch. 3 §7 and the frequency distribution in §2.6 above in this chapter show. Phrasal terms were excluded from consideration because of their tendency to be found in one fixed order, which can obscure patterns of variation and skew the results, see Ch. 3 §8, whilst individual head nouns were eliminated because of the difficulty of coding each individual word and their overlap with the function of the genitive, see Ch. 3 §9. The grammatical number of nominal genitives was not included either, in part because the Viti's 2010 article was published after I had completed the coding, and in part because my own small scale study suggested that it had no real effect, see Ch. 3 §10.

Also eliminated from consideration was the category of author, due to the overlap with genre seen in Table 3.1 above, as well as the fact that the frequency distribution shows the proportions of NGen order for each author to be clustered within 5% of each other, a range so small that it is unlikely to be statistically significant. Finally, animacy was discarded due to its overlap with lexical category, seen in Table 3.3 in Ch. 4 §3 above.

In the variable rule analysis, I examined the effects of (1) information structure, (2) the function of the genitive, (3) the lexical category of the genitive, (4) discontinuity, (5) the presence of a preposition phrase, and (6) genre. However, lexical category and discontinuity were both modified slightly. In lexical category, I merged the nominal genitives with the gerund(ive)s and the adjectival genitives, to reduce it to a distinction between nominals and pronominals. The *wh*-pronominal genitives were also removed entirely from the corpus, because of their invariable GenN order, which reduced the number of genitives to 3569. As for discontinuity, as mentioned in Ch. 4 §3 above, I discarded the genitives separated from their head nouns by modifiers because there were so few of these tokens, and looked instead at a distinction between continuous and discontinuous genitives and head nouns.

The results for the variable rule analysis are given below.

#### **4.1 All authors**

For the corpus as a whole, the factor groups chosen as statistically significant were information structure, the lexical category of the genitive, the function of the genitive, and the presence of prepositions, in that order. For this analysis, and all those that follow, the application value was 1, the coded value given to NGen order. This means

that a factor with a higher weight favours NGen order more than a factor with a lower weight.

Corrected mean			0.569
Log-likelihood			-2134.955
Statistical significance ( $p < 0.05$ )			0.003
Total number of tokens in all authors			3569
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.827	86.3%	241
Unmarked	0.574	63.2%	2512
Both marked	0.442	50%	208
Marked genitive	0.147	19.6%	608
<i>Range</i>	0.68		
<b>Lexical category</b>			
Noun	0.523	58.4%	3134
Pronoun	0.339	43.7%	435
<i>Range</i>	0.184		
<b>Function of the genitive</b>			
Defining	0.662	68.5%	149
Partitive	0.592	66.7%	600
Objective	0.525	60.1%	309
Miscellaneous	0.491	58.8%	523
Possessive	0.464	50.3%	746
Quality	0.416	41.2%	102
Subjective	0.413	47.2%	568
<i>Range</i>	0.249		
<b>Preposition phrases</b>			
Preposition phrase	0.555	60%	800
No preposition phrase	0.484	55.6%	2768
<i>Range</i>	0.071		
<b>Discontinuity</b>			
Discontinuous	0.538	57.7%	274
Continuous	0.496	57.2%	2930
<b>Genre</b>			
History	0.520	59.4%	1241
Letters	0.513	56.9%	592
Didactic	0.504	55.1%	741
Oration	0.500	53.5%	254
Commentary	0.453	54.1%	741

**Table 4.1: variable rule analysis results for all authors.**

In Table 4.1, the corrected mean is another name for the input probability, the average probability that the application value, in this case the order NGen, will be found. The value of 0.569 means that NGen is found roughly 57% of the time; it is relative to this that the factor weights, which are themselves probabilities, will favour or disfavour NGen order. The log-likelihood represents the model fit, with higher

values indicating a model with a better fit. However, the log-likelihood is interpreted relative to the log-likelihood of the other regression models tested by GoldVarb and does not mean very much on its own. The statistical significance is the measure of the likelihood that results equally as interesting will be found when the null hypothesis that the results are due to chance is true. If the value is greater than 0.05, then the likelihood that these results could be due to chance is too great to safely accept the model as reliable. See further Ch. 2.

In Table 4.1, the factor groups the analysis selected as significant are given first. Within each group, the individual factors are arranged from highest factor weight to lowest, and for the significant factor groups the range of the factor weights – the difference between the highest and lowest weight – is also provided. The range shows the relative effect of the factor group on the word order of the genitive: a factor group with a larger range is more likely to have individual factors with very different effects on word order. For example, compare information structure, which has a range of 0.68, with preposition phrases, which has a range of less than 0.1. In information structure, all four factors have different effects on genitive position, particularly nouns with pragmatic marking and genitives with pragmatic marking. The presence or absence of a preposition governing the head noun, by contrast, has a much smaller effect on the word order of the genitive construction, as the presence of a preposition phrase only slightly increases the probability of NGen order.

The column *% NGen* refers to the percentage of tokens of each factor that were observed in this order, whilst the column *Number in cell* has the actual number of tokens of each factor observed in the order NGen. These two columns are essentially frequency distributions. The figures differ from the percentages found in the frequency distributions in §2 above because those frequency distributions still include

the *wh*-pronominal genitives, which were cut from the data set used for the variable rule analyses here.

The results of the variable rule analyses are discussed in §5 below. In the remaining subsections of §4, the results themselves are presented with no further discussion.

## 4.2 Caesar BG 1-3

In Caes. *BG* 1-3, the factor groups chosen as statistically significant were information structure, lexical category, prepositions and function, in that order. The application value was 1, i.e. NGen.

Corrected mean			0.544
Log likelihood			-461.603
Statistical significance ( $p < 0.05$ )			0.034
Total number of tokens in Caes. <i>BG</i> 1-3			741
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.789	85.3%	34
Unmarked	0.531	56.4%	578
Both marked	0.529	60%	30
Marked genitive	0.227	28.3%	99
<i>Range</i>	0.562		
<b>Lexical category</b>			
Noun	0.539	57.9%	648
Pronoun	0.252	28%	93
<i>Range</i>	0.287		
<b>Preposition phrases</b>			
Preposition phrase	0.614	62.9%	186
No preposition phrase	0.461	51.2%	555
<i>Range</i>	0.153		
<b>Function of the genitive</b>			
Defining	0.606	64.3%	28
Partitive	0.588	63.9%	144
Objective	0.527	61%	77
Miscellaneous	0.518	59.6%	203
Possessive	0.476	44.7%	161
Subjective	0.367	40.7%	108
Quality	0.350	35%	20
<i>Range</i>	0.256		
<b>Discontinuity</b>			
Continuous	0.507	54.5%	615
Discontinuous	0.420	47.2%	53

**Table 4.2: variable rule analysis results for Caes. *BG* 1-3.**

### 4.3 Cicero

As Cicero is represented by both personal letters and formal orations, genre was included in the analysis of his combined works, but excluded when the individual works were tested. For all three analyses, the application value was 1, i.e. NGen order.

#### 4.3.1 Cicero Att. 1-3 and Cat. 1-2

For the analysis of both Cicero's works, the significant factors are information structure, lexical category, function and discontinuity, chosen in that order.

Corrected mean			0.559
Log likelihood			-455.532
Statistical significance ( $p < 0.05$ )			0.022
Total number of tokens in Cicero			846
	Factor weight	% NGen	Number in cell
<b>Information structure</b>			
Marked noun	0.880	90.8%	65
Unmarked	0.613	64.9%	358
Both marked	0.478	53.6%	84
Marked genitive	0.089	12.6%	159
<i>Range</i>	<i>0.791</i>		
<b>Lexical category</b>			
Noun	0.531	58.6%	756
Pronoun	0.261	33.3%	90
<i>Range</i>	<i>0.270</i>		
<b>Function of the genitive</b>			
Partitive	0.707	74.8%	115
Objective	0.541	61.5%	179
Defining	0.531	53.6%	28
Miscellaneous	0.517	61.6%	159
Subjective	0.422	47.2%	193
Possessive	0.401	43.6%	149
Quality	0.259	34.8%	23
<i>Range</i>	<i>0.448</i>		
<b>Discontinuity</b>			
Discontinuous	0.649	70.3%	91
Continuous	0.479	54.5%	649
<i>Range</i>	<i>0.170</i>		
<b>Genre</b>			
Letter	0.500	56.9%	592
Oration	0.499	53.5%	254
<b>Preposition phrases</b>			
No preposition phrase	0.507	57.4%	679
Preposition phrase	0.473	49.7%	167

**Table 4.3.1: variable rule analysis results for Cic. Att. 1-3 and Cat. 1-2.**

### 4.3.2 Cicero Att. 1-3

For this work, the factor groups selected as significant were information structure, function and lexical category, in that order.

Corrected mean			0.576
Log likelihood			-321.485
Statistical significance ( $p < 0.05$ )			0.007
Total number of tokens in Cic. Att. 1-3			592
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.873	90.2%	51
Unmarked	0.595	64.5%	380
Both marked	0.484	54.2%	59
Marked genitive	0.086	13.7%	102
<i>Range</i>	0.787		
<b>Function of the genitive</b>			
Partitive	0.774	77.9%	86
Defining	0.641	66.7%	15
Objective	0.529	61.2%	129
Miscellaneous	0.527	63.6%	99
Subjective	0.376	45.5%	145
Possessive	0.367	44.4%	99
Quality	0.335	42.1%	19
<i>Range</i>	0.439		
<b>Lexical category</b>			
Noun	0.524	59.1%	526
Pronoun	0.319	39.4%	66
<i>Range</i>	0.205		
<b>Discontinuity</b>			
Discontinuous	0.601	70.1%	77
Continuous	0.482	55.3%	445
<b>Preposition phrases</b>			
No preposition phrase	0.505	58.7%	475
Preposition phrase	0.479	49.6%	117

**Table 4.3.2: variable rule analysis results for Cic. Att. 1-3.**

### 4.3.3 Cicero Cat. 1-2

In this work, the significant factors selected were information structure, lexical category and discontinuity, in that order.

Corrected mean			0.508
Log likelihood			-130.823
Statistical significance ( $p < 0.05$ )			0.049
Total number of tokens in Cic. Cat. 1-2			254
	Factor weight	% NGen	Number in cell
<b>Information structure</b>			
Marked noun	0.941	92.9%	14
Unmarked	0.656	65.8%	158
Both marked	0.473	52%	25
Marked genitive	0.081	10.5%	57
<i>Range</i>	<i>0.86</i>		
<b>Lexical category</b>			
Noun	0.557	57.4%	230
Pronoun	0.102	16.7%	24
<i>Range</i>	<i>0.455</i>		
<b>Discontinuity</b>			
Discontinuous	0.812	71.4%	14
Continuous	0.475	52.9%	204
<i>Range</i>	<i>0.337</i>		
<b>Function of the genitive</b>			
Objective	0.554	62%	50
Subjective	0.551	52.1%	48
Partitive	0.513	65.5%	29
Miscellaneous	0.492	58.3%	35
Possessive	0.433	42%	50
Defining	0.373	38.5%	13
Quality	NA		
<b>Preposition phrases</b>			
Preposition phrase	0.508	50%	50
No preposition phrase	0.498	54.4%	204

**Table 4.3.3: variable rule analysis results for Cic. Cat. 1-2.**

### 4.4 Sallust

For the variable rule analyses of Sallust, speech was included as a factor group, as he was the only author who had sufficiently long stretches of speech, both direct and reported, to make testing it worthwhile. Once again, the application value for the analyses following is 1, i.e. NGen order.

#### 4.4.1 Sallust *Cat. and Iug.*

The significant factors selected in the variable rule analysis of both of Sallust's works are information structure, preposition phrases, function and discontinuity, in that order.

Corrected mean			0.606
Log likelihood			-759.844
Statistical significance ( $p < 0.05$ )			0.009
Total number of tokens in Sall. <i>Cat.</i> and <i>Iug.</i>			1241
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.695	77.6%	49
Unmarked	0.569	65.7%	963
Both marked	0.367	44.4%	72
Marked genitive	0.154	21.7%	157
<i>Range</i>	<i>0.541</i>		
<b>Preposition phrases</b>			
Preposition phrase	0.595	68.2%	236
No preposition phrase	0.477	57.3%	1005
<i>Range</i>	<i>0.118</i>		
<b>Function of the genitive</b>			
Defining	0.720	76.9%	52
Partitive	0.608	69.9%	153
Quality	0.589	52.4%	42
Objective	0.507	57.7%	189
Subjective	0.462	57.9%	183
Miscellaneous	0.460	57%	379
Possessive	0.450	56.4%	243
<i>Range</i>	<i>0.270</i>		
<b>Discontinuity</b>			
Discontinuous	0.527	54.5%	33
Continuous	0.499	61.4%	1083
<i>Range</i>	<i>0.028</i>		
<b>Lexical category</b>			
Pronoun	0.519	60.9%	128
Noun	0.498	59.2%	1113
<b>Speech</b>			
Narrative	0.501	60%	985
Speech	0.496	57%	256

**Table 4.4.1: variable rule analysis results for Sall. *Cat.* and *Iug.***

#### 4.4.2 *Sallust Cat.*

The significant factors selected for this work were information structure and preposition phrases, in that order.

Corrected mean			0.580
Log likelihood			-247.946
Statistical significance ( $p < 0.05$ )			0.008
Total number of tokens in <i>Sall. Cat.</i>			407
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.731	77.8%	9
Unmarked	0.587	65.8%	22
Both marked	0.222	26.7%	15
Marked genitive	0.156	21.3%	61
<i>Range</i>	<i>0.575</i>		
<b>Preposition phrases</b>			
Preposition phrase	0.664	70.8%	72
No preposition phrase	0.463	55.2%	335
<i>Range</i>	<i>0.201</i>		
<b>Function of the genitive</b>			
Partitive	0.709	75%	40
Defining	0.611	65%	20
Quality	0.546	47.1%	17
Miscellaneous	0.521	63.4%	131
Objective	0.474	55.6%	54
Subjective	0.425	52.6%	57
Possessive	0.399	47.7%	88
<b>Lexical category</b>			
Pronoun	0.580	61.7%	47
Noun	0.489	57.5%	360
<b>Discontinuity</b>			
Discontinuous	0.506	60%	10
Continuous	0.500	58.6%	360
<b>Speech</b>			
Speech	0.530	64%	114
Narrative	0.488	55.6%	163

**Table 4.4.2: variable rule analysis results for *Sall. Cat.***

#### 4.4.3 *Sallust Iug.*

The significant factors selected in this work are information structure and function, in that order. Discontinuity has been cut from this variable rule analysis, as it interacts with information structure and genitive function – there are no discontinuous subjective and defining genitives, nor are discontinuous genitives found in this work when both noun and genitive carry pragmatic marking. As a result, the variable rule

analysis containing discontinuity does not converge, i.e. the model does not stabilise around a set of values, but continues to fluctuate, and so discontinuity must be discarded. This is unfortunate, as discontinuity was selected as significant for Sallust's combined works, but not for his *Catilina*, suggesting that it is the *Iugurtha* that contributes to discontinuity being statistically significant in Table 4.4.1 above.

Corrected mean			0.604
Log likelihood			-515.401
Statistical significance ( $p < 0.05$ )			0.013
Total number of tokens in Sall. <i>Iug.</i>			834
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.705	77.5%	40
Unmarked	0.560	65.7%	641
Both marked	0.404	49.1%	57
Marked genitive	0.148	21.9%	96
<i>Range</i>	<i>0.557</i>		
<b>Function of the genitive</b>			
Defining	0.789	84.4%	32
Quality	0.611	56.0%	25
Partitive	0.569	68.1%	113
Objective	0.510	58.5%	135
Subjective	0.488	60.3%	126
Possessive	0.480	61.3%	155
Miscellaneous	0.428	53.6%	248
<i>Range</i>	<i>0.361</i>		
<b>Lexical category</b>			
Noun	0.500	60%	753
Pronoun	0.497	60.5%	81
<b>Speech</b>			
Narrative	0.510	61.8%	692
Speech	0.454	51.4%	142
<b>Preposition phrases</b>			
Preposition phrase	0.564	67.1%	164
No preposition phrase	0.484	58.4%	670

**Table 4.4.3: variable rule analysis results for Sall. *Iug.***

#### 4.5 Varro

The statistically significant factor groups in this work are information structure, lexical category, and function, selected in that order. Once again the application value is 1, i.e. *NGen*.

Corrected mean			0.559
Log likelihood			-402.714
Statistical significance ( $p < 0.05$ )			0.009
Total number of tokens in Varro <i>Rust.</i>			741
	Factor weight	% <i>NGen</i>	Number in cell
<b>Information structure</b>			
Marked noun	0.863	88.2%	93
Unmarked	0.609	64.7%	433
Both marked	0.383	40.9%	22
Marked genitive	0.139	19.2%	193
<i>Range</i>	0.724		
<b>Lexical category</b>			
Noun	0.546	57.1%	617
Pronoun	0.287	45.2%	124
<i>Range</i>	0.259		
<b>Function of the genitive</b>			
Defining	0.744	70.7%	41
Objective	0.535	62.3%	69
Miscellaneous	0.517	59.1%	149
Partitive	0.514	61.2%	188
Possessive	0.497	52.3%	193
Subjective	0.342	32.1%	84
Quality	0.268	29.4%	17
<i>Range</i>	0.476		
<b>Discontinuity</b>			
Continuous	0.502	55.4%	583
Discontinuous	0.487	52.6%	97
<b>Preposition phrases</b>			
Preposition phrase	0.511	56.4%	211
No preposition phrase	0.496	54.6%	529

**Table 4.5: variable rule analysis results for Varro *Rust.***

## 5. DISCUSSION OF VARIABLE RULE ANALYSIS RESULTS

Overall, when the tokens from all four authors were combined, information structure, lexical category, function and prepositions were selected as statistically significant. The corrected mean was 0.569, which means that *NGen* was the more common order, though not by much. When the results of the variable rule analyses of individual authors and their works are included, information structure is consistently selected as the most important factor group in all analyses. In addition to the factor groups selected in the variable rule analysis of the corpus as a whole, the individual analyses of Cicero and Sallust also select discontinuity as a significant factor group. These five factor groups, together with speech and genre, are discussed below.

## 5.1 Information structure

The variable rule analysis of the corpus as a whole (Table 4.1 above) bears out the hypothesis that pragmatically marked constituents precede pragmatically unmarked ones: marked nouns clearly favour NGen order, with a weight of 0.827, whilst marked genitives do not favour it as strongly. In fact, they can be said to disfavour NGen, as their weight – the probability that marked genitives will be found NGen – is a mere 0.147. Genitive constructions in which neither constituent is marked have a factor weight of 0.574, which favours NGen more strongly than the weight of 0.442 for genitive constructions in which both constituents carry pragmatic marking. These results suggest that NGen is the more common order in pragmatically neutral contexts, but that it does not dominate the way it does when the head noun carries emphasis, contrast, or some other pragmatic function.

This is the one factor group that was selected for each and every author and work, and was always the first factor group to be selected, meaning that it was the factor that had the greatest positive impact on the model fit. This would suggest that the hypothesis in the qualitative analysis was correct that information structure was the most influential of all the factor groups. In addition to being statistically significant, it also has the greatest range of all the factor groups chosen, with its individual factors having very different effects on the word order in the genitive construction.

Turning to the variable rule analyses for the individual authors, the same ordering patterns can be seen. In every author, marked nouns favour NGen order while marked genitives disfavour it. Their factor weights in every case fall very strongly to one side or the other – there is nothing indistinct about their ordering preferences. Also, genitive constructions where both elements are pragmatically marked always have a

lower factor weight than pragmatically unmarked genitive constructions. The distributions and ordering tendencies discussed in the qualitative analysis are mirrored by the statistics.

## **5.2 Function of the genitive**

In the variable rule analysis of the corpus as a whole in Table 4.1 above, the factor weights for the function of the genitive are not as distinct for the individual factors as they are in information structure. Moreover, the range between the highest factor weight and the lowest is 0.249, substantially smaller than information structure's range of 0.68. Four of the factors are actually clustered between 0.41 and 0.49 – possessive, quality, subjective and miscellaneous – indicating that there is not much of a difference between the effects of these factors.

However, it is interesting to note that genitives of quality and subjective genitives have the two lowest factor weights in this group, with values of 0.416 and 0.413 respectively. The qualitative analysis suggested that these two genitive functions are associated with GenN order, particularly the genitive of quality. The hypothesis that subjective genitives are found more frequently GenN than the objective genitives is also boosted by the respective factor weights of these two functions, as objective genitives favour NGen order more strongly than the subjective genitives do. The difference between the factor probabilities of these two syntactic functions is slightly more than 0.1, which whilst not large is still noticeable, and certainly a larger difference than that between the genitives of quality and subjective genitives.

Just as in the qualitative analysis, partitive and defining genitives most strongly favour NGen, with weights of 0.592 and 0.662 respectively. The factor weights for

function might be clustered fairly closely together, but the trends observed in the qualitative analysis are still present in the statistics.

As might be expected, with such a number of different functions with similar factor weights, the factor weights and their relationships fluctuate from author to author, and even within individual works by the same author.

So, whilst the defining and partitive genitives are frequently the two with the strongest factor weights in favour of NGen, this is not true for Cic. *Cat.* 1-2, where the partitive has a weight of 0.513, with both the subjective and objective genitives having higher factor weights. Further, and quite surprisingly, the defining genitive in Cic. *Cat.* 1-2 has the lowest weight of all the factors within this group, making it the one least likely to be found after its head noun. The results for function in this work are anomalous in many respects, but this is probably the most striking. The partitive in both Sall. *Iug.* and Varro *Rust.* favours NGen, but not very strongly, with a respective weight of 0.569 and 0.514 in each of the different works.

Turning back to the anomalous Cic. *Cat.* 1-2, besides the remarkably low factor weight for the defining genitive, the subjective and objective genitives are separated by a miniscule difference of 0.003, when Caes. *BG* 1-3, Cic. *Att.* 1-3 and Varro *Rust.* average a difference of 0.169. Interestingly enough, the difference between the objective and subjective genitives in Sallust's works averages out to 0.035, which may very well be the result of his personal preference for NGen order. When NGen is more prevalent overall, the frequency with which NGen order is found in the subjective genitive increases. However, in the variable rule analysis of Sall. *Cat.*, subjective and objective genitives have the second and third lowest factor weights, which does not exactly lend itself to a theory basing itself on the increased proportions of NGen in Sallust. Moreover, this explanation is not available for the

high factor weight found for the subjective genitive in Cic. *Cat.* 1-2, who does not place dependent genitives after their head noun to the same extent as Sallust.

On the other hand, in the variable rule analyses for Cic. *Cat.* 1-2 and Sall. *Cat.* the function of the genitive is not selected as statistically significant. Both of these two works have relatively few tokens of the genitive construction. There are only 254 total tokens for Cic. *Cat.* 1-2 once the phrasal terms and the *wh*-pronouns have been stripped out of the data, whilst Sall. *Cat.* has 407. It is possible that their anomalous distribution of syntactic functions may be caused by the small size of the data set, which may also be why the function of the genitive is not considered statistically significant for either of them. In a small data set, a factor group with so many factors will have a patchy distribution of tokens amongst the factors, whereas a factor group with relatively few factors will have more tokens for each factor, enabling ordering patterns to be established for each factor, and so giving it a better chance of being selected as a statistically significant group.

The other unusual feature of Cic. *Cat.* 1-2's results for function is the lack of genitives of quality. The only genitives of quality found in this work used *wh*-pronouns, and so were lost when the *wh*-pronouns were removed from consideration. The genitives of quality in both of Sallust's histories are unusual as well, since they do not have low factor weights like the genitives of quality in Caes. *BG* 1-3, Cic. *Att.* 1-2 and Varro *Rust.*, but instead have relatively high weights. In Sall. *Iug.*, which does select function as statistically significant, the genitive of quality has an unusually high factor weight of 0.611, the second highest weight for the group after the defining genitives. A function that is associated with GenN in Cicero, Caesar and Varro favours NGen in Sallust. Why? Sallust consistently uses NGen more frequently than the other authors, see Ch. 3 §2.1, §2.4, §4.2, as well as Ch. 4 §2.1, §2.2, §2.3, §2.9

above, perhaps as a personal quirk, perhaps because his style is deliberately plain and as free of elaborate rhetoric as he can make it, and so a more accurate reflection of the spoken state of the language. Note that the second highest proportions of NGen order overall are found in Cicero's informal letters to Atticus; see Ch. 4 §2.2 above. It appears that NGen is the basic order of the genitive for Sallust, confirmed by the factor weight of 0.611 in the variable rule analysis of Sall. *Iug.*. As for the pattern adjective + genitive + noun found in Sallust's older contemporaries, this can be explained in terms of typological harmony, as genitive + noun and adjective + noun are harmonic combinations, see Ch. 3 §2.4.

Note that whilst function was selected as statistically significant for all authors and works bar Sall. *Cat.*, it was generally not the second of the factors to be chosen. Quite often, in fact, it was third, behind the lexical category of the genitive, though for Cic. *Att.* 1-3 and Sall. *Iug.* it was selected second, and for Caes. *BG* 1-3 it was the fourth of four factors chosen.

### **5.3 Lexical category of the genitive**

The lexical category of the genitive is also a significant factor for the corpus as a whole in Table 4.1, when the fine-grained distinctions between nouns, adjectives used as nouns (e.g. *bonorum*, *maiorum*), gerund(ive)s and pronouns, excluding the invariable *wh*-pronouns, are reduced to a binary nominal versus pronominal genitive distinction. Nominal genitives favour NGen more strongly than the pronominal genitives, though given that the factor weight of the nominal genitives is 0.523, they clearly do not favour NGen very strongly. If anything, pronouns can almost be said to disfavour NGen, with a fairly low factor weight of 0.339.

Similar patterns are found in the variable rule analyses for the individual authors, with nominal genitives favouring NGen and pronominal genitives somewhat more strongly disfavouring it. The exception is Sallust. In neither of Sallust's histories is lexical category considered statistically significant, and interestingly in Sall. *Cat.* it is the pronominals which are more likely to be found NGen, with a weight of 0.580, than the nominals, which have a factor weight of 0.489. In Sall. *Iug.* the difference between the two is a mere 0.003. The increased proportions of NGen in Sallust's pronouns have already been noted in Ch. 4 §2.9 above as part of his tendency to use NGen order more frequently than the other authors. However, the factor weights for the nominals are low, around 0.5, which would on the face of it suggest that the nominals in Sallust are found NGen only half the time. On the other hand, the value of a factor weight is determined with respect to the other factors in the same group, and a glance at the frequency distributions for lexical category for Sallust shows that nominals and pronouns both have close on 60% NGen. So the low factor weights for lexical category in Sallust may be attributable simply to the fact that nominals and pronominals have a very similar frequency distribution in his works. Whatever the case may be, there is a clear change in the order of pronominal genitives in Sallust. Interestingly, a survey of the genitive construction in Tac. *Hist.* 2.1-40 showed that the pronominal genitives followed their head noun half of the time – between the GenN order most common in Varro, Cicero and Caesar and the increase in NGen order in Sallust and Tacitus, it is tempting to speculate that language change is in action here, with the neutral position for pronominal genitives changing from pre-head, a position which Bauer 1995:59 calls a “residue of the archaic organisation”, to post-head, bringing them in line with nominal genitives; again, see Bauer 1995:55f., 59.

The lexical category of the genitive is often the second factor group selected as statistically significant. Exceptions to the rule are Cic. *Att.* 1-3 where it was selected third, after information structure and function of the genitive, and Sallust's histories, where it is not considered significant at all thanks to the increase in frequency of NGen order for the pronominal genitives.

#### **5.4 Preposition phrases**

The presence of a preposition phrase is the fourth and last of the significant factors selected in the variable rule analysis of the corpus in Table 4.1. As in the qualitative analysis, NGen order is favoured more by genitive constructions governed by a preposition, with their factor weight of 0.555, than by genitives whose head nouns are not governed by a preposition, with a factor weight of 0.484. The range, though, of this factor group is less than 0.1, so its effect should not be overestimated.

Whilst selected as significant for the corpus as a whole, preposition phrases were only significant in Caesar and Sall. *Cat.*. In no other author or work were they considered significant. In Cic. *Cat.* 1-2, Sall. *Iug.* and Varro this is likely because genitive constructions governed by preposition phrases did not show a substantial increase in the proportions of NGen as compared to genitive constructions not governed by prepositions; as for Cic. *Att.* 1-3, genitive constructions governed by prepositions show the opposite tendency, with the proportions of GenN increasing. Why this should be so only in this part of the corpus is not readily apparent. Cicero may be exploiting the fact that the preposition governs a specific case, such as the accusative or ablative, which will then be anticipated by the reader, meaning that a genitive enclosed by the preposition and the noun will be easily construed as

belonging to the following head noun which is governed by the preposition; see Ch. 3 §6.2, Ch. 4 §2.10.

As for the increased proportions of NGen in the other texts when the genitive construction is governed by a preposition, this is a harmonic order for languages where NGen is the dominant order (Elerick 1994:69). Whilst this provides further support for the hypothesis that NGen is the basic order for Sallust, it would appear to contradict the earlier observation in Ch. 3 §2.4 about the genitive of quality, where a GenN order would lead to harmonic adjective + genitive + noun. However, given that the genitive in Classical Latin is sometimes held to be undergoing a shift in order, see Rosenkranz 1933:139, Elerick 1994:71f., Bauer 1995:59, it should perhaps not be surprising that it shows up sometimes as GenN and sometimes as NGen.

### **5.5 Discontinuity**

Discontinuity was not selected as statistically significant in the variable rule analysis of the corpus as a whole, nor in most of the analyses of individual authors and works. However, it was a statistically significant factor for Cic. *Cat.* 1-2, with discontinuous genitives favouring NGen quite heavily, with a factor weight of 0.812 opposed to the much lower 0.475 for continuous genitives. Discontinuity was also significant for Sallust's work when the tokens for both of his histories were combined. Again discontinuous genitives favoured NGen more than continuous genitives, though the factor weight was only 0.527. Discontinuity was not significant for Sall. *Cat.* by itself and had to be cut from Sall. *Iug.* as it interacted with the other factors (see Ch. 4 §4.4.3 above).

Looking at the results for the other variable rule analyses, though, it seems that although discontinuity may have been significant for two sets of data, this is a false

positive. The factor weights for the other authors and works show little difference between continuous and discontinuous genitives, and for Caesar *BG* 1-3 and Varro *Rust.*, it is the continuous genitives that favour NGen and the discontinuous ones which disfavour it. This sort of distribution across the authors does not support the hypothesis, after Elerick's 1989 principle of pre-emptive markedness, that the neutral word order is most likely to occur in a discontinuous and therefore grammatically marked, genitive construction in order to minimise the complexity of the construction. In fact, the distribution seen in the corpus undermines it, since the marked construction of discontinuity ultimately does not consistently favour one order over another, let alone the unmarked NGen. It does not offer much support either for the pragmatic hypothesis, but it at least does not contradict it. On the other hand, it could be argued that in the two instances where discontinuity is selected as statistically significant, it bears out the pre-emptive markedness hypothesis, with discontinuity favouring NGen. However, Cic. *Cat.* 1-2 has very few tokens, and there are issues with discontinuity in Sall. *Iug.*, which is presumably the work that contributes to discontinuity being statistically significant when Sall. *Iug.* and Sall. *Cat.* are combined. As a result, I would hesitate before considering their discontinuity results reliable.

## 5.6 Speech

This was tested only in Sallust's histories, as none of the other authors had much in the way of speech, or, in the case of Varro, the "speech" was no more than a framing device, and was not really speech at all; see further Ch. 3 §7.

As it turned out, the distinction between speech and the main narrative of the text was not selected as statistically significant in either of Sallust's works. Not only was

the range between the factor weights for narrative and dialogue very small, but the factor weights in Sall. *Cat.* – narrative disfavouring NGen, speech favouring NGen – were reversed in Sall. *Iug.*, so that narrative favoured NGen ever so slightly and speech disfavoured it. Between the very small range of the factor weights and the lack of consistency in their distribution, it is clear why direct speech is not considered statistically significant.

### 5.7 Genre

Genre was tested in two runs, these being all authors combined, and just Cicero's letters and orations combined. In every other case, the author and the genre overlapped, see the cross tabulation Table 3.1 in Ch. 4 §3 above. Caesar was the only writer of commentaries, both Sall. *Cat.* and Sall. *Iug.* are histories, and Varro *Rust.* is the only didactic treatise in the corpus.

However, in neither variable rule analysis was genre selected as significant. Even Sallust's histories, with their frequency distribution of 60% NGen, were not considered all that different from the works of his older contemporaries in the variable rule analysis – the factor weight for Sallust's works is just 0.52. Still, the next highest factor weight, 0.513, is given to Cicero's personal correspondence with Atticus, whilst his formal orations against Catiline and Caesar's commentaries have factor weights of 0.5 and 0.453 respectively. For these latter works, the reverse weights might have been expected given that the percentage of NGen in Cic. *Cat.* 1-2 is lower than in Caes. *BG* 1-3, so it is interesting to see that Caesar favours NGen least strongly of all the authors. Varro too scores a factor weight of 0.504, very close to Cic. *Cat.*.

Also, as noted in Ch. 4 §2.9 above, there is more variation within Cicero, from oration to letter, than between Cicero's orations and Varro's didactic. Does this mean genre has more of an effect than authorial preference? Would the results be different if more than two of the Catilinarian orations had been included? Or is it not genre but register that is important?

The biggest difference, though, in genre factor weights for all authors combined is between Caesar and Cicero, 0.047. Cicero remarked on the purity of Caesar's Latin, and it has often been noted that he has a very consistent style and predictable word order. Would this result have changed if the later and rhetorically more sophisticated books of the *BG* had been included?

Interestingly enough, the factor weights for letters and orations in the variable rule analysis for Cic. *Att.* 1-3 and *Cat.* 1-2 are separated by a difference of just 0.001, with the letters scoring exactly 0.5 and the orations 0.499. When Cicero alone is considered, his style is apparently unaffected by genre, but when these factor weights are compared to the weights when the other authors are included, the difference jumps to 0.013, and, as noted above, there is more variation between Cicero's orations and letters than there is between his orations and Varro's work. Context is everything, even for statistics.

## **6. CONCLUSION**

The statistical analyses bear out, for the most part, the hypotheses of the pilot study and the findings of the qualitative analysis. Information structure is indeed a significant factor, and is not just selected first, but also has consistently the largest range. Lexical category and function of the genitive are both statistically important factors in their own right, even if the main distinction in lexical category is between

nominals and pronominals, and not the fine-grained distinctions discussed in the qualitative analysis. The statistical analyses have also suggested that typological harmony plays a role in determining word order, both by selecting preposition phrases as statistically significant, as well as through the factor weights given to the genitive of quality.

The rejection of discontinuity as a significant factor was interesting, as it suggests that Elerick's pre-emptive markedness hypothesis does not hold – as I argued in Ch. 3 §3.3 – but does not necessarily detract from the pragmatic hypothesis. Again, it may be the case that the (dis)continuity of head noun and dependent genitive is not an independent but a dependent variable. However, this can only be examined through a multinomial analysis, which is currently beyond the capacity of GoldVarb.

Whilst it was not surprising that speech did not prove to be a significant factor, the rejection of genre was interesting in light of Sallust's higher proportions of NGen. Whilst the low factor weight for histories of 0.52 suggests that Sallust's increased proportions of NGen are not necessarily as significant (statistically) as they seem at first glance, there are still some interesting differences between Sallust and his older contemporaries, particularly in preposition phrases and the genitive of quality. These slightly more complex genitive constructions are patterned in accordance with typologically harmonic orders, and in both instances Sallust must have a neutral NGen order for the patterns exhibited in his Latin to be harmonic. Further, the fact that lexical category is simply not significant for Sallust may support a change in pronominal ordering from GenN to NGen. As in the qualitative analysis, it is not the overall distribution but the figures that come out of the breakdown of the tokens into different factor groups that show Sallust's Latin behaving differently. However, this does not necessarily imply that language change has taken place in the fifteen years

between Caesar and Sallust's births, as it is entirely possible that these patterns exist but are obscured by literary and aesthetic preferences in the works of Cicero and Caesar.

To sum up, the quantitative analysis shows that the word order of the Classical Latin genitive is influenced by a number of different factors, most notably information structure. Since information structure has the most dramatic effects on genitive position and is consistently the first of the factors to be selected as statistically significant, it would seem that it is the most important of the factors in determining the order of the genitive and head noun. For all that, genitive position is not entirely dependent upon information structure – pronominal genitives, subjective genitives and genitives of quality are more likely to be found before their head noun, whilst objective, defining and partitive genitives are likely to follow their head noun instead, and the presence of a preposition favours NGen order. As none of these factors are invariable in the order they prefer, unlike the *wh*-pronominals, it is clear that regardless of their relative importance, the position of each genitive in Latin is determined by a combination of these factors working together.

## CONCLUSION

Latin word order is notorious for not following patterns that are obvious and predictable. One of the rules first taught to students learning Latin, that the verb comes at the very end of the sentence, is broken constantly, and grammar books with sections on word order point out that these are only guidelines which are not always adhered to. No-one who has ever translated lines such as *grandia per multos tenuantur flumina rivos* Ovid *Rem.* 445 is likely to forget the game of syntactic hopscotch (Gries 1951:84) involved in getting from “great through many they are diminished rivers small streams” to “great rivers are diminished when divided into many small streams”.

In the Classical Latin genitive construction, the near equal distribution of the orders NGen and GenN certainly makes it seem as though they are in free variation. The conflicting opinions as to the actual order of the genitive in Latin certainly does not help. Feix 1934 states that the genitive position is free and left to the preference of the individual authors, though certain factors, such as fixed expressions and antitheses, are associated with certain orders. Elerick 1991, 1994 considers that there is free variation with both orders co-dominant as a result of the transition from Archaic Latin GenN to Late Latin NGen being in progress at this point, whilst Adams 1976 argues that the neutral order is NGen, with the change in order having taken place by the time of Plautus, but being obscured by literary conventions. Leumann, Hofmann and Szantyr 1964 and Kühner and Stegmann 1912-14 both state that the order is GenN, with NGen found in emphatic or contrastive phrases, but Pinkster 1990, Marouzeau 1922 and Devine and Stephens 2006 give NGen as the neutral order, whilst Spevak

2010 and Viti 2010 argue that there is no basic order for the construction as a whole but rather specific orders associated with specific functions of the genitive.

In this study of genitive word order I have combined the traditional qualitative-type analyses with a quantitative analysis in the hope of bringing a statistical and perhaps less subjective aspect to the subject. An actual numerical study with somewhat more sophisticated statistics than simple frequency distributions has been lacking from the field, even though it can provide a corroboration of the qualitative analysis and can either confirm or disprove the hypotheses derived from the pilot study. By using both a qualitative and a quantitative analysis, I have been able to discuss individual examples and counter-examples of genitive ordering patterns in their original contexts, as well as testing different potential factors for statistical significance, i.e. the probability that the results they give would be found were they due to chance.

The combined analyses complemented each other, since the more detailed discussions of factor groups and individual factors in the qualitative analysis meant that it could provide linguistic justification for some of the decisions made in the quantitative analysis. For example, when I reduced discontinuity to a distinction between continuous and discontinuous noun phrases in Ch. 4 §3, the decision to omit genitives and head nouns separated by modifiers was based not just on the fact that there were relatively few examples of them, but also on the different ordering patterns they had shown in Ch. 3 §3.2, with GenN found when the head noun was modified and NGen when the genitive was modified. Because these types of discontinuous head nouns and genitives behaved differently from each other, I could not justify combining them with each other, nor with the other continuous noun phrases, nor with truly discontinuous noun phrases, and so they were discarded from the statistical analysis.

The qualitative analyses also allowed me to examine certain potential factors which were omitted from the variable rule analysis for a variety of reasons, e.g. phrasal terms (Ch. 3 §8) and *wh*-pronominal genitives (Ch. 3 §4.3), both excluded because of their fixed orders, grammatical number of nominal genitives (Ch. 3 §10) and animacy of the genitive (Ch. 3 §5), excluded in part because of their inconsistent ordering patterns. The quantitative analysis, on the other hand, showed the interaction between factor groups, e.g. animacy and lexical category of the genitive (Ch. 4 §3). It also confirmed the tendencies of certain factors to be found with specific orders by showing which factor groups were statistically significant, and whose effects could thus be safely extended to more genitives than those found in my corpus, as well as which groups were not statistically significant. Significant groups largely coincided with groups which had factors the qualitative analysis had shown to have a noticeable effect on genitive position, e.g. information structure (Ch. 3 §1, Ch. 4 §5.1).

The outcome of these analyses, both qualitative and quantitative, show that the order of the Latin genitive is determined by a number of different factors. There may well be a hierarchy of factors, with certain factors being considered more important and overriding others. The *wh*-pronominal genitives spring to mind with their invariable position before the head noun. Information structure is also an important factor, as both qualitative and statistical analyses show. Lexical category too plays its part, with the distinction between pronominal and nominal genitives considered statistically significant, though the qualitative analysis suggests that gerund(ive)s may pattern differently from other nominal genitives. The function of the genitive can affect its position as well, though this is not one of the strongest factors, statistically speaking, and the factor weights of the functions are not all that consistent from author to author. However the qualitative analysis shows that there are also linguistic

grounds for believing that certain functions have specific neutral orders, particularly the subjective and objective genitives, which have a pattern reminiscent of sentence-level subject + verb + object order, and the genitive of quality, the GenN order of which makes a typologically harmonic combination with the adjective + noun order found in these genitives. The presence of prepositions can also affect the order of the genitive and head noun, increasing the proportions of NGen order, and is statistically significant.

In addition to these four factor groups, the qualitative analysis showed that when head nouns and genitives are separated by modifiers of one or the other constituent, the ordering patterns are determined by weight, with the heavy modified constituent following the unmodified constituent, whilst true discontinuity appears to have information structure as the chief motivation behind its word order rather than prosody or a desire to minimise complexity of the genitive construction. Phrasal terms and formulaic expressions and titles were also shown to influence word order, as certain expressions become fixed in one order, to the exclusion of the other. On the other hand, not all expressions identified as phrasal terms or formulaic in my corpus were fixed. A good number of them showed an overwhelming preference for one specific order, but on occasion were found in the reverse order, e.g. *agri cultura*, which would later be fully lexicalised as *agriculture* is once found *cultura agri* at Varro *Rust.* 1.37.3; see discussion of example (212) in Ch. 3 §8 above.

The animacy of genitives and grammatical number of nominal genitives were both omitted from the quantitative analysis, and so have not been tested for statistical significance. However, the discussion of these factors in the qualitative analysis suggested that they do not affect genitive position. In addition to this, the animacy and lexical category of the genitive overlapped due to the fact that the animacy hierarchy

is partly based on a distinction between nominals and pronominals (see Ch. 4 §3), and so only lexical category was retained. It is possible that animacy has some effect when it is reduced to a distinction between human and non-human, but I did not test for this.

Whilst not statistically significant, author and genre, or perhaps register, also appear to have some limited effect on word order. In the qualitative analysis, Sallust is clearly shown to have higher proportions of NGen order than the other authors, not just overall, but also in contexts where the others typically have GenN. As for genre, there was more variation in genitive position between Cicero's orations and letters than there was between the authors, though this may not be caused so much by genre as it is by register. However, as already mentioned, neither author nor genre was selected as statistically significant, a reminder not to put too much emphasis on the effect of register and personal preference on the order of constituents within one grammatical construction.

So, in the end, what is the order of the Classical Latin genitive? Is there a neutral order for the genitive construction as a whole? The statistics predict that NGen order will occur more than half of the time, but not by very much. Presented with just these figures, it would be perfectly reasonable to go with Viti and Spevak's view that there are different orders associated with different functions or types of genitive.

However, there are relatively few factors associated with GenN order – *wh*-pronominal genitives, pronominal genitives in general and genitives of quality in Caesar, Cicero and Varro, subjective genitives (though this is perhaps better considered a case of subjective genitives favouring GenN more than objective genitives, rather than subjective genitives being consistently found before the head noun), and genitives carrying emphasis and contrast. Not only are there rather more

factors associated with NGen order, but “unmarked” genitives within these groups, be they genitives which carry no pragmatic marking, or genitives whose heads are not governed by prepositions, or genitives with miscellaneous syntactic functions, or nominal genitives, are found most often following their head nouns. There is also the increased proportions of NGen order found in genitives of quality and pronominal genitives in Sallust – is this merely a personal preference, or is it perhaps a reflection of the actual position of the Classical Latin genitive, glimpsed here because of Sallust’s deliberate avoidance of the literary patterns used by Cicero and Caesar, and on occasion Varro? After all, the text with the next highest proportions of NGen order is Cicero’s private correspondence with Atticus, which is informal and relaxed, and more likely to reflect everyday Latin.

With this in mind, I feel that NGen is the neutral order for genitives, and that GenN order is associated with specific functions.

Why, then, is NGen order not found more frequently? I suggest this is because word order in the genitive is determined by a combination of factors working together, with the most important of all being information structure. The constituents of the genitive construction are most likely to be arranged with a view to what exactly the speaker intends to communicate. In Latin, it is not order that determines meaning, but meaning that determines order.

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