

III. PREPOSITION/PREVERB SUMMARY

CATEGORY	PROPTER	PRO	APUD	SINE	SUB	TRANS	CONTRA	OB	POST	ANTE	INTRA
TOTAL P+PV	21	72	19	17	54	59	8	51	7	6	5
TOTAL P+SG	18	10	9	16	8	9	5	5	5	5	
TOTAL P+PL	3	10	10	1	2		3	2	2		5
TOTAL P	21	20	19	17	10	9	8	7	7	5	5
TOTAL PV		52			44	50		44		1	
P + PERS SG		4	8	1			4		1	1	
P + PERS PL		3	10				2		1		
P + PERS ALL		7	18	1			6		2	1	
P + N-PERS SG	1	1	1	1	4	9				1	
P + N-PERS PL	1	4			2		1		1		5
P + N-PERS ALL	2	5	1	1	6	9	1		1	1	5
P + ABSTR SG	17	5		14	4		1	5	4	3	
P + ABSTR PL	2	3		1				2			
P + ABSTR ALL	19	8		15	4		1	7	4	3	
PERSONAL FACTOR	ψ	35%	95%	6%	ψ	ψ	75%	ψ	29%	20%	ψ
PV (TRUE)		48			33	26		33			
PV (PSEUDO-I)		1				2					
PV (PSEUDO-II)		3			11	22		11		1	
P : APPOSITE		3	4								
P : EX-VP	21	6	1	16	2		1	7	4	3	

III. PREPOSITION/PREVERB SUMMARY

CATEGORY	PRAET	CIRC	CITR	SECUN	ULTR	PRAE	OTHER	RE	DIS	SUPER	INTRO
TOTAL P+PV	5	17	2	2	2	33	5	160	29	5	3
TOTAL P+SG	3	2	2	1	2	1	4	-	-	-	-
TOTAL P+PL	2			1			1	-	-	-	-
TOTAL P	5	2	2	2	2	1	5	-	-	-	-
TOTAL PV		15				32		160	29	5	3
P + PERS SG		1			1		1				
P + PERS PL	1										
P + PERS ALL	1	1			1		1				
P + N-PERS SG	2	1	2	1	1		3				
P + N-PERS PL	1						1				
P + N-PER ALL	3	1	2	1	1		4				
P + ABSTR SG	1						1				
P + ABSTR PL				1							
P + ABSTR ALL	1			1			1				
PERSONAL FACTOR	20%	50%	ϕ	ϕ	50%	ϕ	20%				
PV(TRUE)		10				14		160	26	4	1
PV(PSEUDO-I)									1		
PV(PSEUDO-II)		5				18			2	1	2
P : APPPOSITE	3				1		1				
P : EX-VP	1			1	1						

EPILOGUE

My purpose here has been to present, in relatively "raw" form, data which I believe can be of use to classical scholars for a variety of purposes. It is not within the scope of the present paper to discuss at length the implications of the statistics set forth in the preceding pages. But I think it appropriate to conclude with a few brief remarks about some of the facts in this data which I feel call out most strongly for further investigation and explanation.

Consider, first of all, the distribution of PERSONAL and NON-PERSONAL nouns within the SUBJECT category (table I.a, p. 21). Two facts stand out here. The first is, that although PERSONAL nouns represent only 54.29 % of all nominals in the text (table II.c, p. 34), they represent 70.04 % of all SUBJECTS. Furthermore, it is the ACTIVE forms which seem to account for the extent of this discrepancy, since the incidence of PERSONAL nouns as SUBJECT of PASSIVE verb-forms is much closer to the norm (at 45.11 %) than is the case for PERSONALS as SUBJECT of ACTIVES (at 82.91 %).

Secondly, consider the radically different propensities for various case-categories to co-occur with PERSONAL noun-stems (table II.b). Except for Genitive, which at 55.34 % is almost equivalent to the overall incidence (55.29 %) of PERSONAL nouns in the sample (based on table II.c), each of the other case categories seems to represent a potentially significant deviation above or below this figure. This not only holds true rather obviously for the NOMINATIVE (at 65.61 %) and DATIVE (at 79.43 %) on the high side, and ABLATIVE (at 16.22 %) on the low side. It is also true, to a much greater extent than appears at first glance, of the ACCUSATIVE and DATIVE/ABLATIVE categories. Once the 69.25 % figure for ACCUSATIVE SUBJECTS

(almost identical, incidentally, to the overall figure for SUBJECTS in I.a) is discounted, the extent to which PERSONAL nouns "avoid" the ACCUSATIVE becomes more striking (32.55 % without and 34.59 % with prepositions). As for the DATIVE/ABLATIVE, remember that some of these forms are truly DATIVE, while others are truly ABLATIVE. It is precisely the type of redundancy represented by the fact that the ABLATIVE and DATIVE forms are at diametrically (and extremely) opposed ends of the PERSONAL scale (at 16.22 % and 79.34 %, respectively) which makes this figure of 45.99 % for the ambiguous figures so interesting. There is, in reality, very little ambiguity, since the environments for the two categories are almost (though not quite) mutually exclusive, or, as linguists would put it, in "complementary distribution". This fact no doubt would become even more obvious if the distribution of various categories of DATIVE forms and ABLATIVE forms with various verb-stems were taken into account.

Even the GENITIVE, which is apparently so undeviating from the norm, shows a distinctive property when the HEAD-NOUN/GENITIVE interaction is examined. Notice that, although 55.34 % of *all* GENITIVES are PERSONAL, only 23 % of those accompanied by PERSONAL HEAD nouns are (22 of 97).

Finally, consider the PERSONAL FACTOR among PREPOSITIONS (table III, p. 35). Once again there are significant deviations from the norm in both directions. IN, at 14.1 %, has 22.5 % fewer PERSONAL nouns than the PREPOSITIONS as a group (at 36.2 %). CUM (76.6 %), APUD (95 %), AB (68.8 %) and INTER (72.4 %) deviate in the opposite direction. And, of course, it seems potentially significant that the PREPOSITION category as a whole falls so far short of the sample-norm for PERSONAL

(36.2 % as against 54.29 %).

These statistic patterns may be representative of one of three orders of linguistic facts :

- a) universal propensities of all human languages;
- b) particular characteristics of Latin, or of the Indo-European family;
- c) personal, stylistic, peculiarities of Julius Caesar, or even of the *De Bello Gallico* itself.

As useful and interesting as the facts presented here may be, I believe that their full importance will only be appreciated when further, comparable information is available, about other Latin authors to separate (b) from (c); and about other languages to separate (a) from (b).

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BIBLIOGRAPHY

Gardner, D. (1971); *A Frequency Dictionary of Classical Latin Words*;
-- Stanford U.Ph.D. Dissertation.

Lecrompe, R. (1968); *Cesar; De Bello Gallico Index Verborum*;
-- Hildesheim; Olms.

Lyons, J. (1968); *Introduction to Theoretical Linguistics*;
-- Cambridge, U. Press.

Seel, O. (1968); *C. Julius Caesar, Bellum Gallicum*;
-- Leipzig; Teubner.

FOOTNOTES

1. Notice that at least some of the other units in the cited clause are not considered to be "relevant" portions of the context with respect to *virtut*+. This is a factor which will be present throughout this discussion. See section 2. Methodology for a more detailed description of how it figures in the collection of the statistics presented here.
2. "Lexicon" is used here in an extended sense, to include such "bound morphemes" as case endings and verb endings.
3. In each case here, the figures given are for the *verb stem* in question, inclusive of all preverb-combinations such as *convenio*, *advenio*, *pervenio*, etc.
4. Lyons' example (1968, p. 79) of this distinction is *dog/bitch*, where *dog* is "unmarked" for sex (it can refer to either) while *bitch* is "marked".
5. Five prose authors (Caesar, Cicero, Livy, Pliny the Younger and Tacitus) will each be represented by a corpus of about the present size (3000 "clauses"). Five poets (Lucretius, Virgil, Ovid, Horace and Juvenal) will each be represented by a corpus of 1000 "clauses".
6. Note that these totals represent in each case the item in question with all of its preverb-combinations. See below under *Preverb Inventories* for further discussion of this point and cf. note 3.
7. As a further check, consider the statistics for the 6 most frequent prepositions :

<i>ITEM</i>	<i>Whole Text</i>	<i>Sample</i>	<i>Percent</i>
IN	1083	326	30.10 %
AD	706	194	27.48 %
AB	542	173	31.92 %
EX	467	119	25.48 %
CUM	250	77	30.80 %
DE	206	57	27.67 %
TOTAL	3254	946	29.07 %

- All of these but EX fall into the same range established by MITTO-POSSUM.
8. The detailed description of my reasons for treating the preverbs (e.g. *prae*+) and the verb form as separate linguistic "units" is given below under *Preverb Inventories*.
 9. It will not surprise the reader to learn that there are cases where the category is indeterminate to some extent. In *instruxit aciem*, for example, *aciem* refers to the soldiers who make up the line but some might view it as NON-PERSONAL, or even ABSTRACT rather than PERSONAL.
 10. To a very limited extent, limited because of the limited use of such structures in Caesar and not by any arbitrary methodological decision, other positions, such as ACCUSATIVE, ABLATIVE etc. were also marked with _____ ϕ under the same conditions of omission or non-repetition.
 11. The first two positions, SUBJECT and ACCUSATIVE, can in fact be occupied by a *complement-structure*-- either Infinitive (as with *licet* or *dico*) or Finite with conjunction (as in *licet ut...* or *impero ut...*). In the statistics, SUBJECT-complements are counted as ABSTRACT for tabulating purposes, OBJECT (i.e. ACCUSATIVE-position) complements are not counted.
 12. A related type of cases are "APPOSITE" case-forms and prepositional phrases, an example of which is B.G. I.16.2 : *frumenta in agris matura non erant* = "the grain (in the fields) was not ripe". These entries were marked APP (with "-PV" in all cases).
 13. Examples of 1, 3 and 4 are :
 1. *firmissimos populos totius Galliae* (B.G. I.3.8)
 2. *cultu atque humanitate provinciae* (B.G. I.1.3)
 3. *cuius pater* (B.G. I.3.4)
 14. This work is apparently available as yet only in microfilm or xerox from Ann Arbor. It is to be hoped that it will eventually appear in more readily useable and accessible form as have its predecessors in Alphonse Juilland's series of Romance Language Frequency Dictionaries. Gardner's statistics are

drawn from virtually all the Classical Latin authors. Thus they are a good index to the properties of words in the language as a whole, as well as to their behavior in the five sub-populations of genres into which the data is divided.