

FIVE CENTURIES OF LATIN HEXAMETER POETRY: SILVER AGE AND LATE EMPIRE

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In a recent series of studies on variety and repetition in Latin hexameter poetry I discussed the patterns and procedures of Vergil¹ and his avoidance of *ds* in emotional and dramatic passages,² Horace's increasing interest in metrical variety from *Satires* I to the late *Ars Poetica*,³ and, in one lengthy article,⁴ the works of the Republican poets (Ennius through Catullus LXIV), Ovid's *Metamorphoses*,⁵ and the hexameter poems of the *Appendix Vergiliana*, including the *Aetna*, which I examined in relation to the other didactic poems of the early Empire.⁶

As I said on an earlier occasion,⁷ statistics based on the eight most

¹ See G. E. Duckworth, "Variety and Repetition in Vergil's Hexameters," *TAPA* 95 (1964) 9-65, hereafter cited as **Duckworth, Vergil**. This article should be consulted for definitions and illustrations of many terms used below, e.g. variety in sixteen-line units, repeat clusters, fourth-foot homodyne percentages, repeats and near repeats, shift in fourth-foot texture in repeated patterns, opposite and reverse patterns in adjacent lines.

² See G. E. Duckworth, "Vergil's Subjective Style and its Relation to Meter," *Vergilius* 12 (1966) 1-10. Cf. also Duckworth, "Hexameter Patterns in Vergil," *PVS* 5 (1965-66) 39-49 (a brief summary of the *Vergilius* article and Duckworth, *Vergil*).

³ See G. E. Duckworth, "Horace's Hexameters and the Date of the *Ars Poetica*," *TAPA* 96 (1965) 73-95, hereafter cited as **Duckworth, Horace**.

⁴ See G. E. Duckworth, "Studies in Latin Hexameter Poetry," *TAPA* 97 (1966) 67-113, hereafter cited as **Duckworth, Studies**.

⁵ See also G. E. Duckworth, "The Non-Ovidian Nature of the *Halieutica*," *Latomus* 25 (1966) 756-68, hereafter cited as **Duckworth, Halieutica**. An examination not only of the *Metamorphoses* but of the hexameters in Ovid's elegiac poetry proves that the heavily spondaic *Halieutica* could not possibly have been composed by Ovid.

⁶ The *Culex* and the *Moretum* could be and probably were the work of Vergil in his early years, whereas the *Ciris* and the *Dirae* (one poem, not two) could not possibly have been written by Vergil; see Duckworth, *Studies* 86-101. The *Aetna*, as is true of most didactic poems of the first century A.D., is not unlike Vergil's *Georgics*, but resembles most closely the *Aratea* of Germanicus Caesar and was probably written between 25 and 50; see Duckworth, *Studies* 101-7.

⁷ Duckworth, *Studies* 108.

frequent patterns in Latin hexameter poetry, ranging from 65.35 per cent in Ennius to 90.98 per cent in Catullus LXIV,⁸ provide a more accurate index to the predilections and idiosyncrasies of the individual poets than do the figures of previous scholars, derived from a study of all sixteen patterns. In my attempt to "fingerprint" the various poets, the numerous other criteria which I have established—variety in sixteen-line units, repeat clusters, frequency of repeats and near repeats, change in fourth-foot texture (from homodyne to heterodyne or from heterodyne to homodyne) in repeated patterns, the nature and frequency of opposite and reverse patterns in adjacent lines—are also most helpful. To the best of my knowledge these particular criteria have not hitherto been applied to the Roman hexameter poets.

My studies have revealed that there are two very different types of hexameter poetry, and these may be briefly summarized as follows:

1. The earlier, more spondaic hexameter, which on the basis of the *Aeneid*, I term the "Vergilian norm." Here, in the first four feet of the eight most frequent patterns, we find twenty spondees and twelve dactyls, also a fourth-foot spondee in each of the eight patterns (and only four dactyls in the first foot). Actually, it was Cicero who first established the ratio of twenty spondees and twelve dactyls for the first eight patterns,⁹ but I call this spondaic hexameter "Vergilian" because Vergil introduced greater variety by a striking reduction in the eight-pattern frequencies,¹⁰ and he likewise changed the fourth-foot texture by a surprising decrease in homodyne percentages.¹¹ Also, he established the frequencies for repeated, opposite, and reverse patterns which many poets after his day adopted.

2. The later, more dactylic or "Ovidian" hexameter. In the *Metamorphoses* we have the exact opposite of the Vergilian norm—in the first four feet of the first eight patterns, twelve spondees and twenty

⁸ Among the poets to be discussed below, the only percentage which I have discovered to be lower than that of Ennius for the first eight patterns is 62.50, in the *Mosella* of Ausonius. Catullus' high percentage is surpassed only by that of Cyprian, 91.06.

⁹ The earliest poets had been even more spondaic in their first eight patterns: Ennius, twenty-two spondees, ten dactyls; Lucilius, twenty-one spondees, eleven dactyls.

¹⁰ Cicero, 82.26 per cent; Lucretius, 79.81; Catullus LXIV, 90.98; but Vergil, *Eclogues*, 69.09; *Georgics*, 73.42; *Aeneid*, 72.78.

¹¹ These had increased from Cicero, 44.79 per cent, to Lucretius, 47.66, to Catullus LXIV, 60.44; the percentages in Vergil are: *Eclogues*, 39.73; *Georgics*, 36.08; *Aeneid*, 37.78. Cf. W. R. Hardie, "A Note on the History of the Latin Hexameter," *JP* 30 (1907) 272: "The versification of the *Eclogues* might almost be regarded as a revolt, a protest or reaction against the rhythm of the preceding generation."

dactyls, and a first-foot dactyl in each of the eight patterns (and only four spondees in the fourth foot).¹² Ovid, therefore, is metrically the most Homeric of the Roman poets.¹³ Also, the fourth-foot homodyne is again high (50.0 per cent), and likewise the frequency percentage of the first eight patterns (81.62). Ovid, with his emphasis on dactylic patterns such as *dsdd*, *ddsd*, *dsdd*, and *dddd* (ninth, tenth, twelfth, and fifteenth respectively in Vergil's *Aeneid*) gives lightness and rapidity to his hexameters, and in this respect he is followed by several poets whom we should expect to be more Vergilian. I have already discussed Columella, who wrote Book x of his *Res Rustica* in hexameters as a continuation of Vergil's *Georgics*, but whose metrical patterns and procedures are those of Ovid, not of Vergil.¹⁴

It will now be of interest to examine the hexameter poetry of the Silver Age and the Late Empire, in relation to the two types described above: the Vergilian norm and the dactylic rhythm introduced by Ovid. I shall treat the poets of the Silver Age under three headings: Pastoral,¹⁵ Epic,¹⁶ and Satire;¹⁷ and those of the later period (fourth, fifth, and sixth centuries) under two headings: Secular Poetry and Christian Poetry (mostly Biblical epic).¹⁸ The title of this article is thus not an exaggeration; I begin with the age of Nero (54-68 A.D.) and end with Arator and Corippus (ca. 550 A.D.).

I. THE SILVER AGE

A. PASTORAL

The works to be considered in this group include the pastorals of Calpurnius Siculus and Nemesianus, the two short *Einsiedeln*

¹² This is true not only of the *Metamorphoses* but of the hexameters in his elegiac poetry both early and late; see Duckworth, *Halientica* 763-64.

¹³ See Duckworth, *Studies* 82.

¹⁴ See Duckworth, *Studies* 103-4, 106.

¹⁵ I here include the *Eclogues* of Nemesianus, although he belongs to the third century A.D. The *Cynegetica* of Nemesianus was discussed under "The *Aetna* and post-Vergilian didactic poetry" in Duckworth, *Studies* 101-7.

¹⁶ I shall include here, in addition to the epics of Lucan, Valerius Flaccus, Statius, and Silius Italicus, not only the *Bellum Civile* of Petronius and the *Ilias Latina*, but also Statius' *Silvae* (for comparison with his epics).

¹⁷ Persius and Juvenal will be examined in relation to Horace's *Satires*.

¹⁸ The poets of this late period total eighteen; here I have been selective and have scanned only one to two thousand verses of each (unlike the earlier periods, where I have complete material on each poet, including all seventeen books of Silius Italicus!). I have given special attention to Claudian (about 3,500 verses).

eclogues, and the *Laus Pisonis*, which is usually discussed with the others.¹⁹ These poems "present a bundle of interconnected and, though baffling, still not uninteresting problems."²⁰ Are the two *Einsiedeln* eclogues by the same poet and, if so, are they the work of Calpurnius Siculus, Calpurnius Piso, or perhaps Lucan?²¹ Did Calpurnius Siculus write the *Laus Pisonis* to praise his patron, or is the poem the work of Lucan?²² The theory that Calpurnius Siculus was the author has been accepted by many scholars,²³ but opposed by others.²⁴ It is my hope that the following metrical analyses of these poems may throw additional light on these particular problems.

I give statistics for the first eight patterns of each work—order of the eight patterns (including also the two least frequent), relevant percentages, and the distribution of spondees and dactyls.²⁵ For purposes of comparison, I include the same information for Vergil's *Eclogues* and Ovid's *Metamorphoses*. Here and elsewhere I list the sixteen patterns according to their frequency in the *Aeneid* (the "Vergilian norm").

¹⁹ My statistics for the *Eclogues* of Nemesianus are based on the text of J. W. Duff and A. M. Duff, *Minor Latin Poets* (LCL 1934) 456–84. For the other poems I use the more recent edition of R. Verdière, *T. Calpurni Siculi De laude Pisonis et Bucolica et M. Annaei Lucani De laude Caesaris Einsiedlensia quae dicuntur carmina* (Berchem-Bruxelles 1954) [= *Collection Latomus* 19]. As in my earlier articles, I omit spondaic verses and lines bracketed as spurious. Also, here and later I abbreviate as follows: LCL (Loeb Classical Library), OCD (*Oxford Classical Dictionary*, 1949), OCT (*Oxford Classical Texts*), CSEL (*Corpus Scriptorum Ecclesiasticorum Latinorum*), MGH (*Monumenta Germaniae Historica*).

²⁰ Duff (above, note 19) 209.

²¹ See Duff (above, note 19) 319–21; Verdière (above, note 19) 43–44, who favors Lucan and entitles the poems *De laude Caesaris*.

²² Lucan's authorship is supported by B. L. Ullman, "The Text Tradition and Authorship of the *Laus Pisonis*," *CP* 24 (1929) 109–32. Duff (above, note 19) 290, says: "The names of Ovid, Saleius Bassus and Statius have been advocated, of whom the first lived too early and the others too late to write the *Laus Pisonis*."

²³ E.g. Haupt, Birt, Trampe, Schenkl, Skutsch, Teuffel, Plessis; see J. Hubaux, *Les thèmes bucoliques dans la poésie latine* (Bruxelles 1930) [= *Memoires, Académie Royale de Belgique* 29.1] 184–85.

²⁴ Especially by G. Ferrara, *Calpurnio Siculo e il panegirico a Calpurnio Pisone* (Pavia 1905). See G. Martin, *Laus Pisonis* (Cornell Univ. diss. 1917) 23–37, who says (p. 27): "The problem as to the author of the *Laus Pisonis* is then to-day as far from solution as ever," so J. W. Duff, "Laus Pisonis" (OCD) 484: "The authorship is uncertain." But Verdière (above, note 19) 27–31, argues on the basis of style and parallel passages that Calpurnius Siculus was the author.

²⁵ For totals of all sixteen patterns, see below, Table 1.

	Verg. <i>Ecl.</i>	Ovid <i>Metam.</i>	Einsied. <i>Ecl.</i>	Calp. <i>Sic.</i>	<i>Laus</i> <i>Pisonis</i>	Nemes. <i>Ecl.</i>
<i>dsss</i>	2	2	2	8-9	2	3
<i>ddss</i>	1	1	1	3	4-5	2
<i>dsds</i>	3	4	3	1	1	1
<i>sdss</i>	6		5-7			4
<i>ssss</i>		15	8-9	14-15	15-16	8
<i>ddds</i>	7	6	4	5	7	7
<i>ssds</i>						5
<i>sdds</i>	8		14-15		4-5	
<i>dssd</i>	4-5	3		4	6	
<i>ddsd</i>	4-5	5	5-7	2	3	6
<i>sdsd</i>			8-9	8-9		
<i>dsdd</i>		7	5-7	6		
<i>sssd</i>	15		16	16	15-16	
<i>ssdd</i>		16		14-15		16
<i>dddd</i>		8	14-15	7	8	
<i>sddd</i>	16					15
% 1st pattern:	13.09	13.08	16.47	12.80	14.56	15.05
% 1st four:	41.45	48.37	49.41	44.99	43.68	52.98
% 1st eight:	69.09	81.62	75.29	75.20	76.25	78.37
First eight—						
Spondees:	16	12	15 or 17	12-11	13	19
Dactyls:	16	20	17 or 15	20-21	19	13
4th-foot sp.:	6	4	5-6	4-3	5	7
1st-foot da.:	6	8	6	8-7	7	5

The two Einsiedeln pastorals are too short (47 and 38 lines respectively) to provide metrical information of much value, and this is especially true when we compare the two poems. There are interesting differences, however. I gave above the first pattern as *ddss*, with a combined percentage of 16.47; in I the first pattern is *dsss*, 19.15 per cent, and *ddss* is second; in II *ddss* is first, 15.79 per cent, and *dsss* is tied with seven other patterns (for sixth to thirteenth place). Somewhat more significant is the percentage difference of the first eight patterns: I, 85.11; II, 65.79. In the seven *Eclogues* of Calpurnius Siculus, the corresponding range is from 70.65 (VI) to 81.65 (IV). The possibility that the two poems are the work of two different writers must be considered, and the additional criteria to be presented below may also be helpful for this problem. If the Einsiedeln eclogues were composed by the same person, there seems no compelling reason to ascribe them

to Lucan, as does Verdière;²⁶ *ddsd* and *dsdd* do not appear among Lucan's eight most frequent patterns, and his distribution of spondees and dactyls is eighteen and fourteen; even less likely as the author is Calpurnius Siculus, who favors *dssd* and *dddd*, whose first pattern (*dsds*) has an unusually low percentage of 12.80, and whose distribution of spondees and dactyls in the first eight patterns is twelve or eleven and twenty or twenty-one.

Dimsdale says of Calpurnius Siculus: "His trifling hexameters, correct in their adherence to the metrical usage of bucolic verse, do not succeed in avoiding monotony."²⁷ This is a curious statement: what does he mean by "the metrical usage of bucolic verse"? Calpurnius certainly does not follow the metrical procedures in Vergil's *Eclogues*; his eight most frequent patterns are those of Ovid (but in different order), and his distribution of twelve or eleven spondees and twenty or twenty-one dactyls is practically identical with that first introduced by Ovid; such a high proportion of dactyls appears in no other poet of either the Silver Age or the Late Empire.

I return now to the problem of the authorship of the *Laus Pisonis*. An examination of the patterns and percentages listed above reveals many striking similarities between the *Eclogues* of Calpurnius Siculus and the *Laus Pisonis*: *dsds* is first in both and seven of the first eight patterns are the same,²⁸ with *ddsd* unusually frequent in both; the use of *dddd* is similar, as are the low frequencies of *ssss* and *sssd*. The percentages of the first four and the first eight patterns are remarkably close (*Eclogues*, 44.99 and 75.20; *Laus*, 43.68 and 76.25). Most significant, however, is the distribution of spondees and dactyls in the first eight patterns of the *Laus Pisonis*: thirteen and nineteen respectively, and this is almost identical with the twelve and twenty of Ovid and the twelve or eleven and twenty or twenty-one of Calpurnius Siculus. Even Columella, Ovidian as he is,²⁹ has a distribution of fifteen spondees and seventeen dactyls, as do Valerius Flaccus in the *Argonautica* and

²⁶ See above, note 21.

²⁷ M. S. Dimsdale, *A History of Latin Literature* (New York 1915) 388.

²⁸ The patterns which differ are *dsdd*, sixth in Calpurnius but not among the first eight in the *Laus*; *sdds*, fourth-fifth in the *Laus*, but not among the first eight in the *Eclogues*. Also, *dsss* is second in the *Laus*, but only eighth-ninth in the *Eclogues*.

²⁹ See above, note 14.

Stattius in the *Thebaid* and the *Silvae* (the *Achilleid* is closer with fourteen spondee and eighteen dactyl). No such emphasis on dactyls as we find in Calpurnius and the *Laus Pisonis* appears again in the whole range of Latin hexameter poetry; the nearest approach is Arator in the sixth century, fifteen or fourteen spondee, seventeen or eighteen dactyl.

If Calpurnius Siculus is not the author of the *Laus Pisonis*, we must then accept the existence of another poet living at the same time who favored dactyls over spondee in the manner of Ovid to a degree unmatched by any of about twenty-five other hexameter poets in a period of five hundred years. This seems most unlikely. Other metrical arguments which support the authorship of Calpurnius Siculus will be given below. In any case, Lucan is excluded as a possible author; his distribution of spondee and dactyl is eighteen and fourteen, and, with one exception (*dssd* for *ssss*), his eight most frequent patterns are the same as in Vergil's *Aeneid*.

The four pastorals of Nemesianus long went under the name of Calpurnius Siculus, but the evidence for the separation is very strong.³⁰ Also, however much Nemesianus may have imitated Calpurnius (in addition to Vergil), he is metrically very different. With nineteen spondee and thirteen dactyl in the first eight patterns, he is far more spondaic than is Vergil in his *Eclogues* (sixteen spondee, sixteen dactyl) and is close to Vergil's procedure in the *Georgics* and the *Aeneid* (twenty spondee, twelve dactyl). Also, seven of his first eight patterns are identical with those of the *Georgics* and the *Aeneid*. In this respect there is little difference between the *Eclogues* of Nemesianus and his *Cynegetica*; the eight most frequent patterns of the *Cynegetica* are those of Vergil's *Aeneid* and thus have twenty spondee and twelve dactyl.³¹ The first pattern in the two works of Nemesianus is *dsds*: *Eclogues*, 15.05 per cent; *Cynegetica*, 15.38 per cent.

The comparative frequencies and percentages for variety in sixteen-line units, fourth-foot homodyne, and repeated, opposite, and reverse patterns are as follows:

³⁰ See J. W. Duff, *A Literary History of Rome in the Silver Age*² (New York 1960) 264.

³¹ See Duckworth, *Studies* 102-3.

	Verg. <i>Ecl.</i>	Ovid <i>Metam.</i>	Eins. <i>Ecl.</i>	Calp. <i>Sic.</i>	<i>Laus</i> <i>Pisonis</i>	Nemes. <i>Ecl.</i>
Patterns per 16-line unit:	9.7	8.9	9.5	9.3	8.9	8.9
% units with 8 or more:	97.87	86.35	100.0	90.91	93.75	94.44
Repeat clusters, 1 every x lines:	275.0	112.5	—	126.3	261.0	106.3
% fourth-foot homodyne:	39.73	50.0	42.35	61.08	54.02	41.07
Repeats—						
1 every x lines:	13.1	10.7	10.6	10.1	9.7	15.2
% of change:	49.21	46.91	50.0	41.33	37.04	57.14
Differs from homodyne %:	+9.48	−3.09	+7.65	−19.75	−16.98	+16.07
R plus NR—						
1 every x lines:	5.1	4.1	5.7	4.2	4.8	4.6
% of change:	44.10	46.19	53.33	37.78	40.74	41.23
Differs from homodyne %:	+4.37	−3.81	+10.98	−23.30	−13.28	+0.16
Favorite repeat:	<i>ddss</i>	<i>dsss</i>	<i>ddss</i>	<i>ddsd</i>	<i>dsds</i>	<i>dsds</i>
R, % total R:	31.75	18.08	25.0	22.67	22.22	23.81
% total pattern:	18.52	13.47	14.29	19.32	15.38	10.42
% of change:	45.0	51.49	100.0	47.06	33.33	60.0
Differs from homodyne %:	+5.27	+1.49	+57.65	−14.02	−20.69	+18.93
R plus NR—						
% total R + NR:	24.22	17.21	33.33	18.33	25.0	20.0
% total pattern:	36.11	33.60	35.71	37.50	33.33	29.17
% of change:	46.15	52.28	60.0	30.30	30.77	21.43
Differs from homodyne %:	−6.42	−2.28	+17.65	−30.78	−23.25	−19.64
Opposites, one every x lines:	19.6	29.3	14.1	23.0	20.1	29.0
Most frequent:	<i>sdsd-dsds</i>	<i>sdsd-dsds</i>	<i>ssdd-ddss</i> <i>dsdd-sdss</i> <i>sdsd-dsds</i>	<i>sdsd-dsds</i>	<i>dssd-sdds</i>	<i>dssd-sdds</i>
% total opposites:	19.05	22.11	33.33 each	33.33	46.15	27.27
Reverses, one every x lines:	55.0	39.3	85.0	44.6	37.3	24.4
Most frequent:	<i>dsdd-ddsd</i>	<i>dsdd-ddsd</i>	<i>dsdd-ddsd</i>	<i>dsdd-ddsd</i>	<i>sddd-ddds</i>	<i>ssds-sdss</i>
% total reverses:	46.67	71.05	100.0	58.82	42.86	38.62

In these statistics we find additional evidence that the *Einsiedeln* poems, short as they are, cannot be the work of either Lucan or Calpurnius Siculus. The following points seem most significant (*E*=*Einsiedeln* eclogues, *L*=Lucan, *C*=Calpurnius); fourth-foot homodyne percentages: *E* 42.35, *L* 37.08, *C* 61.08; repeats, one every x lines: *E* 10.6, *L* 11.4, *C* 10.1; percentage of change in repeats differs from homodyne percentage: *E* +7.65, *L* +2.01, *C* -19.75; repeats plus near repeats, one every x lines: *E* 5.7, *L* 4.2, *C* 4.2; percentage of change in repeats and near repeats differs from homodyne percentage: *E* +10.98, *L* -1.52; *C* -23.30; opposites, one every x lines: *E* 14.1, *L* 22.0, *C* 23.0; reverses, one every x lines: *E* 85.0, *L* 40.7, *C* 44.6.

The two *Einsiedeln* pastorals again show some surprising variations; patterns per sixteen-line unit: I 9.2, II 10.0; fourth-foot homodyne percentages: I 51.06, II 31.58; repeats, one every x lines: I 9.4, II 12.7; percentage of change in fourth-foot texture: I 60.0, II 33.33; repeats plus near repeats, one every x lines: I 5.9, II 5.4; percentage of change: I 62.50, II 42.86; opposites, one every x lines: I 15.7, II 12.6. I mentioned above the percentages of the first eight patterns: I 85.11, II 65.79. On the basis of these many differences, perhaps we do have here two fragmentary poems by two different writers. We are, however, dealing with such short works that no certainty is possible.

In the case of the *Laus Pisonis*, which I said above should be ascribed to Calpurnius Siculus (and not to Lucan), we have the following additional similarities between the panegyric and the pastorals (*CE*=Calpurnius' *Eclogues*, *LP*=*Laus Pisonis*, *L*=Lucan): unusually high percentage of fourth-foot homodyne: *CE* 61.08, *LP* 54.02 (*L* 37.08); repeats, one every x lines: *CE* 10.1, *LP* 9.7 (*L* 11.4); percentage of change in repeats differs from homodyne percentage: *CE* -19.75, *LP* -16.98 (*L* +2.01); percentage of change in repeats plus near repeats differs from homodyne percentage: *CE* -23.30, *LP* -13.28 (*L* -1.52);³² favorite repeat, percentage of total repeats: *CE* *ddsd*, 22.26; *LP* *dsds*, 22.22 (*L* *dsds*, 26.76); change in favorite repeat differs from homodyne percentage: *CE* -14.02, *LP* -20.69 (*L* +11.07);

³² In each of the seven *Eclogues* of Calpurnius Siculus the percentage of change in the repeats is lower than the homodyne percentage, from -5.67 (iii) to -43.88 (i); likewise in the case of repeats plus near repeats, from -13.40 (iii) to -33.86 (vii). The variation in the ten books of Lucan is as follows: repeats, from -6.21 (iv) to +14.24 (ix); repeats plus near repeats, from -6.04 (iii) to +2.94 (vii).

change in most frequent repeats plus near repeats differs from homodyne percentage: *CE* - 30.78, *LP* - 23.25 (*L* + 7.23). When we combine the percentages of the two most repeated patterns, we have the following (and I add here the corresponding percentages for Vergil and Ovid):

	<i>CE</i>	<i>LP</i>	<i>L</i>	<i>Aen.</i>	<i>Metam.</i>
Combined R,					
% total R:	42.67	40.74	51.24	40.94	33.57
Combined R + NR,					
% total R + NR:	36.66	40.38	50.36	38.82	34.14

These combined percentages of Calpurnius Siculus and the *Laus Pisonis* are very similar, and are quite unlike those of Lucan; surprisingly enough, they resemble the percentages of Vergil and not of Ovid.

On the basis of all the evidence assembled both here and above, there seems no reason to doubt that Calpurnius Siculus is the author of the *Laus Pisonis*.

The differences between the pastorals of Nemesianus (= *NE*) and those of Calpurnius Siculus (= *CE*) are again very striking: e.g., percentage of fourth-foot homodyne: *NE* 41.07, *CE* 61.08; repeats, one every *x* lines: *NE* 15.2 (on this, see below), *CE* 10.1; percentage of fourth-foot change in repeats: *NE* 57.14, *CE* 41.33; difference from fourth-foot homodyne: *NE* + 16.07, *CE* - 19.75; change in repeats plus near repeats, difference from fourth-foot homodyne: *NE* + 0.16, *CE* - 23.30; opposites, one every *x* lines: *NE* 29.0, *CE* 23.0; reverses, one every *x* lines: *NE* 24.4, *CE* 44.6; favorite reverse: *NE* *ssds-sdss*, *CE* *dsdd-ddsd*.

This difference in reverse patterns is of especial interest; Calpurnius' preference for *dsdd-ddsd* is typical of Ovid and some Silver Age poets (Columella x, Einsiedeln *Eclogues*, Valerius Flaccus, Statius' *Thebaid* and *Silvae*), but otherwise this particular reverse combination is almost never a favorite, except in Vergil's *Eclogues* and, in the late period, in Paulinus of Nola and Arator. The reverse *ssds-sdss* of Nemesianus is far more frequent; it is the favorite in Catullus LXIV, Vergil's *Georgics* and *Aeneid*, Horace, Grattius, Germanicus Caesar, Manilius, the *Aetna*, the other Silver Latin poets,³³ and, in the late period, a definite majority of the poets (thirteen of eighteen). The combination *ssds-sdss* often

³³ With the exception of the *Laus Pisonis*, where *sddd-ddds* is first, *dsdd-ddsd* second.

provides a surprisingly high percentage of the total reverses, e.g. Catullus LXIV, 71.43; Grattius, 71.43; Lucan, 70.05; Claudian, *De raptu Proserpinae*, 81.25; and Cyprian, an amazing 95.74.

The *Eclogues* of Nemesianus (= NE) differ in some respects from his *Cynegetica* (= NC), but these are in part due to the fact that the *Cynegetica* is in the tradition of the earlier didactic poets; e.g. opposites, one every x lines: NE 29.0, NC 21.7 (*Georgics*, 20.9; *Aetna*, 22.7); reverses, one every x lines: NE 24.4, NC 46.4 (*Georgics*, 46.4; Manilius, 45.9). The most interesting similarity is the frequency of repeated patterns: NE, one every 15.2 lines; NC, one every 14.8 lines. Nemesianus has far fewer repeats than most poets; they are almost twice as frequent in the early period (Lucretius, 8.8; Catullus, 7.0). Vergil (*Aeneid*, 12.4) and Horace (13.0) lessened the amount of repetition, but Ovid (*Metamorphoses*, 10.7) reversed the trend. The only instances of less frequent repeats than we find in Nemesianus are the following: *Culex*, 18.5; Grattius, 16.3; Ausonius, *Cento*, 18.7;³⁴ Sidonius, 16.1; Paulinus of Pella, 15.3.

The *Eclogues* of Nemesianus are unusual in another respect: reverse patterns in adjacent lines are more frequent than opposite patterns. In most poets, from the Republican period to the Late Empire, opposites occur much more often than reverses; the following are typical:

	Opposites one every x lines	Reverses one every x lines
Lucretius:	30.8	51.3
Catullus LXIV:	37.7	53.9
Vergil, <i>Aeneid</i> :	23.1	38.9
Ovid, <i>Metamorphoses</i> :	29.3	39.3
Grattius:	16.8	38.5
Manilius:	29.0	45.9
<i>Aetna</i> :	22.7	31.8
Calpurnius, <i>Eclogues</i> :	23.0	44.6
Nemesianus, <i>Cynegetica</i> :	21.7	46.4

In the whole range of Latin hexameter poetry I have discovered only the following instances where reverse patterns are favored over opposites:

³⁴ The *Mosella* of Ausonius has one repeat every 14.1 lines.

	Opposites one every x lines	Reverses one every x lines
Cicero:	79.8	24.0
<i>Dirae</i> (<i>Appendix Verg.</i>):	89.0	44.5
Silius Italicus VIII:	29.3	21.7
Silius Italicus XI:	25.5	21.1
Nemesianus, <i>Eclogues</i> :	29.0	24.4
Claudian, <i>In Eutropium</i> II:	43.0	33.4
Claudian, <i>De raptu Pros.</i> III:	26.4	24.9
Juvencus, <i>Libri Evang.</i> IV:	36.7	26.0
Paulinus of Périgueux, <i>De vita Martini</i> I:	45.8	29.7
Avitus:	30.7	26.1
Cyprian:	59.0	27.6

B. EPIC

We now return from Nemesianus to the Silver Age for a comparison of the four epic poets and their relation to Vergil or Ovid.³⁵ The order of the first eight (and last two) patterns, the relevant percentages, and the distribution of spondees and dactyls are as follows:³⁶

	Verg. <i>Aen.</i>	Ovid <i>Metam.</i>	Lucan	Val. Fl.	Stat. <i>Theb.</i>	Sil. Ital.
<i>dsss</i>	1	2	1	3	2	1
<i>ddss</i>	2	1	3	2	3	5
<i>dsds</i>	3	4	2	1	1	4
<i>sdss</i>	4		4	8	8	2
<i>ssss</i>	5	15		15		3
<i>ddds</i>	6	6	6	4	4	8
<i>ssds</i>	7		5			6
<i>sdds</i>	8		8			7
<i>dssd</i>		3	7	5	5	
<i>ddsd</i>		5		6	7	
<i>dsdd</i>		7		7	6	
<i>sssd</i>				16	16	
<i>ssdd</i>		16				
<i>dddd</i>	15	8	16			16
<i>sddd</i>	16		15		15	15

³⁵ All statistics for the four poets are based on the following texts: A. E. Housman, *M. Annaei Lucani Belli Civilis libri decem* (Oxford 1927, reprint 1950); J. H. Mozley, *Valerius Flaccus* (LCL 1936); H. W. Garrod, *P. Papini Stati Thebais et Achilleis* (OCT 1906); J. S. Phillimore, *P. Papini Stati Silvae* (OCT 1905); J. D. Duff, *Silius Italicus, Punica* (LCL 1949–50, 2 vols.).

³⁶ For totals of all sixteen patterns, see below, Table 2.

	Verg. <i>Aen.</i>	Ovid <i>Metam.</i>	Lucan	Val. Fl.	Stat. <i>Theb.</i>	Sil. Ital.
% 1st pattern:	14.39	13.08	15.40	22.65	16.24	13.04
% 1st four:	46.95	48.37	52.28	54.36	48.90	43.90
% 1st eight:	72.78	81.62	78.61	83.35	74.26	72.64
First eight—						
Spondees:	20	12	18	15	15	20
Dactyls:	12	20	14	17	17	12
4th-foot sp.:	8	4	7	5	5	8
1st-foot da.:	4	8	5	7	7	4

We are here dealing with long epics: Lucan's *De bello civili* in ten books (8,021 verses), the *Argonautica* of Valerius Flaccus in eight books (5,585 verses), Statius' *Thebaid* in twelve books (9,703 verses), and the *Punica* of Silius Italicus in seventeen books (12,197 verses),³⁷ and we must keep in mind the fact that the figures presented above give the averages for each of the four poems. There are variations from book to book, but in most instances these are minor, and it is amazing that each poet's procedure is so consistent throughout his work. For example, *dsds* is first in the *Argonautica* with a percentage of 22.65; the same pattern is first in each of the eight books with a range from 21.08 (i) to 25.98 (m). These first-pattern percentages are all unusually high, and the average of 22.65 is surpassed, in all Latin hexameter poetry, only by Lucretius, Book v (23.10), Vergil's *Eclogue* iv (24.19),³⁸ and Catullus LXIV (with a record high of 27.59). Just as the second pattern in Catullus (*sdss*) drops to 15.65, so the second pattern in Valerius Flaccus (*ddss*) falls to 11.39, almost exactly half of the first pattern (22.65).

In the *Thebaid* as a whole, *dsds* is again the first pattern (16.24 per cent) and is likewise first in each of the twelve books (with a percentage range from 14.16 in vi to 19.06 in viii).³⁹ Lucan and Silius Italicus show somewhat greater variation from book to book. In the *De*

³⁷ These totals do not include spondaic verses and bracketed or corrupt lines.

³⁸ The Fourth *Eclogue* differs from Vergil's other nine pastorals in several respects; see Duckworth, *Vergil* 17–22. I did not mention earlier the fact that the fourth-foot homodyne percentage in *Eclogue* iv is an abnormally low 28.57; in the other *Eclogues* the range is from 32.22 (v) to 53.49 (vi); see Duckworth, *Vergil* 64 (= Table 4); in its homodyne percentage *Eclogue* iv does not imitate Catullus LXIV (a high 60.44).

³⁹ Valerius Flaccus and Statius are thus as consistent in their use of *dsds* as first pattern as were Lucretius, Vergil (*Georgics*, *Aeneid*), and Horace in their preference for *dsss*; in

bello civili as a whole, *dsss* is first with 15.40 per cent, but *dsds* is a close second with 15.37; *dsss* is first in Books IV, VI, X, and tied with *dsds* for first place in II and III, with *dsds* first in the other five books; the first-pattern percentages range from 14.15 (*dsss* in X) to 17.08 (*dsds* in I). In the *Punica*, *dsss* is first with 13.76 per cent and also first in twelve books; in the other five (V, VIII, IX, XII, XIV) *sdss* is first, and the range of the first-pattern percentages is from 11.78 (*dsss* in XI) to 17.60 (*dsss* in VI). When we compare this with the range of *dsds* in Valerius Flaccus (21.08 to 25.98) it is apparent that Silius Italicus has a concentration on one pattern almost half of what we find in the *Argonautica*, by far the lowest of the four Silver Latin epic poets. In other respects also we shall find that Silius is far more interested in variety than the other three poets.

The fact that *sdss* is first in five books of the *Punica* and second in the poem as a whole is also of considerable interest. We have seen that *sdss* is elsewhere the first pattern only in Lucilius, the *Dirae*, Horace (*Epistles* II 1), and the *Halieutica*, wrongly ascribed to Ovid;⁴⁰ in Ennius *sdss* is tied with *dsss* for second place, and it is second in Catullus LXIV, Horace, the *Aetna*, and in later poetry only in Juvenal and (in the fifth century) Paulinus of Pella and Avitus; from Catullus to Avitus, when *sdss* is the second pattern, *dsss* is first, as in the case of Silius Italicus.

The percentages of the first eight patterns have a range of about two points plus or minus the average; I give first the average and then the range in the individual books:

Lucan:	78.61	76.46 (II) to 80.29 (IV)
Valerius Flaccus:	83.35	81.27 (I) to 85.77 (V, VI)
Statius:	74.26	72.32 (VI) to 78.21 (II)
Silius Italicus:	72.64	70.93 (XIV) to 76.99 (V)

As in the case of the first pattern, Valerius Flaccus has much the highest percentages and Silius Italicus the lowest.

When we turn to the eight patterns preferred by the four poets and the distribution of spondees and dactyls, we find that Valerius Flaccus

Ovid's *Metamorphoses*, the first pattern (*ddss*) ranges in the individual books from first to fourth place; the second pattern (*dsss*) ranges from first to fifth; see Duckworth, *Studies* 81.

⁴⁰ See Duckworth, *Halieutica* 760.

and Statius are definitely Ovidian and that Lucan and Silius Italicus follow the Vergilian norm. The order of patterns in Valerius Flaccus and Statius is almost identical (*dsds* first, *ddds* fourth, *dssd* fifth, *sdss* eighth) and the emphasis in both on *dssd*, *ddsd*, and *dsdd* prove the dactylic and Ovidian nature of their hexameters, as does the resultant distribution of fifteen spondees and seventeen dactyls in the first eight patterns. Summers is therefore wrong when he terms the hexameter of Statius "Virgilian rather than Ovidian."⁴¹ Butler, on the other hand, refers to Lucan's "desire to steer clear of the influence of Vergil" and adds: "His affinity to Ovid is greater."⁴² This is certainly not true of Lucan's choice of metrical patterns; seven of his first eight are those of Vergil's *Aeneid*. Silius' first eight patterns are identical with Vergil's, as is his distribution of twenty spondees and twelve dactyls. It is important to note that in no book of the *Punica* is the distribution less than twenty and twelve, in six (II, III, IV, IX, XII, XIII) it is twenty-one and eleven, and in five (I, VI, VII, X, and XIV) it rises to twenty-two spondees and ten dactyls. Actually, therefore, Silius Italicus to this extent is more spondaic than Vergil,⁴³ and approaches the procedure of Ennius.⁴⁴

⁴¹ W. S. Summers, *The Silver Age of Latin Literature* (London 1920) 52.

⁴² H. E. Butler, *Post-Augustan Poetry from Seneca to Juvenal* (Oxford 1909) 123; see also W. E. Heitland in C. E. Haskins (ed.), *M. Annaei Lucani Pharsalia* (London 1887) xcvi-xcvii.

⁴³ The range in the *Aeneid* is from eighteen and fourteen to twenty and twelve; only in *Georgics* IV does Vergil have a distribution of twenty-one and eleven. The consistently spondaic nature of Silius Italicus is important for the controversial passage in *Punica* VIII, 144-223 (eighty-one lines, including 157a), which appears in no manuscript and in no edition prior to the Aldine text of 1523. Duff says (above, note 35) I.xvii: "The source from which these verses are derived is a matter of dispute: some critics believe them to be the work of a forger; others hold that they were written by Silius and that the loss of them was due to some mutilation of S, the original ms. at St. Gall." On the manuscript problem, see W. E. Heitland, "The 'Great Lacuna' in the Eighth Book of Silius Italicus," *JP* 24 (1896) 188-211, who points out (pp. 209-10) that both the language in the passage and the imitations of Vergil are characteristic of Silius Italicus. Metrically, these lines also have the "fingerprints" of Silius; the distribution of spondees and dactyls is twenty or nineteen, and twelve or thirteen (total Silius twenty and twelve); *dsss* is first, *ssss* third, and *ssds* tied (with *ddds*) for fifth place (total Silius, *dsss* first, *ssss* third, and *ssds* sixth). The pattern percentages for the disputed passage are slightly higher: first pattern 17.28; first four, 54.32; first eight, 76.54; the corresponding percentages in the *Punica* as a whole are 13.04, 43.90, and 72.64. We shall see below that Silius has more variety than the other epic poets of the Silver Age, e.g. number of patterns per sixteen-line unit, 9.5; repeats once every 11.8 lines; repeats

Although both Valerius Flaccus and Statius are Ovidian in their preference for dactyls, their metrical techniques differ in many respects, with Valerius the most repetitious and monotonous of the four Silver Latin epic poets. Likewise, we find many differences between Lucan and Silius Italicus, and Silius is by far the most painstaking metrician of the four in his desire for variety and avoidance of repetition. The following statistics will make these distinctions clear:

	Verg. <i>Aen.</i>	Ovid <i>Metam.</i>	Lucan	Val. Fl.	Stat. <i>Theb.</i>	Sil. Ital.
Patterns per 16-line unit:	9.4	8.9	8.9	8.4	9.2	9.5
% units with 8 or more:	92.46	86.35	87.43	74.86	90.20	93.37
Repeat clusters, 1 every x lines:	200.1	112.5	82.7	44.7	101.1	187.6
% fourth-foot homodyne:	37.78	50.0	37.08	31.70	40.18	42.95
Repeats— 1 every x lines:	12.4	10.7	11.4	8.6	12.1	11.8
% of change:	44.49	46.91	39.09	30.91	40.63	46.09
Differs from homodyne %:	+6.71	-3.09	+2.01	-0.79	+0.45	+3.14
R plus NR— 1 every x lines:	4.6	4.1	4.2	3.5	4.3	4.6
% of change:	45.83	46.19	35.56	32.20	39.89	46.12
Differs from homodyne %:	+8.05	-3.81	-1.52	+0.50	-0.29	+3.17

plus near repeats once every 4.6 lines; one opposite every 22.3 lines. The corresponding figures for VIII 144-223 show even less repetition: 10.0, 16.2, 5.1, and 20.3. Statistics based on short passages are often misleading, but the fact that there are so many similarities between the passage in question and Silius' statistics as a whole argues strongly for the authenticity of *Punica* VIII 144-223.

⁴⁴ The influence of Vergil on Silius Italicus was of course paramount; Duff (above, note 35) I.xi, says: "Silius owes much more to Virgil's *Aeneid* than to any other source;" see J. Groesst, *Qua tenus Silius Italicus a Vergilio pendere videatur* (Diss. Halle, Wiesbaden 1887); M. von Albrecht, *Silius Italicus: Freiheit und Gebundenheit römischer Epik* (Amsterdam 1964) 166-84; von Albrecht says (p. 189): "Kein anderes Epos kann man mit grösseren Recht den Versuch einer Fortsetzung der *Aeneis* im geschichtlichen Raum nennen als die *Punica*." Silius, however, is related to Ennius not only metrically but in various other respects; see L. B. Woodruff, "Reminiscences of Ennius in Silius Italicus," *Univ. of Mich. Stud.* 4 (1910) 355-424; C. W. Mendell, "Silius the Reactionary," *Philol. Quart.* 3 (1924) 92-106; M. V. T. Wallace, "The Architecture of the *Punica*: a Hypothesis," *CP* 53 (1958) 99, who says: "The conclusion is therefore inescapable that the *Annales* of Ennius served as a model for Silius in the composition of the *Punica*, and possibly as a historical source." There are also numerous Ovidian reminiscences in the *Punica*; see R. T. Bruère, "Color Ovidianus in Silius *Punica* 1-7," in N. I. Herescu (ed.), *Ovidiana: Recherches sur Ovide* (Paris 1958) 475-99; "Color Ovidianus in Silius *Punica* 8-17," *CP* 54 (1959) 228-45.

	Verg. <i>Aen.</i>	Ovid <i>Metam.</i>	Lucan	Val. Fl.	Stat. <i>Theb.</i>	Sil. Ital.
Favorite repeat:	<i>ds</i> <i>ss</i>	<i>ds</i> <i>ss</i>	<i>ds</i> <i>ss</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ss</i>
R, % total R:	22.18	18.08	26.74	46.37	30.88	19.71
% total pattern:	12.40	13.47	15.30	23.72	15.67	12.82
% of change:	45.14	51.49	48.15	15.33	25.10	44.61
Differs from homodyne %:	+7.36	+1.49	+11.07	-16.37	-15.08	+1.66
R plus NR—						
% total R + NR:	23.15	17.21	25.26	42.86	27.75	19.30
% total pattern:	34.66	33.60	39.11	53.36	39.72	32.37
% of change:	49.28	52.28	44.31	17.33	28.16	44.47
Differs from homodyne %:	+11.50	+2.28	+7.23	-14.37	-12.02	+1.52
Opposites, one every α lines:	23.1	29.3	22.0	26.9	21.8	22.3
Most frequent:	<i>sdsd</i> — <i>dsds</i>	<i>sdsd</i> — <i>dsds</i>	<i>sdsd</i> — <i>dsds</i>	<i>sdsd</i> — <i>dsds</i>	<i>sdsd</i> — <i>dsds</i>	<i>sdsd</i> — <i>dsds</i>
% total opposites:	16.04	22.11	26.92	33.01	20.40	21.90
Reverses, one every α lines:	38.9	39.3	40.7	48.6	46.9	29.0
Most frequent:	<i>ssds</i> — <i>ds</i> <i>ss</i>	<i>dsdd</i> — <i>ddsd</i>	<i>ssds</i> — <i>ds</i> <i>ss</i>	<i>dsdd</i> — <i>ddsd</i>	<i>ddsd</i> — <i>dsdd</i>	<i>ssds</i> — <i>ds</i> <i>ss</i>
% total reverses:	40.08	71.05	70.05	60.0	38.16	55.71

Many have commented on the Ovidian nature of the meter of Valerius Flaccus.⁴⁵ The fact not generally realized is that he goes far beyond Ovid in his repetition of patterns and his complete disregard of variety. I shall illustrate from several of the categories listed above and compare not only his averages but also the variation in the individual books with the corresponding figures for Ovid and the other three epic poets. The differences between Valerius and Statius, the other "Ovidian" poet, should be noted, and also the extent to which Silius Italicus reveals a greater interest in many aspects of variety than do the other three.

⁴⁵ E.g. Butler (above, note 42) 192; Mozley (above, note 35) xvii-xviii. Dimsdale (above, note 27) 449, says that Valerius "has fallen under the influence of the smoother and more imitable Ovid, to whom, indeed, in his preference of the dactyl, Valerius approaches more nearly than any other Latin poet." This is wrong; it is Calpurnius Siculus, both in his *Eclogues* and in the *Laus Pisonis*, who is the most Ovidian in his preference for dactyls.

1. Patterns per sixteen-line unit:

	Average	Range
Ovid:	8.9	8.6 (xiv) to 9.1 (vi)
Lucan:	8.9	8.7 (ix) to 9.3 (ii)
Valerius:	8.4	8.1 (vi) to 8.7 (i)
Statius:	9.2	8.9 (viii) to 9.4 (iv, vi, xi, xii)
Silius:	9.5	8.9 (v) to 10.0 (iii)

Valerius' low average of patterns per sixteen-line unit, 8.4, is surpassed only by 7.0 in Catullus LXIV, 7.4 in Vergil's Fourth *Eclogue*, and 8.3 in Lucretius v and vi; in later poetry, only by 8.1 in Claudian, *In Eutropium* I and II, 8.1 in Corippus, *Johannis* I, and 7.6 in Cyprian.

2. One repeat cluster every *x* lines:

	Average	Range
Ovid:	112.5	80.0 (iv) to 208.0 (xii)
Lucan:	82.7	68.5 (I, iv) to 135.5 (v)
Valerius:	44.7	38.9 (iii) to 49.9 (i)
Statius:	101.1	69.6 (viii) to 144.3 (iii)
Silius:	187.6	93.9 (ix) to 654.0 (xvii)

Repeat clusters (passages in which the same metrical pattern appears six or more times in sixteen or fewer lines) are abnormally frequent in Valerius, 125 instances, an average of one every 44.7 lines; this is two and one-half times as often as in Ovid's *Metamorphoses*, and is surpassed in all Latin hexameter poetry only by Catullus LXIV, one every 29.0 lines; Lucretius, 39.1 (v) and 43.3 (iii);⁴⁶ and, in the late period, Avitus (I. *De mundo initio*) 40.6; and Corippus, *Johannis* I, 34.1.

3. Percentage of fourth-foot homodyne:

	Average	Range
Ovid:	50.0	45.28 (viii) to 53.29 (xiv)
Lucan:	37.08	32.31 (v) to 42.59 (i)
Valerius:	31.70	27.10 (viii) to 37.27 (vii)
Statius:	40.18	36.27 (ii) to 44.43 (vi)
Silius:	42.95	40.58 (xv) to 46.11 (i)

Valerius' average of 31.70 per cent for fourth-foot homodyne is lower than had appeared earlier (cf. the *Culex*, 36.76; the *Moretum*, 33.33;

⁴⁶ The average for the *De rerum natura* is one repeat cluster every 49.2 lines, with a range from 39.1 (v) to 68.5 (ii).

Vergil's *Georgics*, 36.08, *Aeneid*, 37.78; the *Aetna*, 33.18)⁴⁷ and is surpassed by only three later poets: Nemesianus, *Cynegetica*, 31.69; Claudian, *Panegyricus de quarto consulatu Honorii Augusti*, 31.45, and *De raptu Proserpinae* I, 29.02, and II, 30.46; Corippus, *Johannis* VIII, 29.74; and *dsds* is likewise the most frequent pattern in these three poets. Mozley says of Valerius, "some lines follow each other with monotonous sameness, and there is a fondness for particular pauses, such as the 2nd and 4th caesura (the latter is a special favourite with the Silver Latin writer)."⁴⁸ Fourth-foot heterodyne and hephthemimeral caesura go hand in hand and seem especially characteristic of *dsds*; too much *dsds* combined with heterodyne, as in Valerius, produces a jerky effect,⁴⁹ and Statius, whose first pattern is also *dsds* (but 16.24 per cent; Valerius, 22.65), avoids the excessive emphasis on heterodyne which mars the verse of Valerius. Statius has been called "far less monotonous than Ovid, Lucan, or Valerius."⁵⁰

4. One repeat every x lines:

	Average	Range
Ovid:	10.7	9.1 (III) to 12.7 (I)
Lucan:	11.4	10.2 (II) to 13.6 (X)
Valerius:	8.6	7.6 (VIII) to 9.8 (II)
Statius:	12.1	10.2 (V) to 14.4 (III, XI)
Silius:	11.8	9.5 (VIII) to 14.9 (XVII)

Again Valerius Flaccus goes to extremes. Such a high frequency of repeated patterns in adjacent lines had not appeared since the Republican period (Lucretius, 8.8;⁵¹ Catullus LXIV, 7.0), and would not be seen again until the late period, in Paulinus of Périgueux, *De vita*

⁴⁷ See Duckworth, *Vergil* 43; *Horace* 81; *Studies* 76, 84, 89, 104. The homodyne percentages in Vergil, *Eclogue* IV and *Aeneid* I, are unusually low, 28.57 and 30.91 respectively.

⁴⁸ Mozley (above, note 35) xviii. Cf. W. C. Summers, *A Study of the Argonautica of Valerius Flaccus* (Cambridge 1894) 50, who says that this tripartite hexameter "is used to excess—a fault due to Ovidian influence." But we should not blame Ovid for the excesses of Valerius.

⁴⁹ W. B. Anderson, "Lucan" (*OCD*) 514, says that the "hephthemimeral jerk" is a conspicuous feature of Lucan's verse. It is far more characteristic of Valerius Flaccus.

⁵⁰ Butler (above, note 42) 226.

⁵¹ Repeats are especially numerous in Books III, V, and VI of the *De rerum natura*, one every 7.5, 8.0, and 7.6 lines respectively.

Martini 1, one every 8.4 lines; Cyprian, one every 7.9 lines; and Corippus, *Johannis* 1, one every 7.6 lines. Statius avoids repeats even more than Lucan and Silius.

5. Most frequent repeat, percentage of change in fourth-foot texture:

	Pattern	Average	Range
Ovid:	<i>dsss</i>	51.49	31.25 (ix) to 81.82 (vi)
Lucan:	<i>dsss</i>	48.15	31.82 (iv) to 75.0 (iii)
Valerius:	<i>dsds</i>	15.33	9.62 (iii) to 22.22 (ii)
Statius:	<i>dsds</i>	25.10	11.11 (iii) to 43.33 (viii)
Silius:	<i>dsss</i>	44.61	15.79 (xiii) to 88.89 (xvii)

When the same metrical pattern occurs in two or more verses, the change in fourth-foot texture (from homodyne to heterodyne, or from heterodyne to homodyne) counteracts the monotony inherent in the repetition of the same metrical patterns.⁵² If the percentages of such change run higher than the percentages of fourth-foot homodyne, we have an indication that the poet is deliberately attempting to provide additional variety (e.g. Vergil's *Aeneid*, repeats, +6.71; repeats plus near repeats, +8.05; most frequent repeat, +7.36; Lucan, repeats, +2.01; favorite repeat, +11.07). When Valerius Flaccus combines a low fourth-foot homodyne percentage such as 31.70 and a high incidence of *dsds* repeats (46.37 per cent of the total repeats), we should expect some variety in fourth-foot texture, but what do we find? A percentage of change of only 15.33 (as low as 9.62 in Book iii), and this is 16.37 per cent below his fourth-foot homodyne percentage. Nothing like this low percentage of shift in fourth-foot texture had appeared earlier. In Catullus LXIV the percentage of change differs from the homodyne percentage as follows: repeats, -25.25; repeats plus near repeats, -26.84; most frequent repeat, -22.94. But Catullus has a fourth-foot homodyne percentage of 60.44, the highest in Latin poetry with the exception of Calpurnius Siculus, *Eclogues*, 61.08. The percentage of change in Catullus is therefore as follows: repeats, 35.19; repeats plus near repeats, 33.60, favorite repeat, 37.50; and this last is more than twice the percentage of change in Valerius' favorite repeat. Statius' percentage of change in his most frequent

⁵² See Duckworth, *Vergil* 45-47.

repeat (likewise *dsds*) is also low, but higher than that of Valerius, with the exception of the *Silvae* (average, 13.33). Among the later poets Claudian 1 has a percentage of change (in the most frequent repeat) of 13.79,⁵³ Arator 10.0, and Cyprian an amazingly low 2.63.

Other categories could be added, but the comments given above prove conclusively the excessive monotony of Valerius Flaccus and show how, in most respects, the other "Ovidian" poet, Statius, avoided the same pitfalls. Actually, Valerius is unique among the hexameter poets of his day for the sameness of his verses and his complete lack of regard for the various types of variety which could have counteracted his too great concentration on the same metrical patterns, especially *dsds*. To illustrate, I give the repeat cluster in iv 196-203:

taurus aquis qui primus init spernitque tumentem	(<i>dsds</i>)
pandit iter, mox omne pecus formidine pulsa	(<i>dsds</i>)
pone subit, iamque et mediis praecedat ab undis.	(<i>dsds</i>)
At procul e silvis sese gregibusque ferebat	(<i>dssd</i>)
saevus in antra gigans; quem nec sua turba tuendo	(<i>ddsd</i>)
it taciti secreta metus. mortalia nusquam	(<i>dsds</i>)
signa manent; instar scopuli, qui montibus altis	(<i>dsds</i>)
summus abest longeque iugo stat solus ab omni.	(<i>dsds</i>)

In the passage quoted above, *dsds* appears six times in eight verses,⁵⁴ with no change in fourth-foot texture (i.e. all heterodyne), with the same second and fourth foot caesuras, and almost the same word-divisions within the feet (cf. the beginnings: *taurus aquis*, *pandit iter*, *pone subit*, *signa manent*, *summus abest*). This is typical of Valerius' handling of *dsds*. I said above that repeat clusters are abnormally numerous in the *Argonautica*: 125 instances, an average of one every 44.7 lines; 101 clusters, or 80.80 per cent of the total, are *dsds*, and this

⁵³ Claudian 1 includes the panegyrics for the fourth and sixth consulships of Honorius and the two invectives *In Eutropium*. The percentage of change in *In Eutropium* II is 9.09.

⁵⁴ For clusters of the same pattern in nine or ten lines, see *Argonautica* I 546-55 (*dsds*, seven instances); III 511-20 (*dsds*); V 26-35 (*ddds*), 679-87 (*dsds*); VI 45-54 (*dsds*); there is almost no shift in fourth-foot texture, from heterodyne (t) to homodyne (m); in III 708-21, *dsds* appears nine times in fourteen consecutive verses, with fourth-foot texture as follows: tt . . ttm . tt . . tt. In the other three poets similar clusters are also found in very short passages, but there is more variation in the fourth foot: e.g. Lucan I 571-77 (six instances of *dsss* in seven lines: mtm . mtt), Silius II 334-44 (seven instances of *ddss* in eleven lines: m . . t . mt . mtt).

accounts for the jerkiness and monotony of so much of his hexameter verse.

Of the four poets under consideration here, Silius Italicus stands at the opposite extreme and reveals a regard for variety unparalleled by his contemporaries. More spondaic than Vergil in his first eight patterns, he resembles his master again and again in the categories listed above; I cite the most striking (*V* = Vergil's *Aeneid*): patterns per sixteen-line unit, 9.5 (*V* 9.4); percentage of units with eight or more patterns, 93.37 (*V* 92.46); repeat clusters, one every 187.6 lines (*V* 200.1); percentage of fourth-foot change in repeats, 46.09 (*V* 44.49); increase over homodyne percentage, +3.14 (*V* +6.71);⁵⁵ repeats plus near repeats, one every 4.6 lines (*V* 4.6); percentage of change in repeats plus near repeats, 46.12 (*V* 45.83); increase over homodyne percentage, +3.17 (*V* +8.05); most frequent repeat, percentage of total repeats, 19.71 (*V* 22.18),⁵⁶ and percentage of total pattern, 12.82 (*V* 12.40); percentage of fourth-foot change in the most frequent repeat, 44.61 (*V* 45.14); combination of the two patterns most often repeated: repeats, percentage of total repeats, 37.58 (*V* 40.94); repeats plus near repeats, percentage of total repeats plus near repeats, 36.84 (*V* 38.82);⁵⁷ opposites, one every 22.3 lines (*V* 23.1). Reverse patterns occur once every 29.0 lines (*V* 38.9), and in using these to counteract the monotony of repeated patterns, Silius resembles Horace, where reverse patterns appear once every 29.4 lines.⁵⁸

The metrical technique displayed in the *Punica* is identical with that in the *Aeneid* in far too many respects to be the result of accident. Silius must have studied Vergil's metrics with extreme care to have been able to imitate him so closely. This is certainly not the case of

⁵⁵ The smaller increase here and in the repeats plus near repeats results from Silius' higher fourth-foot homodyne percentage, 42.95 (*V* 37.78). But his average increase over the homodyne percentages is conspicuously greater than that in Lucan, Valerius, and Statius.

⁵⁶ Cf. Lucan, 26.74; Valerius, 46.37; Statius, 30.88.

⁵⁷ Cf. with Silius (37.58, 36.84) these corresponding percentages: Lucan, 51.24, 77.23; Valerius, 56.88, 54.16; Statius, 50.01, 47.30; in their concentration on two repeated patterns, these three writers follow the practice of the Republican poets, while Silius is in the tradition of Vergil, Horace, and Ovid; see Duckworth, *Studies* 75-76, 83.

⁵⁸ See Duckworth, *Horace* 83. The other three epic poets are much less interested in reverse patterns, which appear once every *x* lines as follows: Lucan, 40.7; Valerius, 48.6; Statius, 46.9.

the other three epic poets, who reveal no such close adherence to Vergil, however much they may be indebted to him for language, style, and poetic structure.⁵⁹

The *Punica* has been much maligned in the handbooks of Latin literature, where we usually read that it is not only the longest but the worst of Latin epics.⁶⁰ Not all writers have agreed; almost a century ago Simcox said that Silius "is always dignified and often pathetic; he comes nearer—much nearer—to the noble grace of Vergil than any other Roman poet."⁶¹ Perhaps, as Huxley maintains, "the time is ripe for a revaluation of his poetic gifts."⁶² I agree with Duff that "scholars would think better of the poem if they would condescend to read it,"⁶³ and I am happy to find the *Punica* called "the most

⁵⁹ On the parallelism of the two halves of the *Aeneid*, with numerous similarities and contrasts between the corresponding books (I and VII, II and VIII, III and IX, etc.), see G. E. Duckworth, "The Architecture of the *Aeneid*," *AJP* 75 (1954) 1-15; *Structural Patterns and Proportions in Vergil's Aeneid* (Ann Arbor 1962) 2-10. This same division into halves with similarities and contrasts appears both in the *Argonautica* and the *Thebaid*; on the former, see E. Frank, "Structure of Valerius' *Argonautica*," *CB* 43 (1966-67) 38-39; cf. W. Schetter, "Die Buchzahl der *Argonautica* des Valerius Flaccus," *Philologus* 103 (1959) 297-308. It is therefore wrong to maintain, as do many scholars, e.g. Butler (above, note 42) 182, Dimsdale (above, note 27) 447, and J. H. Mozley, "Virgil and the Silver Latin Epic," *PVS* 3 (1963-64) 14, that Valerius had probably intended his epic, like the *Aeneid*, to consist of twelve books. On the parallelism of the two halves of the *Thebaid*, see E. Frank, "La composizione della Tebaide di Stazio," *Rendiconti, Istituto Lombardo* 99 (1965) 309-18. For the indebtedness of Statius to Vergil in general, see L. Legras, *Étude sur la Thébaïde de Stace* (Paris 1905) 30-144; Legras says (p. 348) that Statius "sait Virgile par coeur, et il l'imité partout, dans la composition, les caractères, les ornements et le style." On the structure of the *Punica*, see Wallace (above, note 44) 99-103, who suggests a possible arrangement with IX the central book and eight books balanced on each side; but Wallace (p. 102) agrees with earlier scholars that Silius probably intended an epic in eighteen books (to parallel Ennius' *Annales*), with a division into two corresponding halves in the Vergilian manner.

⁶⁰ E.g. Butler (above, note 42) 236; Dimsdale (above, note 27) 456.

⁶¹ G. A. Simcox, *A History of Latin Literature from Ennius to Boethius* (New York 1883) 2.64.

⁶² H. H. Huxley, in M. Platnauer (ed.), *Fifty Years of Classical Scholarship* (Oxford 1954) 424. He adds: "the better passages of the *Punica* compare favourably in respect of strength, simplicity, and sentiment with much that a student accepts without question and reads without initial bias derived from prejudiced and sometimes misinformed sources."

⁶³ Duff (above, note 35) I.xiii. He says also that "the versification is in general pleasing, and much less monotonous than that of Lucan." Cf. Heitland (above, note 42) xciv: "The general effect of Lucan's verse is one of steady monotony."

readable of the post-Augustan Latin epic poems.”⁶⁴ Certainly, everything that I have discovered about Silius’ metrical practices and his amazing resemblances to Vergil’s technique supports the view that, as in many other respects such as simplicity, straightforwardness, and freedom from rhetoric, Silius is to be preferred to the other three epic poets of the Silver Age.⁶⁵

There remain three interesting problems to be considered before we leave the epic poets.

1. Petronius in his *Bellum Civile* reworks the theme of Lucan;⁶⁶ these verses on the civil war of Caesar and Pompey have been viewed as a criticism or parody of the *De bello civili*.⁶⁷ Is Petronius metrically similar to Lucan, or does he subtly criticize his technique by preferring different patterns and percentages?

2. Does Statius in the *Achilleid* (not previously examined) reveal the same metrical technique as in the *Thebaid*? And what about the *Silvae*? In these poems Statius used the hexameter for themes usually presented in elegy and epigram. Are the procedures of Statius here the same, or do they differ from what we find in the *Thebaid* and the *Achilleid*? Duff states that the hexameters of the *Silvae* attain “a facility suitable to the lighter and more sportive subjects in the collection.”⁶⁸ This implies a somewhat different handling of the hexameter from that in his epic poetry.

3. The *Ilias Latina* is described as “a meagre epitome devoid of

⁶⁴ Bruère in *CP* (above, note 44) 244.

⁶⁵ Cf. M. V. T. Wallace, “The Epic Technique of Silius Italicus,” *HSCP* 62 (1957) 161: “Silius’ style . . . is not characteristic of the times in which he wrote. He is markedly different from Lucan and Statius. In his simplicity and good taste he is an anachronism, closer to Virgil than to his contemporaries”; so Mendell (above, note 44) 106: “In an age of artificial rhetoric when epigram was at a premium and the purple patch held supremacy as perhaps never before or since, Silius . . . dared to utter an impressive protest, pointing the audience of his own day back to national models well nigh forgotten but greater than the brilliant failures which that audience was every day applauding.”

⁶⁶ Only Books I–III of Lucan’s epic were published during the poet’s lifetime; see K. F. C. Rose, “Problems of Chronology in Lucan’s Career,” *TAPA* 97 (1966) 379–96. Petronius also echoes passages from IV–X; his knowledge of these later books could well have come from private recitations, much in vogue at that time, before Lucan’s death; cf. F. T. Baldwin, *The Bellum Civile of Petronius* (New York 1911) 27–32.

⁶⁷ See Simcox (above, note 61) 99; Butler (above, note 42) 103; Baldwin (above, note 66) 11–12. S. Gaselee, “Petronius Arbiter” (*OCD*) 672, calls the poem “an enlightened and penetrating criticism of Lucan’s treatment of the same theme.”

⁶⁸ Duff (above, note 30) 396.

artistic merit, characterized by free and uneven treatment, a straightforward style thickly embellished with Virgilian and Ovidian echoes, and careful versification."⁶⁹ On the basis of an acrostic signature at the beginning and end of the poem which reads (with minor emendations) ITALICUS SCRIPSIT,⁷⁰ the poem has been considered a youthful work of Silius Italicus,⁷¹ or the composition of Baebius Italicus, mentioned in a late manuscript (fifteenth or sixteenth century) as the author.⁷² Is it not probable that the *Ilias Latina*, praised for its "careful versification," is actually by Silius Italicus, the poet who likewise is noted for careful versification and who, as we have seen, is closer metrically to Vergil than any other epic poet of the Silver Age?⁷³

In the following list of the favorite eight patterns and the resultant percentages, I shall compare (1) Lucan and Petronius, (2) Statius' *Thebaid* with the *Achilleid* and the *Silvae*, and (3) the *Ilias Latina* with the *Punica*.⁷⁴ (Table on p. 102.)

1. Petronius (=P) does not follow Lucan (=L) in his choice of metrical patterns; the differences are numerous: first pattern, *P* *ddss* (as in Ovid), *L* *ds**ss*, with *ddss* third; *dsds*, second in *L*, is sixth in *P*, and such a low position for *dsds* is most unusual;⁷⁵ *P* favors *sdsd* (tied with *ds**sd* for fourth) and *ssss* (eighth), neither of which appears in the first

⁶⁹ A. Hudson-Williams, "Ilias Latina" (OCD) 449; Duff (above, note 30) 276, says that the versification possesses "a considerable share of easy grace."

⁷⁰ See R. Doering, *Ueber den Homerus Latinus* (Progr. Strassburg 1884) 3-5; Butler (above, note 42) 162-63; Duff (above, note 30) 275; J. W. Zarker, *Studies in the Carmina Latina Epigraphica* (Ann Arbor 1958 [=Princeton University dissertation, microfilmed]) 32-34.

⁷¹ So Doering (above, note 73), who discusses similarity of sources, language, and meter; see pp. 39-46 for numerous verbal parallels between the *Ilias Latina* and the *Punica*. See also M. E. Cosenza, *Petrarch's Letters to Classical Authors* (Chicago 1910) 184-85; Zarker (above, note 70) 33.

⁷² Hudson-Williams (above, note 69) 449, says: "The ascription of the work . . . to Silius Italicus on the ground of two acrostics is untenable; but the author may be a Baebius Italicus." Cf. also D. J. Campbell, "Silius Italicus" (OCD) 838.

⁷³ Butler (above, note 42) 163, however, says of the *Ilias Latina* that "the style of the verse is very different from that of the *Punica*;" so Duff (above, note 30) 275.

⁷⁴ My statistics are based on K. Müller, *Petronii Arbitri Satyricon* (München 1961) 141-53, and, for the *Ilias Latina*, A. Baehrens, *Poetae Latini Minores* 3 (Leipzig 1881). For the *Achilleid* and the *Silvae* of Statius, see above, note 35. For the totals of all sixteen patterns, see below, Table 2.

⁷⁵ In Ennius *dsds* is eighth, in Cicero's *Aratea* it is tied for seventh place, and it appears again in sixth position only in Avitus in the fifth century. Usually it ranges from first to fourth place.

	Lucan	Petr.	Theb.	Statius Ach.	Silv.	Ilias Lat.	Sil. It.
<i>dsss</i>	1	2	2	2	2	1	1
<i>ddss</i>	3	1	3	4	3	2	5
<i>dsds</i>	2	6	1	1	1	4	4
<i>sdss</i>	4	3	8			3	2
<i>ssss</i>		8		15		8-9	3
<i>ddds</i>	6		4	3	4	6	8
<i>ssds</i>	5	7			8	8-9	6
<i>sdds</i>	8			7-8			7
<i>dssd</i>	7	4-5	5	5	5	7	
<i>ddsd</i>			7	6	6	5	
<i>sdsd</i>		4-5					
<i>dsdd</i>			6	7-8	7		
<i>sssd</i>			16	16	16		
<i>ssdd</i>		16				15	
<i>dddd</i>	16						16
<i>sddd</i>	15	15	15		15	16	15
% 1st pattern:	15.40	12.11	16.24	17.11	16.47	13.76	13.04
% 1st four:	52.28	42.91	48.90	46.17	47.29	43.64	43.90
% 1st eight:	78.61	70.93	74.26	71.48	73.64	69.92	72.64
First eight—							
Spondees	18	21	15	14	15	18-17	20
Dactyls	14	11	17	18	17	14-15	12
4th-foot sp.:	7	6	5	5	5	6	8
1st-foot da.:	5	4	7	7	7	6	4

eight patterns of *L* (*sdsd*, tenth; *ssss*, eleventh). The preference for *sdsd* is unique; *sdsd* is tied for sixth position in Grattius and is seventh in Germanicus Caesar,⁷⁶ but nowhere, except in Petronius, does it appear in fourth place.

The percentage of the first pattern in *P* is 12.11, in *L* 15.40; again a striking difference, and the percentage in *P* is lower than what we find in the Republican poets, Vergil, the *Appendix Vergiliana*, Ovid, and the post-Vergilian didactic poets. Only Horace (*Epistles* II, 10.82; total *Epistles*, 11.85, with *Epist.* II 1, 11.85 and *Ars Poetica*, 10.32) has a lower first-pattern percentage.⁷⁷ The percentage of the first eight patterns

⁷⁶ It is also seventh in Juvenal, Ausonius' *Mosella* (but tied for fifteenth place in his *Cento Nuptialis*), and Arator.

⁷⁷ The percentage in Petronius is also lower than in any poet in the Late Empire, with the exception of the amazingly low percentage of 9.38 in Ausonius' *Mosella* and 12.05 in the *Psychomachia* of Prudentius (11.31 in the *Psychomachia* and the *Hamartigenia* combined).

is 70.93 in *P*, 78.61 in *L*, and again *P* is surprisingly low; among earlier poets we find the following lower percentages only: Ennius, 65.35; Vergil, *Eclogues*, 69.09; Horace, 67.97 (*Ars Poetica*, 65.89). The percentage of the first eight patterns in the *Ilias Latina*, to be discussed below, is 69.92. Several of the fourth and fifth century poets are likewise lower.⁷⁸

The distribution of spondees and dactyls in *P* is twenty-one and eleven, in *L* eighteen and fourteen. This high proportion of spondees in *P* is most unusual; after Ennius and Lucilius, we find it only in Horace (*Satires* I, *Epistles* I and II), Germanicus Caesar, and the *Aetna*, and later only in Silius Italicus (eleven books), Juvenal, Juvencus, Paulinus of Périgueux, and Avitus.

Does Petronius in his parody of Lucan criticize him for his metrical practices? Does he show by his own handling of patterns and percentages what he favors for epic poetry? One thing is certain: he desires greater variety (this is shown by his percentages for the first pattern and the first eight patterns) and also a more spondaic meter (this is proved by the distribution of twenty-one spondees and eleven dactyls in the first eight patterns).

2. When we turn to the metrical patterns used by Statius in his three works (*Thebaid*, *Achilleid*, and *Silvae*), we discover an amazing similarity: *dsds* and *dsds*, first and second respectively; *ddss* and *ddds* in third or fourth place; *dssd*, fifth in all three poems; *ddsd* and *dsdd* in sixth or seventh position; and *sssd* sixteenth in all three. The percentages of the first, first four, and first eight patterns are almost identical, with the *Silvae* in each case between the two epics;⁷⁹ in the first eight patterns the number of fourth-foot spondees (five) and first-foot dactyls (seven) is the same; in the distribution of spondees and dactyls in the

⁷⁸ The statistics for the late poets will be given below; the eight-pattern percentages lower than that in Petronius are the following: Avienus, *Aratea*, 68.61; Ausonius, *Mosella*, 62.50; Prudentius, *Psychomachia*, 70.87; Paulinus of Pella, 69.39; Paulinus of Nola, 69.96; Prosper (?), *De providentia Dei*, 70.48. On the other hand, in some of the late poets the first eight patterns have a percentage between 80 and 85; these include Claudian, Avitus, and Corippus; Cyprian's percentage is 91.06.

⁷⁹ In the individual poems of the *Silvae*, the percentage range for the first pattern is from 10.81 (for each of two patterns, *ddds* and *dsdd*, in II 4, a poem of 37 verses) to 26.32 (V 4, the famous poem to Somnus in 19 verses); for the first eight patterns, from 69.35 (III 1) to 100.0 (again V 4; next is V 5 with 86.21 per cent).

first eight patterns, the *Achilleid* is slightly more dactylic—fourteen spondees only, with fifteen in the *Thebaid* and the *Silvae*. But essentially, in his patterns and percentages, Statius shows no important variations.

3. The *Illias Latina* (= *IL*) resembles the *Punica* of Silius Italicus (= *SI*) in certain respects: the first pattern (*dsss*) and the fourth (*dsds*) are the same, but *ddsd* (fifth in *IL*) and *dssd* (seventh in *IL*) do not appear among the first eight patterns of *SI*. Lucan (= *L*) and *IL* are also similar: first pattern *dsss*, sixth *ddds*, seventh *dssd*, and the distribution of spondees and dactyls in *IL* (eighteen or seventeen spondees, fourteen or fifteen dactyls) is that of *L* (eighteen and fourteen) rather than that of *SI* (twenty and twelve). But in the percentages of the first, first four, and first eight patterns, *IL* is much closer to *SI* than to *L*, as follows:

	<i>L</i>	<i>IL</i>	<i>SI</i>
% 1st pattern:	15.40	13.76	13.04
% 1st four patterns:	52.28	43.64	43.90
% 1st eight patterns:	78.61	69.92	72.64

If the *Illias Latina* is the work of Silius Italicus, written in the age of Nero, it is not surprising that we should have the similarities to Lucan mentioned above. Also, the *Illias Latina*, if written by Silius (born 26 A.D.) after the publication of Lucan's *De bello civili* I–III (62–63 A.D.), can hardly be called a “youthful work” since Silius would by then be more than thirty-five years old.

More light will be thrown on these three problems by the following statistics on variety and repetition:

	Lucan	Petr.	<i>Theb.</i>	Statius <i>Ach.</i>	<i>Silv.</i>	<i>Illias</i> <i>Lat.</i>	<i>Sil. It.</i>
Patterns per 16-line unit:	8.9	9.3	9.2	9.5	9.4	9.2	9.5
% units with 8 or more:	87.43	100.0	90.20	95.65	90.21	90.77	93.37
Repeat clusters, 1 every x lines:	82.7	144.5	101.1	160.3	150.7	95.8	187.6
% fourth-foot homodyne:	37.08	52.07	40.18	39.84	38.41	45.45	42.95
Repeats— 1 every x lines:	11.4	14.5	12.1	11.2	12.2	11.3	11.8

	Lucan	Petr.	Theb.	Statius Ach.	Silv.	Ilias Lat.	Sil. It.
% of change:	39.09	25.0	40.63	41.0	32.47	44.09	46.09
Differs from							
homodyne %:	+2.01	-27.07	+0.45	+1.16	-5.94	-1.34	+3.14
R plus NR—							
1 every x lines:	4.2	5.2	4.3	4.5	4.4	4.7	4.6
% of change:	35.56	42.86	39.89	37.65	35.04	43.75	46.12
Differs from							
homodyne %:	-1.52	-9.21	-0.29	-2.19	-3.37	-1.70	+3.17
Favorite repeat:	<i>ds</i> <i>ss</i>	<i>dd</i> <i>ss</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ss</i>	<i>ds</i> <i>ss</i>
R, % total R:	26.74	30.0	30.88	32.0	33.21	21.51	19.71
% total pattern:	15.30	17.14	15.67	16.67	16.48	13.79	12.82
% of change:	48.15	16.67	25.10	31.28	13.33	40.0	44.61
Differs from							
homodyne %:	+11.07	-35.40	-15.08	-8.56	-25.08	-5.45	+1.66
R plus NR—							
% total R + NR:	25.26	23.25	27.75	33.60	28.08	21.43	19.30
% total pattern:	39.11	37.14	39.72	43.23	39.19	33.10	32.37
% of change:	44.31	23.08	28.16	26.51	18.79	45.83	44.47
Differs from							
homodyne %:	+7.23	-28.99	-12.02	-13.33	-19.62	+0.38	+1.52
Opposites, one							
every x lines:	22.0	14.5	21.8	16.7	20.0	17.9	22.3
Most frequent:	<i>sd</i> <i>sd</i> —	<i>ds</i> <i>ds</i> —	<i>sd</i> <i>sd</i> —	<i>sd</i> <i>sd</i> —	<i>sd</i> <i>sd</i> —	<i>ss</i> <i>ds</i> —	<i>sd</i> <i>sd</i> —
	<i>ds</i> <i>ds</i>	<i>sd</i> <i>sd</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ds</i>	<i>ds</i> <i>ds</i>	<i>dd</i> <i>sd</i>	<i>ds</i> <i>ds</i>
% total opposites:	26.92	25.0	20.40	26.86	24.70	25.42	21.90
Reverses, one							
every x lines:	40.7	57.8	46.9	41.6	41.5	37.6	29.0
Most frequent:	<i>ss</i> <i>ds</i> —	<i>ss</i> <i>sd</i> —	<i>dd</i> <i>sd</i> —	<i>s</i> <i>ddd</i> —	<i>ds</i> <i>dd</i> —	<i>ss</i> <i>ds</i> —	<i>ss</i> <i>ds</i> —
	<i>sd</i> <i>ss</i>	<i>d</i> <i>sss</i>	<i>ds</i> <i>dd</i>	<i>ddd</i> <i>s</i>	<i>dd</i> <i>sd</i>	<i>sd</i> <i>ss</i>	<i>sd</i> <i>ss</i>
						<i>ss</i> <i>sd</i> —	
						<i>d</i> <i>sss</i>	
% total reverses:	70.05	60.0	38.16	37.04	33.75	32.14 each	55.71

1. In several of the categories listed above, Petronius reveals a greater interest in variety than does Lucan (=L): number of patterns per sixteen-line unit, 9.3 (L 8.9); percentage of sixteen-line units with eight or more patterns, 100.0 (L 87.43); one repeat cluster every 144.5 lines (L 82.7); one repeat every 14.5 lines (L 11.4); repeats plus near repeats, one every 5.2 lines (L 4.2).⁸⁰

⁸⁰ Repeats plus near repeats thus appear in Petronius more seldom than in any other Silver Latin epic poet; they are of course most frequent in Valerius Flaccus, one every 3.5 lines.

In his treatment of opposite and reverse patterns in adjacent lines Petronius is almost unique; one opposite every 14.5 lines (*L* 22.0), and this high frequency is unparalleled in the whole range of Latin hexameter poetry;⁸¹ on the other hand, reverse patterns are relatively rare, once every 57.8 lines (*L* 40.7), and in this respect Petronius reverts to the practice of the Republican poets;⁸² in all later hexameter poetry, reverse patterns are more frequent than in Petronius.

The percentage of fourth-foot homodyne in Petronius is unusually high, 52.07 (*L* 37.08), and the percentages of fourth-foot texture change in total repeats and, in the case of the most repeated pattern, *ddss* (*L dsss*), repeats and also repeats plus near repeats, are all low, 25.0, 16.67, 23.08 respectively (the corresponding percentages in *L* are 39.09, 48.15, 44.31), and as a result the percentages of change differ strikingly from the fourth-foot homodyne percentages, -27.07, -35.40, -28.99 (*L* +2.01, +11.07, +7.23). Petronius' procedure here makes for greater monotony, and I much prefer the lower homodyne and the higher percentage of change which we find in Lucan and which are so similar to the corresponding percentages in Vergil's *Aeneid*. We saw above the extent to which Petronius differed from Lucan in patterns and percentages; here we have additional evidence to prove that his treatment of the hexameter was very unlike that of Lucan.

How are these many differences to be explained? Petronius dislikes Lucan's emphasis on rhetoric and his avoidance of divine machinery; perhaps he was also suggesting a better way to write hexameter verse. In some respects his procedure was an improvement (less concentration on the same patterns, and more spondees), in others (high homodyne percentage and low percentage of change in fourth-foot texture) it was definitely inferior.⁸³

⁸¹ The closest to this is one opposite every 16.3 lines in Horace, *Epistles* II (*Epist.* II 1, 15.0; *Ars Poetica*, 15.3), one every 16.8 in Grattius, one every 16.7 in Statius, *Achilleid*; in the Late Empire, one every 15.4 in Avienus, *Aratea*, one every 16.5 in Sidonius and Arator. The two Einsiedeln *Eclogues* (average, 14.1) are too short to provide a basis for comparison.

⁸² The figures for frequency of reverses: Lucretius, one every 51.3 lines; Catullus LXIV, 53.9; Vergil, *Eclogues*, 55.0; *Ciris*, 65.0; *Moretum*, 60.0.

⁸³ Cf. Butler (above, note 42) 103: "The verse is uninspired, the method is impossible, the remedy is worse than the disease." The hexameters of Petronius have been considered *Vergiliani*, non *Lucaniani*; see E. Trampe, *De Lucani arte metrica* (Berlin 1884) 78; H. Stubbe, *Die Verseinlagen im Petron* (*Philologus*, Supplb. 25, Heft 2, 1933) 103. Baldwin

2. Statius' "fingerprints" are clearly marked on all three works. I pointed out above that the first eight patterns and their percentages were almost identical; this is true also of the statistics on variety and repetition. We find considerable variation in the individual poems of the *Silvae*, but this is to be expected, since many are very short.⁸⁴ The amazing thing, when we examine the three Statius columns listed above, is that the *Silvae* (= *S*) is so close to the *Thebaid* (= *Th*) or the *Achilleid* (= *Ach*), or to both; to give a few examples: number of patterns per sixteen-line unit, *S* 9.4, *Ach* 9.5; percentage of units with eight or more patterns, *S* 90.21, *Th* 90.20; percentage of fourth-foot homodyne, *S* 38.41, *Th* 40.18, *Ach* 39.84; one repeat every x lines, *S* 12.2, *Th* 12.1; one repeat or near repeat every x lines, *S* 4.4, *Th* 4.3, *Ach* 4.5; most frequent repeat, *dsds* in all three works; percentage of total repeats, *S* 33.21, *Th* 30.88, *Ach* 32.0; percentage of total *dsds*, *S* 16.48, *Th* 15.67, *Ach* 16.67; one opposite every x lines, *S* 20.0, *Th* 21.8; one reverse every x lines, *S* 41.5, *Ach* 41.6.

I did not list above the various patterns preceded or followed by their opposites, but here too we have striking similarities, as follows:

	<i>S</i>	<i>Th</i>	<i>Ach</i>
% of <i>sssd</i> with <i>ddd</i> s:	17.78	19.87	18.75
% of <i>ssss</i> with <i>ddd</i> d:	5.0	4.89	8.70
% of <i>sdss</i> with <i>dsdd</i> :	12.89	12.19	15.87
% of <i>sdsd</i> with <i>dsds</i> :	29.92	30.54	39.13

The *Silvae* differ much in subject-matter and tone from the two epics, and Butler speaks of the "sprightly and dexterous handling of the hexameter" in the collection of short poems.⁸⁵ It is apparent, however, that Statius' metrical technique in the *Silvae* is identical with that in the *Thebaid* and the *Achilleid*.

3. I return now to the *Ilias Latina* (= *IL*), where the author's handling

(above, note 66) 55, disagrees: "these verses are utterly un-Vergilian in their effect, and resemble those of Lucan in many points, especially defects." My own statistics indicate that Petronius, in spite of his faults, is closer to Vergil than to Lucan.

⁸⁴ E.g. the average for repeat clusters is one every 150.7 lines; fourteen of the twenty-six hexameter poems have no clusters, but I 2 and V 1 each have four, one every 69.0 and 65.5 lines respectively; the fourth-foot homodyne percentages (average, 38.41) range from 24.53 (III 4) to 49.11 (III 5); the average of reverse patterns is one every 41.5 lines (cf. *Achilleid*, 41.6), but five poems (I 4, I 5, III 2, IV 2, V 4) have no reverse patterns at all.

⁸⁵ Butler (above, note 42) 228.

of the first eight patterns has already been shown to resemble Lucan (= *L*) in part, but also Silius Italicus (= *SI*). The figures for the various categories of variety and repetition reveal a few instances where *IL* is closer to *L* than to *SI*: e.g. repeat clusters, one every 95.8 lines in *IL*, 82.7 in *L*, but 187.6 in *SI*; one repeat every 11.3 lines in *IL*, 11.4 in *L*, 11.8 in *SI*; most frequent opposite, percentage of total opposites, *IL* 25.42, *L* 26.92, *SI* 21.90; reverses once every 37.6 lines in *IL*, every 40.7 in *L*, but every 29.0 in *SI*.

A careful examination of the last two columns listed above, however, reveals that *IL* in most respects is far more similar to *SI* than to *L* (or the other epic poets of the period). This is seen in the fourth-foot homodyne percentages (*IL* 45.45, *SI* 42.95), and in the percentages of change in both repeats (*IL* 44.09, *SI* 46.09) and repeats plus near repeats (*IL* 43.75, *SI* 46.12). In the case of the most frequent repeat (*dsss*), the percentages of the total repeats (*IL* 21.51, *SI* 19.71), of the total pattern (*IL* 13.79, *SI* 12.82), and of the change in fourth-foot texture (*IL* 40.0, *SI* 44.61) are practically identical, and this is even more true of the three corresponding percentages when we include the *dsss* near repeats (*IL* 21.43, 33.10, 45.83; *SI* 19.30, 32.37, 44.47). I did not list above the second pattern most frequently repeated (*ddss* in *IL*, *sdss* in *SI*), but it is worth noting that the combination of the two repeated patterns produces the following percentages of the total repeats: 38.71 in *IL*, 37.58 in *SI*, with much higher percentages in the other Silver Age poets, from 46.96 in Statius' *Silvae* to 56.88 in Valerius Flaccus (51.25 in Lucan). These latter percentages are almost as high as in the Republican poets (Cicero, 57.15; Lucretius, 59.64; Catullus LXIV, 68.51), but *IL* and *SI* are lower than Vergil, *Aeneid*, 40.94, and not much higher than Horace, *Satires*, 33.95, and Ovid, *Metamorphoses*, 33.57.⁸⁶ The two most frequent repeats in relation to the totals of the two patterns are as follows: *IL* 26.10 per cent, *SI* 25.19, and the other poets have a range from Statius, *Thebaid*, 28.20 (cf. Lucan 29.33) to Valerius Flaccus, 34.38. Here again *IL* and *SI* are similar and resemble Vergil's *Aeneid*, 25.94 (and also Cicero, 26.27); although the other poets have higher percentages, they are lower than those in Lucretius (37.84) and Catullus (41.08).

⁸⁶ See Duckworth, *Studies* 75-76, 83.

Also, as in the case of Statius above, the percentages of the individual opposite combinations will be relevant here: percentage of *sddd* with *ds*, *IL* 26.32, *SI* 27.12, but *L* 37.0 (the other epic poets of the age are either lower or higher, with Petronius 43.86); percentage of *sssd* with *dds*, *IL* 7.14, *SI* 9.19, *L* 9.63 (the range for the other poets is from the *Silvae*, 17.78, to the *Argonautica*, 21.21); percentage of *dddd* with *ss*, *IL* 24.32, *SI* 22.73, but *L* 8.20 (in the other poets, the percentage of *ss* with *dddd* ranges from 4.89 in the *Thebaid* to 13.21 in the *Argonautica*). In the case of the reverse combination *sddd-dds*, the percentage of *sddd* preceded or followed by *dds* is this: *IL* 10.53, *SI* 8.05, *L* 7.09; the corresponding percentages in the other poets range from 14.29 in Petronius to 35.29 in Valerius Flaccus.

These additional figures show even more clearly the extent to which the metrical technique of the *Ilias Latina* is almost identical with that of the *Punica*. The resemblances to Lucan are what we should expect of a poet writing in the age of Nero, but the differences are more numerous than the similarities. We have a situation here not unlike the problem of Calpurnius Siculus and the authorship of the *Laus Pisonis*, discussed above under pastoral poetry. The *Ilias Latina* resembles the *Punica* far too closely to be assigned to anyone but Silius, to whom the acrostic ITALICUS SCRIPSIT must therefore refer.

C. SATIRE

I shall now compare the versification of the two satirists, Persius and Juvenal, and show their relation to the earlier poets and especially to Horace in his two books of *Satires*. For Butler, the meter of Persius "represents almost the high-water mark of the post-Vergilian hexameter,"⁸⁷ and he considers Juvenal "almost untouched by the Ovidian influence;" he adds: "As far as his metre has any ancestry, it is descended from the Vergilian hexameter."⁸⁸ But what influence, if any, does the Horatian hexameter have on the metrical procedures of the two later satirists who in other respects were so indebted to

⁸⁷ Butler (above, note 42) 94; he continues: "Here, as in other writers of the age, the influence of Ovid is traceable in the increase of dactyls and the avoidance of elision. But the verse has a swing and dignity, together with a variety, that can hardly be found in any other poetry of the Silver Age."

⁸⁸ Butler (above, note 42) 318; cf. Duff (above, note 30) 497.

Horace?⁸⁹ To what extent is Persius indebted to Ovid, or Juvenal to Persius? Also, do we have any traces of the Lucilian hexameter in either poet? Persius was inspired by reading Lucilius to compose satire,⁹⁰ and Lucilius is called "the predecessor whom Juvenal most admires."⁹¹

I give opposite the order of the first eight patterns, the relevant percentages, and the distribution of spondees and dactyls,⁹² and to these I add the corresponding material for Lucilius and Horace's *Satires*.

The favorite pattern in both Persius (= *P*) and Juvenal (= *J*) is *dsss*, as in the late Republican poets, Vergil and Horace, and, in the first century A.D., Grattius, Germanicus Caesar, Manilius, the *Aetna* in didactic poetry, and Lucan, the *Ilias Latina*, and Silius Italicus in epic.⁹³ In both *P* and *J* the first four patterns are the same, but in different order; *P* has the same order as in the *Aeneid* and in this respect he is the most Vergilian of all hexameter poets.⁹⁴ The order of the first four patterns in *J* is identical with that of Horace, and *sdss* is second in both; this latter feature is so unusual⁹⁵ that perhaps we have evidence here of the Horatian nature of Juvenal's versification. On the other hand, this prominence of *sdss* in both Horace and Juvenal may result

⁸⁹ On Persius and Horace, see Dimsdale (above, note 27) 423; cf. Duff (above, note 30) 230: "His Horatian debts are visible everywhere;" Butler (above, note 42) 83-85, who says (p. 85): "Horace appears everywhere, but *quantum mutatus ab illo!*" On Juvenal and Horace, see G. Highet, "Juvenal's Bookcase," *AJP* 72 (1951) 388-89, who points out that Juvenal quotes or echoes Horace at least forty times.

⁹⁰ See Duff (above, note 30) 227; he says later (p. 230): "Along with Horace he adopted for imitation Horace's outspoken master in satire, Lucilius." Cf. G. C. Fiske, "Lucilius and Persius," *TAPA* 40 (1909) 121-50, who concludes that "Lucilius is a source for Persius second only to Horace in importance."

⁹¹ G. Highet, *Juvenal the Satirist: A Study* (Oxford 1954) 235 (note 10), where he lists the allusions to Lucilius in Juvenal's first satire; see also Highet (above, note 89) 388, 394.

⁹² These and later statistics are based on the text of W. V. Clausen, *A. Persi Flacci et D. Iuni Iuvenalis Saturae* (OCT 1959). For totals of all sixteen patterns, see below, Table 1.

⁹³ In Persius *dsss* is first in five satires and tied (with *ddss*) for first place in one (v). Juvenal in his individual poems is slightly less consistent; *dsss* first in ten satires, and tied (with *dsds*) for first place in one (vi); it is second in three (ii and v, where *ddss* is first; xv, where *sdss* is first) and fourth in two (vii and xiii, where again *ddss* is first).

⁹⁴ The closest approach is Marius Victor in the fifth century, where we find *dsss* first, *ddss* second, and *dsds* and *sdss* tied for third place.

⁹⁵ See above, p. 90, on Silius Italicus, where the few instances of such emphasis on *sdss* are given.

	Lucilius	Horace	Persius	Juvenal
<i>ds</i> ss	2	1	1	1
<i>dd</i> ss	5-6	4	2	4
<i>ds</i> ds	4	3	3	3
<i>sd</i> ss	1	2	4	2
<i>ss</i> ss	3	5	8	8
<i>ddd</i> s		8	6	
<i>ss</i> ds	5-6	7		6
<i>sdd</i> s	7			
<i>dssd</i>		6	5	5
<i>ddsd</i>			7	
<i>sdsd</i>	8			7
<i>ssdd</i>	15		16	16
<i>dddd</i>	16	15		15
<i>sddd</i>		16	15	
% 1st pattern:	16.86	13.44	17.57	13.66
% 1st four:	47.60	43.78	53.16	45.73
% 1st eight:	74.21	69.99	77.50	71.07
First eight—				
Spondees:	21	20	18	21
Dactyls:	11	12	14	11
4th-foot spondee:	7	7	6	6
1st-foot dactyl:	3	5	6	4

from their indebtedness to Lucilius, where *sdss* occupies first place. The second four patterns in *P* and *J* show greater variation; both resemble Horace in their use of *dssd*, and both have *ssss* in eighth position (Horace fifth, Lucilius third); *ddsd*, seventh in *P*, is perhaps due to Ovid's influence (fifth in the *Metamorphoses*), and the presence of *sdsd* among the first eight patterns in *J* (seventh place) is again a rarity,⁹⁶ but may result from the fact that *sdsd* is eighth in Lucilius.

When we examine the three percentages—first pattern, first four, and first eight—we find a striking difference between *P* and *J*. The percentage of the first pattern in *P* is 17.57, much higher than in most poets (cf. Lucan, 15.40; Statius, *Thebaid*, 16.24) and resembles that of Manilius, 17.33; on the other hand, *J* has 13.66, almost identical with that of Horace, 13.44; the percentages for the first four and first eight patterns in *J*, 45.73 and 71.07 respectively, are likewise close to the corresponding percentages in Horace, 43.78 and 69.99. This indicates

⁹⁶ See above, p. 102 and note 76. In Horace's *Satires*, *sdsd* is in twelfth position (eleventh in the *Aeneid*, tenth in Ovid's *Metamorphoses*).

that the percentages of *J* should be considered "Horatian" rather than "Vergilian."⁹⁷ The first four and the first eight patterns in *P* are considerably higher; they are more typical of the Silver Age and perhaps show the influence of Ovid: first four in *P*, 53.16; cf. Manilius, 53.59; Lucan, 52.28; Valerius, 54.36 (Ovid, 48.37); first eight in *P*, 77.50; cf. Manilius, 77.33; Lucan, 78.61 (Ovid, 81.62).

The distribution of spondees and dactyls in *P* is eighteen and fourteen; this is the same as in Lucan and should not necessarily be considered Ovidian; the truly Ovidian poets are Columella, Valerius Flaccus, and Statius (fifteen spondees, seventeen dactyls) and, most Ovidian of all, Calpurnius Siculus (*Eclogues*, twelve or eleven and twenty or twenty-one; *Laus Pisonis*, thirteen and nineteen). The distribution in *J* is unusually spondaic, twenty-one spondees and eleven dactyls, and this is identical with that in Lucilius (Horace, twenty and twelve, but twenty-one and eleven in *Satires* I and *Epistles* I and II).⁹⁸

The statistics on variety and repetition follow:⁹⁹

	Horace	Persius	Juvenal
Patterns per 16-line unit:	9.3	8.8	9.6
% units with 8 or more:	85.22	84.21	93.45
Repeat clusters, 1 every x lines:	150.7	108.2	199.2
% fourth-foot homodyne:	45.24	58.0	48.93
Repeats, 1 every x lines:	13.0	10.8	12.0
% of change:	46.30	55.0	40.64
Differs from homodyne %:	+1.06	-3.0	-8.29
R + NR, 1 every x lines:	4.5	3.9	4.8
% of change:	48.50	43.38	43.28
Differs from homodyne %:	+3.26	-14.62	-5.65
Most frequent repeat:	<i>dsss</i>	<i>dsss</i>	<i>dsss</i>
R, % total repeats:	19.75	30.0	26.67
% total pattern:	11.26	15.79	16.25
% of change:	50.0	55.56	47.62
Differs from homodyne %:	+4.76	-2.44	-1.31
R + NR, % total R + NR:	21.79	27.17	22.66

⁹⁷ The three corresponding percentages in the *Aeneid* are 14.39, 46.95, and 72.78. *J* thus stands between Vergil and Horace, but closer to the latter. Lucilius has somewhat higher percentages, 16.86, 47.60, and 74.21 respectively.

⁹⁸ On this distribution of twenty-one spondees and eleven dactyls, see above, pp. 91 and 103.

⁹⁹ Again I add Horace's *Satires*, but not Lucilius, whose short fragments provide no information on sixteen-line units, or on repeated, opposite, and reverse patterns in adjacent lines.

	Horace	Persius	Juvenal
% total pattern:	35.91	39.47	34.24
% of change:	54.90	42.22	43.50
Differs from homodyne %:	+9.66	-15.78	-5.43
Opposites, 1 every x lines:	25.2	24.0	22.5
Most frequent:	<i>dsdd-sdss</i>	<i>dsdd-sdss</i>	<i>dsdd-sdss</i> <i>sdsd-dsds</i>
% total opposites:	20.24	22.22	21.43 each
Reverses, 1 every x lines:	29.3	49.9	37.5
Most frequent:	<i>ssds-sdss</i>	<i>ssds-sdss</i>	<i>ssds-sdss</i>
% total reverses:	52.78	38.46	51.49

The similarities here between *P* and *J* are few and consist mostly in the fact that the percentages of fourth-foot change in total repeats and in total repeats plus near repeats (also in the pattern most often repeated, both repeats and repeats plus near repeats) are all well below the percentages of fourth-foot homodyne,¹⁰⁰ whereas the corresponding percentages in Horace (and Vergil) are all much higher. In this respect both satirists are typical of the Silver Latin poets, with the exception of Lucan and Silius Italicus.

In the categories listed above, there are many differences between *P* and *J*. The average number of patterns per sixteen-line unit in *P* is 8.8 (cf. Lucan, 8.9; Ovid, 8.9), but in *J* is 9.6, higher than in Vergil's *Aeneid* (9.4) and Horace (9.3). Repeat clusters are almost twice as numerous in *P* (one every 108.2 lines; cf. Ovid, 112.5) as in *J* (one every 199.2 lines; cf. *Aeneid*, 200.1). The percentage of fourth-foot homodyne in *P* is unusually high, 58.0 (cf. Calpurnius, *Eclogues*, 61.08, *Laus Pisonis*, 54.02; Petronius, 52.07), but in *J* we find 48.93, not much higher than in Horace (45.24). Repeats are frequent in *P*, one every 10.8 lines (Ovid, 10.7), but in *J* we find less concentration, one every 12.0 lines (*Aeneid*, 12.4); repeats plus near repeats in *P* occur once every 3.9, and in all Silver Latin hexameter this high frequency is surpassed only by that in Valerius Flaccus, once every 3.5 lines; in *J* they occur once every 4.8 lines (cf. Horace, 4.5; *Aeneid*, 4.6). When we combine the two most frequently repeated patterns, the repeats comprise 46.67 per cent of the total repeats in *P* (cf. Statius, *Silvae*,

¹⁰⁰ *P* is usually lower than *J* by far: e.g. difference between percentage of change in total repeats plus near repeats and homodyne percentage: *P* - 14.62, *J* - 5.65; *ssds* repeats plus near repeats: *P* - 15.78, *J* - 5.43; repeats plus near repeats in second most repeated pattern: *P* - 28.37, *J* - 5.41.

46.96; *Achilleid*, 47.0), but 39.69 per cent in *J* (cf. *Aeneid*, 40.94); the combined repeats plus near repeats comprise 43.44 per cent of the total repeats plus near repeats in *P* (cf. *Achilleid*, 44.94), but 36.49 in *J* (cf. Horace, 35.47).

The figures for total opposite patterns show little variation, but the percentages of *ssdd* with *ddss* and of *sssd* with *ddds* are both 40.0 in *P*; in *J* the corresponding percentages are 17.95 (Horace, 22.22) and 11.21 (Horace 6.67). *P* shows little interest in reverse patterns, one every 49.9 lines (Valerius, 48.6), whereas *J* has one every 37.5 lines (*Aeneid*, 38.9); the most frequent reverse (*ssds*–*sdss*) comprises 38.46 per cent of the total in *P* (*Thebaid*, 38.16), but 51.49 per cent in *J* (Horace, 52.78). The percentage of *sssd* with *dsds* is 40.0 in *P*, but 26.72 in *J* (Horace, 24.76); the reverse combination *sddd*–*ddds* does not occur in *P* and is rare in *J*, where the percentage of *sddd* with *ddds* is 4.44 (Horace also 4.44).

To summarize the analyses given above, Persius is far more Ovidian than is Juvenal and in most respects is characteristic of the poets of the Silver Age; there is little metrical evidence to indicate his devotion to Lucilius and Horace. Juvenal, in his avoidance of repetition and his desire for greater variety, resembles Vergil and especially Horace. If we had enough of Lucilius preserved to give us adequate information on the various categories of variety and repetition, we might find that Juvenal was even closer to Lucilius than to Horace; certainly, in his choice of favorite patterns and the distribution of spondees and dactyls, he is as Lucilian as Horatian.

In one respect Juvenal is unique: unlike all the poets from Vergil through Silius Italicus he evinces a definite fondness for a spondee in the fifth foot; we find thirty-five instances, one every 109.1 lines. Wilson says that this is "a larger proportion than is found in any poet after Catullus himself,"¹⁰¹ where in *LXIV* one occurs every 13.6 lines. Wilson's statement is true only if we exclude the *Ciris*, where the proportion of spondaic verses is almost three times that in Juvenal, or one every 35.7 lines.¹⁰² It is interesting to note that Juvenal has thirty-five

¹⁰¹ H. L. Wilson, *D. Iuni Iuvenalis Saturarum libri V* (Boston 1903) lxvi; he explains Juvenal's preference for the *versus spondiacus* as the result of a desire for emphasis.

¹⁰² See Duckworth, *Studies* 92. Among the poets of the late period, Avienus has the most spondaic verses, one every 64.8 lines in the *Aratea*.

spondaic verses and that the total in all the other Silver Age poets (including Columella) is also thirty-five.

There is one final topic to discuss in connection with Persius and Juvenal. Horace changed his metrical procedures over the years, with greater variety and less concentration on the same patterns in his late *Epistles* than in *Satires* I,¹⁰³ and I find nothing comparable in Lucretius, Vergil,¹⁰⁴ Ovid, or the epic poets of the first century A.D. But what about the later satirists? Are they influenced by Horace in this respect?

Persius composed his satires over a period of about twelve years, with I-IV in the years 50-56 and V-VI about 62.¹⁰⁵ I find the following differences:

	I-IV	V-VI
% first pattern:	19.31	15.13
% first eight patterns:	80.16	77.12
Spondees in 1st eight:	19	18 or 17
Dactyls in 1st eight:	13	14 or 15
Repeats, one every x lines:	9.7	12.9
R + NR, one every x lines:	4.2	3.6

Persius thus to some extent follows the practice of Horace; his two final satires have less concentration on the same patterns and fewer repeated patterns, but the proportion of repeats plus near repeats shows a marked increase. Also, the last two poems reveal a slightly greater emphasis on dactyls in the first eight patterns.

The poetic career of Juvenal extended over a much longer period, perhaps as much as thirty years. The publication of Book I (*Satires* I-V) is dated by some shortly after 100, by others about 110, but some of the satires may have been written by 100 or earlier; Book V (*Satires* XII-XVI) was published or left unfinished between 127 and 131.¹⁰⁶ The number of years which Juvenal devoted to writing satire is thus about the same as that covered by Horace's hexameter poetry, from the

¹⁰³ See Duckworth, *Horace* 74-76, 86-87.

¹⁰⁴ The fact that *Aeneid* X-XII differ in many respects from I-IX (and the *Georgics*) is probably to be explained by lack of revision; see Duckworth, *Vergil* 49-53.

¹⁰⁵ See F. Ballotto, *Cronologia ed evoluzione spirituale nelle satire di Persio* (Messina 1964) 27, 38, 45, 61.

¹⁰⁶ See Duff (above, note 30) 481-82; P. Ercole, *Studi Giovenaliani* (Milano 1935) 102; Hightet (above, note 91) 11-16.

earliest satires of Book I to the late *Ars Poetica*. For Juvenal, I omit the intermediate books and compare certain aspects of his metrical technique in Books I and V; when I add the corresponding figures for Horace, *Satires* I and *Epistles* II, we discover that the changes over the years are amazingly similar:

	Juvenal		Horace	
	I	V	Sat. I	Epist. II
% first pattern:	15.49	13.24	12.82	10.82
% first eight patterns:	72.41	71.12	71.16	67.22
Spondees in first eight:	18	21	21	21
Dactyls in first eight:	14	11	11	11
% fourth-foot homodyne:	46.46	52.21	46.80	52.49
Repeats, one every x lines:	11.5	12.8	11.2	13.9
R + NR, one every x lines:	4.3	5.0	4.2	5.1
Favorite repeat:	<i>dsss</i>	<i>dsss</i>	<i>dsss</i>	<i>dsss</i>
% total repeats:	36.47	17.74	15.22	21.74
R + NR, % total R + NR:	30.69	20.63	17.70	17.20
Opposites, 1 every x lines:	21.7	22.0	32.1	16.3
Reverses, 1 every x lines:	37.5	37.6	34.3	31.0

In many respects Juvenal shows between his first and last book the same changes which appear in Horace: the percentages of the first and the first eight patterns are lower in each, and the frequency of both repeats and repeats plus near repeats decrease in each, with a striking similarity in the figures: repeats, Juvenal from one every 11.5 lines to 12.8, Horace from 11.2 to 13.9; repeats plus near repeats, Juvenal from 4.3 to 5.0, Horace from 4.2 to 5.1. Such numerical identity is difficult to explain unless we assume that Juvenal was as familiar with Horace's metrical technique as he was with his language. Equally astounding is the fact that the decreasing emphasis on the same patterns is accompanied by a corresponding increase in each poet in the percentage of fourth-foot homodyne: in Juvenal from 46.46 to 52.21; in Horace from 46.80 to 52.49. Juvenal at the beginning was less spondaic in his first eight patterns (eighteen spondees, fourteen dactyls) but, unlike Persius who became more dactylic in his final satires, Juvenal in his final book has the same distribution of twenty-one spondees and eleven dactyls that we find in Lucilius and in three of Horace's hexameter books. In his use of opposites Juvenal shows little variation

from 1 to v; Horace had used them more sparingly in *Satires* 1 (one every 32.1 lines) but in his second book he increased them to once every 20.8 lines, and this is approximately what we find in Juvenal.

In this short comparison of Juvenal's metrical practices in Book 1 and Book v, we have strong additional evidence to prove his indebtedness to the hexameter technique of Horace. Duff and Butler are therefore wrong to speak of Juvenal's meter as "Vergilian."¹⁰⁷

2. THE LATE EMPIRE

Hexameter poetry shared in the general decline of literature in the second and third centuries. The metrical technique of Nemesianus (late third century) has already been treated.¹⁰⁸ In the fourth century we have a poetic revival which lasted into the sixth century; many writers composed hexameter verse on a variety of subjects, both secular and religious, and the remainder of this article will be devoted to an analysis and comparison of their metrical practices and an examination of their relation to the earlier classical poets.

Also, from this point on, my own procedure undergoes modification. My earlier statistics have been based on the complete hexameter works

¹⁰⁷ See above, note 88.

¹⁰⁸ For his *Eclogues*, see above, pp. 79-87, *passim*; the *Cynegetica* is analyzed in Duckworth, *Studies* 102-6. In addition to Nemesianus, we have, between the Silver Age and the hexameter poetry of the Late Empire, the second century Vergilian cento of Hosidius Geta, the tragedy *Medea*. This work totals 343 hexameter verses, exclusive of the choruses, the hemistichs (and Hosidius is the only later Latin poet to imitate Vergil in his use of half-lines), and the lines which have either too few or too many syllables; the latter are called "overloaded lines" by J. J. Mooney, on whose edition of the *Medea* (Birmingham 1919) I have based my statistics. The cento of Hosidius Geta is less Vergilian than the *Cento Nuptialis* of Ausonius and the *Cento Probae* (both will be analyzed below). In the first eight patterns we find a distribution of seventeen spondee and fifteen dactyls (Ausonius, twenty and twelve; Proba, nineteen and thirteen); although *dsss* is the first pattern, *ddsd* is fourth and *sdsd* is eighth; neither of these two patterns appears among the first eight in Vergil, Ausonius' *Cento*, or Proba, and the high position of *ddsd* is typical of Ovid and the poets of the Silver Age.

Also we have, probably from the third century, the *Liber medicinalis*, a textbook of medical prescriptions in 1,107 hexameters by Quintus Serenus (Sammonicus?). I have examined his verse in the edition by F. Vollmer (Leipzig 1916). In his metrical procedures, Serenus closely resembles Vergil in the *Aeneid*, but he may be following the post-Vergilian didactic poets who were influenced by Vergil. I shall discuss Serenus in greater detail in my forthcoming book: *Vergil and Other Hexameter Poets: A Study in Metrical Variety*.

of each author, even when, as in the case of Vergil, Ovid's *Metamorphoses*, Statius, or Silius Italicus, the total number of verses ranges from twelve to fourteen thousand. But for the late period, with eighteen writers to be considered, many of them minor and little known, such a procedure seems impracticable. Even though, as Steele says "Given the data in any work, book, or section, we cannot by multiplication get the schemata for larger units, nor can we by division get the facts for the smaller,"¹⁰⁹ we do reach from a smaller number of verses a close approximation of the patterns and percentages favored by the individual poets and their treatment of variety and repetition. The comparison of one or two books of Vergil's *Aeneid* with one or two of Ovid's *Metamorphoses* still gives an accurate idea of the differences between the two poets, and the same is true in the case of Valerius Flaccus and Silius Italicus.

The statistics which follow, therefore, are based on a liberal sampling of each of the later poets, usually from a thousand to two thousand verses, but about thirty-five hundred in the case of Claudian whose output is unusually large and who is considered the best of the poets after Statius.¹¹⁰ I have preferred to scan complete works or books rather than shorter and incomplete sections from a larger variety of poems. I shall from here on strive for greater brevity, but it will still be important to point out the salient metrical features of each poet.

A. SECULAR POETRY

My material for this category is based on the following works: Avienus, *Aratea*; Ausonius, *Mosella* and *Cento Nuptialis* (which I list separately for purposes of comparison); Claudian, *In Eutropium* I and II, and the panegyrics on the fourth and sixth consulships of Honorius (these I designate as Claudian I), and *De raptu Proserpinae* (= Claudian II); Sidonius, the panegyrics to Avitus and Anthemius; and Corippus,

¹⁰⁹ R. B. Steele, "Variation in the Latin Dactylic Hexameter," *Philol. Quart.* 5 (1926) 219.

¹¹⁰ Cf. Simcox (above, note 61) 368; Dimsdale (above, note 27) 538. F. J. E. Raby, *A History of Secular Latin Poetry in the Middle Ages*² (Oxford 1957) 1.88, says that Claudian is "by far the ablest of the secular poets of this time, and . . . the last authentic voice of the poetry of the old world." But unfortunately, as we shall see below, he is "post-Ovidian" rather than "Vergilian."

Johannis (or *De bellis Libycis*), Books I and VIII.¹¹¹ The order of the patterns, relevant percentages, and distribution of spondees and dactyls are as follows:¹¹²

	Ausonius			Claudian		Sid.	Cor.
	Avien.	Mos.	Cento	I	II		
<i>ds</i> <i>ss</i>	I	4	I	2	3	2	3
<i>dd</i> <i>ss</i>	3	2-3	2	4	2	3	2
<i>ds</i> <i>ds</i>	4	2-3		I	I	I	I
<i>sd</i> <i>ss</i>	6		7-8	3	4	4	5
<i>ss</i> <i>ss</i>			5-6	15			
<i>ddd</i> <i>s</i>			5-6	6	6	6	4
<i>ss</i> <i>ds</i>		5-6	3-4	5	5	5	6
<i>sdd</i> <i>s</i>			3-4	7	7	7	8-9
<i>ds</i> <i>sd</i>	2	I	7-8	8	8	8	
<i>dd</i> <i>sd</i>	5	5-6					7
<i>sd</i> <i>sd</i>	8	7	15-16				
<i>ds</i> <i>dd</i>	7	8-9					8-9
<i>ss</i> <i>sd</i>				16	16	16	16
<i>ss</i> <i>dd</i>	16	16	15-16		15		
<i>dddd</i>		8-9					
<i>sddd</i>	15	15				15	15
% 1st pattern:	13.42	9.38	13.74	18.27	18.93	12.53	18.06
% 1st four:	42.97	36.04	41.98	55.0	57.07	44.48	58.50
% 1st eight:	68.61	62.50	70.99	82.21	84.06	71.28	81.53
First eight—							
Spondees:	16	16-15	20	18	18	18	17-16
Dactyls:	16	16-17	12	14	14	14	15-16
4th-foot sp.:	4	4	7	7	7	7	7-6
1st-foot da.:	6	6	4	5	5	5	5-6

Avienus is the only poet in this group, with the exception of Ausonius in his *Cento Nuptialis*, who has *ds**ss* as his first pattern, and in this respect he follows the didactic poets of the early first century.¹¹³ He is, however, more dactylic than the others, and resembles Columella

¹¹¹ The following texts have been used: Avienus, A. Breysig (Leipzig 1882); Ausonius, H. G. Evelyn White (LCL 1919, Vol. 1); Claudian, M. Platnauer (LCL 1922, two volumes); Sidonius, W. B. Anderson (LCL 1936, Vol. 1); Corippus, M. Petschenig, *Berl. Stud. für Philol. und Archaeol.* IV.2 (Berlin 1886). On these poets, see Raby (above, note 110) 1.46 (on Avienus), 54-61 (Ausonius), 88-97 (Claudian), 73-86 (Sidonius), 143-46 (Corippus).

¹¹² For the totals of all sixteen patterns, see below, Table 3.

¹¹³ These are Grattius, Germanicus Caesar, Manilius, and the author of the *Aetna*, all of whom show the influence of Vergil's *Georgics*; see Duckworth, *Studies* 102-3.

(and Ovid) in his emphasis on *dssd*, *ddsd*, and *dsdd* patterns. It is unusual for *dssd* to be in second place, and its percentage in Avienus (10.71) is higher than that of *dssd* in Ausonius' *Mosella* (9.38), where the same pattern is first, the only instance of this in a complete poem in all Latin hexameter poetry.¹¹⁴ Avienus' percentages (first pattern, first four, and first eight) are lower than those of the earlier didactic poets, lower even than Vergil, and approach those of Horace.

The *Mosella* of Ausonius is unique not merely because *dssd* appears only here as the favorite pattern in a complete poem, but also because nowhere else in Latin hexameter poetry do we find such low percentages: first pattern, 9.38; first four, 36.04; first eight, 62.50. For anything comparable we must go back to the Augustan Age, to Horace's *Ars Poetica*, where the corresponding percentages are 10.32, 36.84, 65.89. Ausonius' use of Vergilian rhythms in the *Cento Nuptialis* brought him back from an emphasis on dactyls (*ddsd* and *dsdd*) to more normal treatment of the patterns, with *dsss* first, and *sdss*, *ssss*, *ddds*, and *sdds* all among the first eight patterns (not the case in the *Mosella*). The percentages (first pattern, 13.74; first four, 41.98; first eight, 70.99) approach those of Vergil's *Aeneid* (14.39, 46.95, 72.78), and the distribution of spondees and dactyls (twenty and twelve) is also that of the *Aeneid* and quite unlike that in the *Mosella*.

Claudian is the opposite of Ausonius, and there is almost no difference between his panegyrics and invectives (= Claudian I) and the three books of the *De raptu Proserpinae* (= Claudian II); *dsds* is first in both groups, also in the individual poems and books under consideration, and in this respect Claudian resembles the Silver Latin poets, Calpurnius Siculus, Valerius Flaccus, and Statius, who represent what I term the "post-Ovidian" hexameter.¹¹⁵ The order of the second four patterns (*ssds*, *ddds*, *sdds*, *dssd*) is the same in both Claudian I and II, the frequency percentages (first pattern, first four, first eight) are equally high, and the distribution of spondees and dactyls (eighteen and fourteen) is identical. The high percentages of the first eight patterns (I, 82.21; II, 84.06) resemble those of Ovid (81.62), Columella

¹¹⁴ In Ovid's *Metamorphoses*, *dssd* is first in Book IV and tied for first place with *ddss* in Book XI; *dsdd* is also first in the sixth eclogue of Calpurnius Siculus.

¹¹⁵ In Ovid's *Metamorphoses*, *dsds* is in fourth position, less frequent than in Lucretius, Vergil, and Horace (third place in each).

(81.84) and Valerius Flaccus (83.85). It therefore seems wrong for Dimsdale to say of Claudian that "at times he reproduces the Virgilian rhythm;"¹¹⁶ the panegyrics and invectives show the same metrical technique as the mythological epic.

Sidonius composed three panegyrics which "follow the traditional manner and owe much to a study of Claudian."¹¹⁷ Metrically he is very similar to Claudian; the order of the patterns is almost identical: *dsds* first, *dsss* second (as in Claudian I), *sdss* fourth (as in Claudian II), the second four patterns in the exact same order. The distribution of spondees (eighteen) and dactyls (fourteen) is likewise the same. But Sidonius differs from Claudian in one important respect: he has far less concentration on the first eight patterns; the percentages drop to a Vergilian range, and he therefore reveals a much greater interest in variety than does Claudian.

Corippus also has *dsds* as his first pattern and his percentages (first, first four, first eight) resemble those of Claudian; his hexameters are somewhat more dactylic, however, with *ddsd* and *dsdd* in seventh and eighth (tied with *dssd*) places respectively; neither of these two patterns appear among the first eight in Claudian (or Sidonius).

The comparative frequencies and percentages for variety in sixteen-line units, fourth-foot texture, repeated, opposite, and reverse patterns are as follows:

	Avien.	Ausonius		Claudian		Sidon.	Cor.
		<i>Mos.</i>	<i>Cento</i>	I	II		
Patterns per 16-line							
unit:	9.6	10.1	10.6	8.3	8.5	9.5	8.5
% units with 8 or more:	95.65	100.0	100.0	74.0	77.61	97.14	77.63
Repeat clusters,							
1 every x lines:	205.3	480.0	—	67.8	78.9	190.3	51.2

¹¹⁶ Dimsdale (above, note 27) 540-41; but cf. p. 539, where he calls the *Rape of Proserpina* an "unfinished Ovidian hexameter"; so Duff (above, note 30) 526. R. M. Henry, "Epic Poetry, Latin" (OCD) 322, says that "in the *De raptu Proserpinae*, Claudian shows a perfect mastery of the epic style and metre;" obviously "epic" here is not to be equated with "Vergilian."

¹¹⁷ Raby (above, note 110) 77; Dimsdale (above, note 27) 545, calls him "a frigid and vastly inferior Claudian." Cf. also Anderson (above, note 111) I.liii, who adds: "Sidonius observes all the pitiable conventions of the *genre*, and succeeds in writing three 'poems' which for prolonged insipidity, absurdity, and futility would be hard to beat."

	Avien.	Ausonius		Claudian		Sidon.	Cor.
		<i>Mos.</i>	<i>Cento</i>	I	II		
% fourth-foot homodyne:	56.15	51.97	35.11	33.96	31.86	35.15	30.84
Repeats—							
1 every α lines:	13.1	14.1	18.7	10.0	10.0	16.1	8.7
% of change:	46.10	50.0	42.86	27.16	36.36	39.42	36.88
Differs from							
homodyne %:	-10.05	-1.97	+7.75	-6.80	+4.50	+4.27	+6.04
R plus NR—							
1 every α lines:	5.1	5.3	6.0	3.6	4.0	4.9	3.7
% of change:	40.67	47.25	54.55	29.61	33.09	39.06	31.34
Differs from							
homodyne %:	-15.48	-4.72	+19.44	-4.35	+1.23	+3.91	+0.50
Favorite repeat:	<i>dsss</i>	<i>dsds</i>	<i>dsss</i>	<i>dsds</i>	<i>dsds</i>	<i>dsds</i>	<i>dsds</i>
R, % total R:	19.86	11.76	42.86	36.63	35.45	19.72	26.24
% total pattern:	11.29	9.30	16.67	19.59	18.66	9.79	16.67
% of change:	28.57	50.0	33.33	13.79	23.08	35.71	18.92
Differs from							
homodyne %:	-27.58	-1.97	-1.78	-20.17	-8.78	+0.56	-11.92
R plus NR—							
% total R + NR:	20.33	17.58	36.36	31.10	32.37	19.74	26.57
% total pattern:	29.47	37.21	44.44	47.30	43.06	32.17	40.09
% of change:	24.66	31.25	37.50	13.40	16.67	26.09	11.23
Differs from							
homodyne %:	-31.49	-20.72	+2.39	-20.56	-15.19	-9.06	-19.61
Opposites, one							
every α lines:	15.4	17.8	18.7	21.7	20.4	16.5	25.6
Most frequent:	<i>sdsd-</i> <i>dsds</i>	<i>sssd-</i> <i>ddds</i>	<i>sssd-</i> <i>ddds</i> <i>ddsd-</i> <i>ssds</i>	<i>sdsd-</i> <i>dsds</i>	<i>sdsd-</i> <i>dsds</i>	<i>sdsd-</i> <i>dsds</i>	<i>sdsd-</i> <i>dsds</i>
% total opposites:	20.0	18.52	28.57 each	33.01	40.75	24.64	29.17
Reverses, one							
every α lines:	31.9	43.6	26.2	34.7	34.5	35.6	49.2
Most frequent:	<i>sssd-</i> <i>dsss</i>	<i>sdss-</i> <i>ssds</i>	<i>sddd-</i> <i>ddds</i> <i>sssd-</i> <i>dsss</i>	<i>ssds-</i> <i>sdss</i>	<i>ssds-</i> <i>sdss</i>	<i>ssds-</i> <i>sdss</i>	<i>ssds-</i> <i>sdss</i>
% total reverses:	37.93	54.55	40.0 each	74.29	81.25	43.75	52.0

Here again, as in the case of the patterns and percentages listed above, I shall comment only on the salient features of each poet.

Avienus, when compared with the earlier didactic poets,¹¹⁸ shows a higher number of patterns per sixteen-line unit (with the exception of the *Cynegetica* of Nemesianus), fewer repeat clusters (except for the *Aetna*), and an unusually high percentage of fourth-foot homodyne (56.15);¹¹⁹ as a result, the percentages of change in relation to the homodyne percentage are all low: total repeats, - 10.05; total repeats plus near repeats, - 15.48. In the case of the pattern most frequently repeated (*dsss*), the differences are even greater: repeats, - 27.58; repeats plus near repeats, - 31.49; these are very unlike the corresponding percentages in Germanicus Caesar (+ 32.92, + 11.67) and Manilius (+ 14.87, + 7.86). The fourth-foot homodyne percentages in these two poets are of course much lower (35.83 and 39.33 respectively), but we still have here a clear indication that Avienus had no desire to introduce variety by means of change in fourth-foot texture.

When we examine the two Ausonius columns, *Mosella* (= *M*) and *Cento Nuptialis* (= *CN*), we find many differences: e.g. percentage of fourth-foot homodyne, *M* 51.97, but *CN* 35.11 (*Aeneid* 37.78); percentage of fourth-foot change in repeats in relation to fourth-foot homodyne, *M* - 1.97, *CN* + 7.75 (*Aeneid* + 6.71); corresponding change in repeats plus near repeats, *M* - 4.72, *CN* + 19.44 (*Aeneid* + 8.05). These and other similarities between the *Cento* and the *Aeneid* are probably the inevitable result of the use of Vergilian lines and half lines, and the *Mosella* therefore gives us a better idea of Ausonius' metrical technique, both his unusually low frequency of patterns (discussed above) and his corresponding lack of interest in fourth-foot texture change. But in some respects the *Cento* does not reflect Vergil's procedure; e.g. number of patterns per sixteen-line unit, 10.6 (*Aeneid* 9.4); repeats once every 18.7 lines (*Aeneid* 12.4); repeats plus near repeats every 6.0 lines (*Aeneid* 4.6); reverse patterns every 26.2 lines (*Aeneid* 38.9, cf. *M* 43.6; *CN* here resembles Horace, 29.4, and Silius Italicus, 29.0).¹²⁰

¹¹⁸ See the statistics listed in Duckworth, *Studies* 104-5.

¹¹⁹ The homodyne percentage in the *Aratea* of Avienus is surpassed only by that in Catullus LXIV (60.44), Calpurnius Siculus, *Eclogues* (61.08), and Persius (58.0).

¹²⁰ Cf. in this respect the late Christian poets, Prosper, *De ingratia*, 29.3; *De providentia Dei*, 27.3; Avitus, 26.1; Cyprian, 27.6.

An examination of the two columns devoted to Claudian reveals again that the metrical technique in his public poems (I) and in *De raptu Proserpinae* (II) is practically identical; I give the following points in outline form:

1. Number of patterns per sixteen-line unit, 8.3 and 8.5.
2. Percentage of units with eight or more patterns, 74.0 and 77.61; these are unusually low; cf. Valerius Flaccus, 74.86, and Corippus, 77.63.¹²¹
3. Low fourth-foot homodyne percentage, 33.96 and 31.86.
4. Repeats, one every 10.0 lines in both I and II.
5. The most repeated pattern (*dsds*) comprises 36.63 and 35.45 per cent of the total repeats; 19.59 and 18.66 per cent of the total *dsds*.
6. Opposites, one every 21.7 and 20.4 lines.
7. Reverses, one every 34.7 and 34.5 lines.
8. The favorite reverse (*ssds-sdss*) provides an unusually high proportion of the total reverses, 74.29 and 81.25 per cent.¹²²

I pointed out above that Sidonius' first eight patterns are almost identical with those of Claudian, but that the percentages reveal much less concentration on these same patterns. Sidonius' greater interest in variety is seen also in many other categories: e.g. the number of patterns per sixteen-line unit, 9.5. (C I 8.3, II 8.5); percentage of units with eight or more patterns, 97.14 (C I 74.0, II 77.61); repeat clusters, one every 190.3 lines (C I 67.8, II 78.9); repeats, one every 16.1 lines (C I and II, 10.0); repeats plus near repeats, one every 4.9 lines (C I 3.6, II 4.0);¹²³ both repeats and repeats plus near repeats occur in Sidonius less frequently than in the *Aeneid*. With all his faults, therefore, Sidonius metrically is much less monotonous than Claudian.

Corippus resembles Claudian far more closely than does Sidonius, not only in the choice and frequencies of the first eight patterns (as mentioned above), but also in such categories as the number of patterns

¹²¹ The percentages in the Christian poets are all higher, with the exception of Avitus (75.37) and Cyprian (50.62).

¹²² Ovid's favorite reverse in the *Metamorphoses* (*dsdd-ddsd*) comprises 71.05 per cent of the total reverses; the most frequent reverse is usually *ssds-sdss*, and high percentages of the total reverses include the following (in addition to Claudian): Catullus LXIV, 71.43; Grattius, 71.43; Lucan, 70.05; the favorite reverse of Cyprian is *sdss-ssds*, with an amazing 95.74 per cent of the total reverses.

¹²³ Cf. also the following: most repeated pattern, percentage of total repeats, 19.72 (C I 36.63, II 35.45), and percentage of total pattern, 9.79 (C I 19.59, II 18.66). The favorite reverse comprises 43.75 per cent of the total reverses (C I 74.29, II 81.25).

per sixteen-line unit, the percentage of units with eight or more patterns, the frequency of repeats plus near repeats, the frequency of opposites.¹²⁴ Repeat clusters are unusually numerous (one every 51.2 lines), even more so than in Claudian (1 67.8, 11 78.9); Corippus has more repeat clusters than any poet after the late Republic (Lucretius, 49.2; Catullus, 29.0). His frequency of repeats (one every 8.7 lines) is therefore higher than any other Latin poet with the exception of Catullus (7.0), Valerius Flaccus (8.6), and the Christian poet Cyprian (7.9).

In his choice and frequencies of metrical patterns and in his handling of variety and repetition Corippus thus differs much from Vergil, although the latter in a sense is his model; Corippus claims that Johannes is a greater hero than Aeneas, but he realizes that, as a poet, he is inferior to Vergil; cf. *Praef.* 15-16:

Aeneam superat melior virtute Iohannes,
sed non Vergilio carmina digna cano.

He was a devout Christian, but I list him among the secular poets because his epic (in praise of the *magister militum* who had subdued the Moors) is not the usual versification of the Old or New Testament which we find so frequently among the Christian poets. It is interesting that, seventy-five or more years after the end of the Roman Empire in the West, when in 476 Romulus Augustulus was deposed by the German Odoacer,¹²⁵ Corippus could compose a long epic in quantitative hexameters which followed Vergil so closely in language and epic devices. Raby says: "The epic itself is well conceived, and is written without any parade of learning or of obscurity."¹²⁶

One of Vergil's most famous verses (*Aen.* vi 853):

parcere subiectis et debellare superbos

appears in Corippus as follows (1 148-49):

hic pietatis amor, subiectis parcere, nostrae est,
hic virtutis honos, gentes domitare superbas.

¹²⁴ Corippus shows less interest than Claudian in reverse patterns, one every 49.2 lines (*C* 1 34.7, 11 34.5).

¹²⁵ It is ironical that the last emperor of the Western Empire bore the names of both Romulus and Augustus (in diminutive form)—the founders of Rome and its Empire.

¹²⁶ Raby (above, note 110) 144.

Here, in two verses, we have four virtues—*pietas*, *clementia*, *virtus*, *iustitia*—and these are the virtues listed on the golden shield which Augustus received from the senate and the Roman people in 27 B.C. and which are stressed by both Vergil and Horace.¹²⁷ We should, therefore, consider Corippus as perhaps the most Vergilian of the late poets, in spite of his failure to follow the metrical practices of his avowed model.

B. CHRISTIAN POETRY

The Christian hexameter poets of the fourth and fifth centuries are numerous and follow the epic tradition; they go back to the classical poets and especially Vergil. Raby says:

When Latin Christian poetry really began in the West, the main literary influence could hardly fail to be that of the Latin classical poets, the only possible models for men who had received their education in the public schools. . . . Vergil was their model, and their subjects were taken, as a rule, from sacred history.¹²⁸

My metrical analyses of the Christian poets include the following authors and works (in approximate chronological order):

Iuvenius, *Libri Evangeliorum* I and IV
 Prudentius, *Psychomachia* and *Hamartigenia*
 Proba, *Probae Cento*
 Paulinus of Nola V, XV, and XXIII
 Prosper of Aquitaine, *De ingratis*, and *De providentia Dei*, possibly by Prosper
 Sedulius, *Paschale carmen* I, II, and V
 Marius Victor, *Alethia* I and II
 Paulinus of Pella, *Eucharisticus*
 Paulinus of Périgueux, *De vita Martini* I and IV
 Dracontius, *De laudibus Dei* I, and *De raptu Helenae*

¹²⁷ See G. E. Duckworth, "Animae Dimidium Meae: Two poets of Rome," *TAPA* 87 (1956) 299–308.

¹²⁸ F. J. E. Raby, *A History of Christian-Latin Poetry from the Beginnings to the Close of the Middle Ages*² (Oxford 1953) 4, 76. E. K. Rand, "Prudentius and Christian Humanism," *TAPA* 51 (1920) 81, refers to the "writers who, in a steady stream from the time of Juvenius, had essayed to turn the Holy Scriptures into Virgilian epic."

Avitus, *De spiritalis historiae gestis* I ("De mundi initio") and V ("De transitu maris rubri")

Cyprian, *Heptateuchos* II ("Exodus")

Arator, *De actibus Apostolorum* I¹²⁹

I did not include Commodian in the list of Christian poets given above, because he writes in accentual rather than in quantitative hexameters. Raby suggests that "his neglect of quantity may perhaps be conscious and studied . . . [the verses] are only rhythmical in the sense that they were meant to be read according to their word-accent, as though they were prose."¹³⁰ The ending of each line is usually quantitative, but this results from the normal coincidence of word-accent and metrical ictus in the last two feet. To illustrate Commodian's accentual rhythm, I quote the first six verses of his *Carmen Apologeticum*:

Quis poterit unum proprie Deum nosse caelorum,
 Quis nisi quem sustulerit ab errore nefando?
 Errabam ignarus spatians spe captus inani.
 Dum furor aetatis primae me portabat in auras,
 Plus eram quam palea levior; quasi centum adessent
 In humeris capita, sic praeceps quocumque ferebar.

Rand says of Commodian that his "most interesting characteristic is his illiteracy—or his unmetricality. His little knowledge of the Vergilian hexameter was a dangerous thing for art; his verse is

¹²⁹ The following texts have been used: Juvenius, C. Marold (Leipzig 1886); Prudentius, H. J. Thomson (LCL 1949, Vol. 1); Proba, C. Schenkl (CSEL 16, 1888); Paulinus of Nola, W. de Hartel (CSEL 30, 1894); Prosper, *De ingratia*, C. T. Huegel-meyer (Washington 1962) [= *Catholic Univ., Patristic Studies* 95], *De providentia Dei*, M. P. McHugh (Washington 1964) [= *Catholic Univ., Patristic Studies* 98]; Sedulius I and II, N. Scheps (Delft 1938); Sedulius V, J. Huemer (CSEL 10, 1885); Marius Victor, C. Schenkl (CSEL 16, 1888); Paulinus of Pella, H. G. Evelyn White (*Ausonius*, LCL Vol. 2, 1921); Paulinus of Périgueux, M. Petschenig (CSEL 16, 1888); Dracontius, *De laudibus Dei* I, J. F. Irwin (Philadelphia 1942), *De raptu Helenae*, F. Vollmer (MGH auct. ant. 14, 1905); Avitus, R. Peiper (MGH auct. ant. 6.2, 1883); Cyprian, R. Peiper (CSEL 23, 1881); Arator, A. P. McKinlay (CSEL 72, 1951). On the Christian poets in general, see P. de Labriolle, *History and Literature of Christianity from Tertullian to Boethius*, trans. H. Wilson (London 1924) 311–32, 446–94; E. K. Rand, *Founders of the Middle Ages* (Cambridge, Mass., 1941) 181–217; Raby (above, note 128) 44–120; A. Hudson-Williams, "Virgil and the Christian Latin Poets," *PVS* 6 (1966–67) 11–21.

¹³⁰ Raby (above, note 128) 14. Commodian is to be dated about the middle of the third century, not in the fourth or fifth; see Raby, p. 11, note 4.

fearfully and wonderfully made.”¹³¹ Fortunately, the other Christian poets, from Juvencus to Arator, are quantitative and not accentual.

I list the Christian poets under two headings: (1) those who seem more Vergilian in their selection of patterns, with *dsss* the first choice in each instance, and who usually have a preponderance of spondees in the first eight patterns; these poets are Juvencus, Proba, Prosper, Marius Victor, Paulinus of Pella, and Avitus; (2) the other seven poets who are less Vergilian and who should perhaps be termed “post-Ovidian,” since many favor *dsds* as their first pattern in the manner of the Silver Age poets (Calpurnius Siculus, Valerius Flaccus, and Statius) and in general are more dactylic; to this group belong Prudentius, Paulinus of Nola, Sedulius, Paulinus of Périgueux, Dracontius, Cyprian, and Arator.

I give below the relevant statistics concerning the first eight patterns (order, percentages, and distribution of spondees and dactyls) for the poets in each group, with brief comments on the main characteristics of the more important poets.¹³²

	GROUP I						
	Juv.	Proba	Prosper <i>Ingr.</i>	? <i>Prov.</i>	Mar. Vict.	Paul. Pella	Avit.
<i>dsss</i>	1	1	1	1	1	1	1
<i>ddss</i>	2	3	5	3	2	3	5
<i>dsds</i>	5	2	2	2	3-4	4	6
<i>sdss</i>	3	4	3	4	3-4	2	2
<i>ssss</i>	4	7	4	6		8	4
<i>ddds</i>		5	8	8	6	6	
<i>ssds</i>	6		6	5	5		3
<i>sdds</i>	8	6		7	7		7
<i>dssd</i>	7	8	7			5	8
<i>ddsd</i>					8	7	15
<i>sssd</i>					15-16		
<i>ssdd</i>		16			15-16	16	
<i>dddd</i>	16		15	16		15	16
<i>sddd</i>	15	15	16	15			
% 1st pattern:	15.28	13.71	15.45	13.62	14.26	12.93	18.09
% 1st four:	48.89	50.22	45.54	43.71	48.96	44.35	52.73
% 1st eight:	76.85	74.89	72.62	70.48	75.66	69.39	82.30

¹³¹ Rand (above, note 129) 181-82.

¹³² For the totals of all sixteen patterns, see below, Tables 4 (Christian “Vergilian” poets) and 5 (Christian “post-Ovidian” poets).

	Juv.	Proba	Prosper <i>Ingr.</i>	? <i>Prov.</i>	Mar. Vict.	Paul. Pella	Avit.
First eight—							
Spondees:	21	19	20	20	17	18	21
Dactyls:	11	13	12	12	15	14	11
4th-foot sp.:	7	7	7	8	7	6	7
1st-foot da.:	4	5	5	4	5	6	4

All the poets in Group 1 are Vergilian to a degree; *dsss* is first in each instance, and seven of the first eight patterns are among the first eight in the *Aeneid*, with the exception of Paulinus of Pella (*dssd* and *ddsd*); in the *De providentia Dei*, the first eight are those of Vergil, but in slightly different order. The percentages are also in the Vergilian range with two exceptions: Paulinus of Pella, who has less concentration on the first eight patterns and thus resembles Horace rather than Vergil; and Avitus, whose higher percentages are those of Ovid, Valerius Flaccus, and Claudian. Juvencus and Avitus are both heavily spondaic, with twenty-one spondees and eleven dactyls; this is the distribution found in Lucilius, Horace (*Satires* 1, *Epistles* 1 and 11), Germanicus Caesar, the *Aetna*, Petronius, and Juvenal.

Labriolle says that, if Commodian is put in the fourth or fifth century, "Juvencus should be reckoned the first Christian poet in the Latin tongue."¹³³ But the date of Commodian is not really important in this connection; Juvencus was the first of a long line of Christian poets to write in *quantitative* hexameters, and, as all agree, "Virgil is his great master."¹³⁴ It is Avitus, however, who is praised as the "Christian Vergil";¹³⁵ his *De spiritalis historiae gestis* is considered "the best of all the Biblical epics,"¹³⁶ and Raby says that his poetical talent is "above that of Juvencus or indeed of any of the 'epic' poets of the Church."¹³⁷ In his heavy concentration of the first eight patterns, however, Avitus is definitely less Vergilian than is Juvencus.

Proba in her *Cento* necessarily reproduces Vergil's rhythms, but her

¹³³ Labriolle (above, note 129) 314.

¹³⁴ Rand (above, note 129) 197; cf. Raby (above, note 128) 17, who says that the *Evangeliorum libri* are "thoroughly Virgilian"; see also Labriolle (above, note 129) 316.

¹³⁵ See A. Schippers, *Avitus, De mundi initio* (Diss. Amsterdam 1945) 3.

¹³⁶ Rand (above, note 129) 203; cf. Labriolle (above, note 129) 488: "the most remarkable poem inspired by the book of Genesis in the Vth century."

¹³⁷ Raby (above, note 128) 78.

patterns and percentages are no more Vergilian than those which we find in Juvenecus, Prosper, and the *De providentia Dei*.

This brings me to the problem of the authorship of the *De providentia*. McHugh discusses the frequency of the verse patterns in the *De providentia* and in Prosper's *De ingratis*, also the percentages of spondees and dactyls, and compares the two poems with the classical poets, especially Vergil.¹³⁸ He finds that the two poems are similar and reasonably close to the Vergilian norm, but on the question of authorship he concludes that "no final decision could be reached."¹³⁹

New light can now be thrown on the problem by a comparison of these two works with the other late Christian poems. The *De ingratis* and the *De providentia* are the only two poems in Group 1 which have the Vergilian distribution of twenty spondees and twelve dactyls in the first eight patterns; not only is the first pattern (*ds*) identical, but also the second (*dsds*) and the eighth (*ddd*). This last is sufficiently unusual to justify added comment: *ddd* is in eighth position also in Cicero, Catullus LXIV, Horace, and Silius Italicus, and it does not appear among the first eight patterns in Ennius, Germanicus Caesar, the *Aetna*, Petronius, Juvenal, nor, in the late period, in Avienus, Ausonius, Juvenecus, or Avitus. But in all other poets, both classical (including Vergil and Ovid) and later, *ddd* has a normal range from fourth to sixth position. The similarity in the use of *ddd* in the *De ingratis* and the *De providentia* perhaps gives added support to Prosper's authorship of the latter poem. I shall return to this problem later in connection with repeated, opposite, and reverse patterns, but first I wish to list and comment on the patterns and percentages of the Christian poets in Group 2 (see opposite page).

We find much more variation among the seven poets in Group 2. The first pattern is *dsds*, with the exception of Prudentius and Dracontius, who prefer *ddss*, and Cyprian, who in this respect is almost unique; his first pattern is *ssds*, and no poet in the whole range of Latin hexameter poetry before the fifth century so favors this pattern; it usually varies from fifth to eighth position, but is third in Avitus and Dracontius (first in the *De raptu Helenae* of Dracontius). The favorite pattern of the poets in Group 1, *ds*, is now second or fourth, with the

¹³⁸ McHugh (above, note 129) 215-25; cf. Labriolle (above, note 129) 432, note 1.

¹³⁹ McHugh (above, note 129) vii.

GROUP 2							
	Prud.	Paul. Nola	Sed.	Paul. Pér.	Drac.	Cypr.	Arat.
<i>dsss</i>	4	2	4	2	4	2	8-9
<i>ddss</i>	1	3	2	4	1	3-4	4
<i>dsds</i>	2	1	1	1	2	5	1
<i>sdss</i>	3	4	6	3	6	3-4	
<i>ssss</i>	16		15	5		8	16
<i>dddd</i>	5	6	3		5	7	3
<i>ssds</i>	8	8	8	6	3	1	5
<i>sdds</i>			7	8		6	8-9
<i>dssd</i>	7	5	5	7	8		
<i>ddsd</i>	6	7			7		2
<i>sdsd</i>							7
<i>dsdd</i>							6
<i>sssd</i>	15		16		16	16	15
<i>sddd</i>		16					
<i>dddd</i>				16			
<i>sddd</i>		15		15	15	15	
% 1st pattern:	11.31	12.82	15.72	13.31	13.66	16.58	16.19
% 1st four:	42.77	43.05	48.07	48.44	47.87	59.91	49.77
% 1st eight:	70.79	69.96	75.37	78.19	74.04	91.06	76.56
First eight—							
Spondees:	17	17	18	21	17	20	15-14
Dactyls:	15	15	14	11	15	12	17-18
4th-foot sp.:	5	6	7	7	6	8	5
1st-foot da.:	5	6	5	4	6	4	5-6

exception of Arator, where it is tied with *sdds* for eighth place; only in the *Eclogues* of Calpurnius Siculus do we elsewhere find *dsss* in such a low position. The pattern *ssss* is fourth to eighth in the poets of Group 1 (with the exception of Marius Victor); in Group 2 *ssss* appears among the first eight patterns only in Paulinus of Périgueux and Cyprian; it is fifteenth in Sedulius and sixteenth in Prudentius and Arator; on the other hand, in Group 2 *dddd* appears among the last two patterns only in Paulinus of Périgueux; in Group 1 it is fifteenth or sixteenth in all but Proba and Marius Victor.

The percentages of the first eight patterns are low in Prudentius and Paulinus of Nola, 70.79 and 69.96, and resemble those in *De providentia* (70.48) and Paulinus of Pella (69.39); the percentage is average in the other poets of Group 2 (from 74.04 to 78.19), with the exception of Cyprian, who has an amazingly high 91.06; there is

nothing like this in all hexameter poetry with the exception of Catullus LXIV (90.98) and Vergil's Fourth Eclogue (91.93).¹⁴⁰ As to the distribution of spondees and dactyls, Paulinus of Périgueux and Cyprian are heavily spondaic (cf. Juvenecus, Prosper, and Avitus); the other writers of Group 2 have a larger proportion of dactyls and resemble the Silver Age poets (though less dactylic than Calpurnius Siculus, Valerius Flaccus, and Statius).

Prudentius is praised not only as "the first great Christian poet,"¹⁴¹ but because "he has mastered the art of the Vergilian hexameter with more delicacy than those martial and resonant singers, Juvenal, Lucan, and Claudian."¹⁴² But with *dsss* in fourth place and *ssss* in sixteenth place, and with both *dssd* and *ddsd* included among the first eight patterns, Prudentius seems definitely more Ovidian than Vergilian in his choice of patterns, more so certainly than Juvenal, Lucan, or Claudian, all of whom include *ssss* among their first eight patterns, but not *ddsd*. In his lower percentages (first, first four, first eight), however, Prudentius is more Vergilian than either Lucan or Claudian.

Sedulius also studied Vergil carefully,¹⁴³ but he likewise departs from his model in his dislike for *ssss* (fifteenth place); *dsss* is in fourth position, as in Prudentius and Dracontius. Arator, "the last important Italian poet of the sixth century,"¹⁴⁴ is also the most dactylic, with *ddsd* second and *dsdd* sixth;¹⁴⁵ *dsss* is tied for eighth place (a position paralleled elsewhere in Latin hexameter poetry only in the *Eclogues* of Calpurnius Siculus), and *ssss* is sixteenth, as in Prudentius. We can therefore consider the last of the ancient Christian poets the most Ovidian of them all.

I shall now give the statistics for variety and repetition for the two groups of Christian poets (see opposite page for Group 1).

I stated earlier that Avitus, because of his heavy concentration on the first eight patterns, seems definitely less Vergilian than Juvenecus; in

¹⁴⁰ See Duckworth, *Vergil* 17-22.

¹⁴¹ Raby (above, note 128) 44; cf. p. 61: the *Psychomachia* "presents the first poetical Christian allegory, an original creation;" see also Rand (above, note 128) 81.

¹⁴² Rand (above, note 129) 184.

¹⁴³ See Labriolle (above, note 129) 476.

¹⁴⁴ Raby (above, note 128) 117.

¹⁴⁵ In no other Christian poet does *dsdd* appear among the first eight patterns; in this respect Arator resembles Ovid, Calpurnius Siculus, Valerius Flaccus, Statius, Avienus, Ausonius (*Mosella*), and Corippus.

	GROUP I						
	Juv.	Proba	Prosper <i>Ingr.</i>	? <i>Prov.</i>	Mar. Vict.	Paul. Pella	Avit.
Patterns per 16-line unit:	9.0	9.3	9.4	10.0	9.1	9.7	8.6
% units with 8 or more:	84.69	88.37	88.71	100.0	85.29	89.21	75.37
Repeat clusters, 1 every x lines:	87.1	138.6	110.8	145.8	110.1	203.7	65.3
% fourth-foot homodyne:	34.94	34.63	44.76	45.43	38.53	51.47	44.06
Repeats— 1 every x lines:	10.8	11.2	12.2	11.8	11.1	15.3	10.1
% of change:	43.15	45.16	40.24	39.19	50.51	50.0	42.72
Differs from homodyne %:	+9.21	+10.53	-4.52	-6.24	+11.98	-1.47	-1.34
R plus NR— 1 every x lines:	3.9	4.0	4.3	5.2	4.0	5.6	4.0
% of change:	45.52	48.57	43.97	42.86	44.53	47.27	39.85
Differs from homodyne %:	+10.62	+13.94	-0.97	-2.57	+6.0	-4.20	-4.21
Favorite repeat:	<i>dsss</i>	<i>dsds</i>	<i>dsss</i>	<i>dsss</i>	<i>dsss</i>	<i>sdss</i>	<i>dsss</i>
R, % total R:	20.55	24.19	28.05	14.86	24.24	15.0	32.04
% total pattern:	12.45	16.30	14.94	9.24	15.22	8.0	17.46
% of change:	40.0	26.67	56.52	36.36	50.0	50.0	54.55
Differs from homodyne %:	+5.06	-7.96	+11.76	-9.07	+11.47	-1.47	+10.49
R plus NR— % total R + NR:	25.12	20.57	27.16	20.24	21.90	22.73	28.74
% total pattern:	41.91	39.13	40.91	28.97	38.22	33.33	39.68
% of change:	49.50	30.56	49.21	58.82	45.0	48.0	45.33
Differs from homodyne %:	+14.56	-4.07	+4.45	+13.39	+6.47	-3.47	+1.27
Opposites, one every x lines:	27.6	25.7	19.2	16.8	26.9	21.8	30.7
Most frequent:	<i>dsdd—</i> <i>sdss</i>	<i>sdsd—</i> <i>dsds</i>	<i>sdsd—</i> <i>dsds</i>	<i>ssdd—</i> <i>ddss</i>	<i>ddsd—</i> <i>ssds</i>	<i>sddd—</i> <i>dsss</i>	<i>sdsd—</i> <i>dsds</i>
% total opposites:	19.30	33.33	19.23	19.23	28.27	25.0	32.35
Reverses, one every x lines:	30.3	49.5	29.3	27.3	35.5	55.5	26.1
Most frequent:	<i>ssds—</i> <i>sdss</i>	<i>sssd—</i> <i>dsds</i> <i>ssds—</i> <i>sdss</i>	<i>sssd—</i> <i>dsds</i>	<i>ssds—</i> <i>sdss</i>	<i>ssds—</i> <i>sdss</i>	<i>sssd—</i> <i>dsds</i> <i>ssds—</i> <i>sdss</i>	<i>ssds—</i> <i>sdss</i>
% total reverses:	51.92	35.71 each	44.12	43.75	58.06	36.36 each	65.0

the most important categories just listed, neither Juvencus nor Avitus seems particularly Vergilian; this lack of Vergilian variety may be seen, for example, in the number of patterns per sixteen-line unit (9.0 and 8.6); the percentage of units with eight or more patterns (84.69 and 75.37); the frequency of repeat clusters (one every 87.1 and 65.3 lines); the frequency of repeated patterns (one every 10.8 and 10.1 lines); the frequency of repeats plus near repeats (one every 3.9 and 4.0 lines); and in every instance but the final one Avitus consistently has greater repetition and consequently is farther from the Vergilian norm. But in these same categories Prosper in the *De ingratis* is much closer to Vergil, and Paulinus of Pella has even less repetition; e.g. the number of patterns per sixteen-line unit is 9.4 and 9.7 respectively (*Aeneid* 9.4); percentage of units with eight or more patterns, 88.71 and 89.21 (*Aeneid* 92.46); repeat clusters once every 110.8 and 203.7 lines (*Aeneid* 200.1); repeats once every 12.2 and 15.3 lines (*Aeneid* 12.4); repeats plus near repeats, one every 4.3 and 5.6 lines (*Aeneid* 4.6). In their desire for variety, therefore, Prosper of Aquitaine and Paulinus of Pella are closer to Vergil than are either Juvencus or Avitus, both of whom have been praised as Vergilian.¹⁴⁶ Also, in these same categories, Prosper and Paulinus are more like Vergil than is Proba, even though she composes her poem in Vergilian lines and half-lines. But the *Probae Cento* is more Vergilian in most respects than is the *Cento Nuptialis* of Ausonius.

The poet in Group 1 who resembles Proba (= P) most closely is Marius Victor; e.g. he has 9.1 patterns per sixteen-line unit (P 9.3), one repeat every 11.1 lines (P 11.2), one repeat plus near repeat every 4.0 lines (P 4.0); the favorite repeat comprises 24.24 per cent of the total repeats (P 24.19) and 15.22 per cent of the total pattern (P 16.30); the repeats plus near repeats provide 21.90 per cent of all repeats plus near repeats (P 20.57) and 38.22 per cent of the total pattern (P 39.13). The percentage of change in fourth-foot texture, however, is higher in Marius Victor than in Proba, especially in the case of the pattern most frequently repeated.

I return now to the problem of the authorship of the *De providentia Dei*. When we compare the metrical features of the poem with those of Prosper's *De ingratis*, we find several differences (especially in the

¹⁴⁶ See above, notes 134 and 135.

percentages of the pattern most frequently repeated), but the similarities seem more significant and are more numerous—too numerous, I am convinced, to be the result of coincidence. In most instances the *De providentia* (= *P*) resembles only the *De ingratis* (= *I*); I summarize the most important similarities and comment on the corresponding technique of the other poets in Group 1.

1. % fourth-foot homodyne: *I* 44.76, *P* 45.43. Avitus, 44.06; the others range from 34.63 to 38.53, except Paulinus of Pella (51.47).
2. Repeats, one every x lines: *I* 12.2, *P* 11.8. Others from 10.1 to 11.2, except Paulinus (15.3).
3. % of change: *I* 40.24, *P* 39.19. Others range from 42.72 to 50.51.
4. Differs from homodyne %: *I* -4.52, *P* -6.24. Others range from -1.34 to +11.98.
5. R + NR, one every x lines: *I* 4.3, *P* 5.2. Others 3.9 and 4.0, except Paulinus, 5.6.
6. Opposites, one every x lines: *I* 19.2, *P* 16.8. Others range from 21.8 to 30.7.
7. Most frequent, % total opposites: *I* 19.23, *P* 19.23. Juvencus, 19.30; others from 25.0 to 33.33.
8. Reverses, one every x lines: *I* 29.3, *P* 27.3. Avitus, 26.1; others from 30.3 to 55.5.
9. Most frequent, % total reverses: *I* 44.12, *P* 43.75. Others range from 35.71 to 36.36 and from 51.92 to 65.0.

To these convincing resemblances between the two poems may be added the following evidence based on the individual opposite combinations:

	% ssdd with ddss	% dsdd with sdss	% sdsd with dsds
<i>De ingratis</i> :	25.0	17.65	22.73
<i>De providentia</i> :	25.64	20.0	23.53
Juvencus:	25.0	28.95	9.26
Proba:	63.64	4.55	28.13
Marius Victor:	5.0	9.09	19.15
Paulinus of Pella:	8.33	5.56	9.38
Avitus:	12.50	35.29	26.83

Here, too, the variation among the other poets is so great and the *De ingratis* and the *De providentia* are so similar that we need have no hesitation in asserting that Prosper of Aquitaine is the author of the *De providentia Dei*.

	GROUP 2						
	Prud.	Paul. Nola	Sed.	Paul. Pér.	Drac.	Cypr.	Arat.
Patterns per 16-line unit:	9.6	9.4	9.0	8.7	9.2	7.6	8.9
% units with 8 or more:	94.83	88.71	88.06	84.85	88.51	50.62	83.58
Repeat clusters, 1 every \times lines:	311.0	170.3	98.9	96.3	78.1	54.0	67.2
% fourth-foot homodyne:	46.54	43.35	36.12	43.63	34.85	34.16	34.98
Repeats— 1 every \times lines:	12.7	11.0	10.4	9.5	9.8	7.9	9.9
% of change:	38.78	51.61	41.90	36.61	35.42	21.95	23.85
Differs from homodyne %:	-7.76	+8.26	+5.78	-7.02	+0.57	-12.21	-11.13
R plus NR— 1 every \times lines:	4.8	4.6	4.1	4.0	4.1	3.2	4.0
% of change:	40.46	50.0	36.50	39.16	33.63	22.93	26.94
Differs from homodyne %:	-6.08	+6.65	+0.38	-4.47	-1.22	-11.23	-8.04
Favorite repeat:	<i>ddss</i>	<i>dsds</i>	<i>dsds</i>	<i>dsds</i>	<i>ddss</i>	<i>ssds</i>	<i>dsds</i>
R, % total R:	13.61	19.35	34.29	25.89	25.0	23.17	27.51
% total pattern:	9.48	13.74	21.05	20.57	18.75	17.67	17.24
% of change:	45.0	33.33	38.89	20.69	52.88	2.63	10.0
Differs from homodyne %:	-1.54	-10.02	+2.77	-22.94	+18.03	-31.53	-24.98
R plus NR— % total R + NR:	15.98	19.82	28.14	21.29	21.05	21.95	23.31
% total pattern:	29.38	33.59	43.27	39.72	37.50	41.86	35.63
% of change:	41.94	36.36	28.38	16.07	58.33	2.22	8.06
Differs from homodyne %:	-4.60	-6.99	-7.74	-27.56	+23.48	-31.94	-26.92
Opposites, one every \times lines:	21.0	24.2	20.9	39.2	19.8	59.0	16.5
Most frequent:	<i>sdsd-</i> <i>dsds</i>	<i>sdsd-</i> <i>dsds</i>	<i>sdsd-</i> <i>dsds</i>	<i>sdsd-</i> <i>dsds</i>	<i>ssdd-</i> <i>ddss</i>	<i>dds-</i> <i>ssds</i> <i>ssdd-</i> <i>ddss</i>	<i>ssds-</i> <i>ddsd</i>
% total opposites:	20.22	23.57	32.69	33.33	32.39	22.73 each	37.50
Reverses, one every \times lines:	31.1	40.9	54.4	37.8	37.8	27.6	37.1
Most frequent:	<i>ssds-</i> <i>sdss</i>	<i>dsdd-</i> <i>ddsd</i>	<i>sddd-</i> <i>ddds</i>	<i>ssds-</i> <i>sdss</i>	<i>sdss-</i> <i>ssds</i>	<i>sdss-</i> <i>ssds</i>	<i>dsdd-</i> <i>ddsd</i>
% total reverses:	48.33	36.0	50.0	60.71	45.95	95.74	51.72

In matters of variety and repetition Prudentius and Paulinus of Nola are the most Vergilian of the poets in this group; this may be seen especially in the number of patterns per sixteen-line unit, their avoidance of repeat clusters, and the relative infrequency of repeated patterns and repeats plus near repeats. But the other poets, from Sedulius to Arator, have almost no interest in any form of variety; note particularly the decrease in the number of patterns per sixteen-line unit, and the corresponding increase in the frequency of repeat clusters, repeats, and repeats plus near repeats. In the case of the most repeated pattern, the percentages of change in fourth-foot texture reach new and unheard-of lows, with the exception of Dracontius, whose percentages of change (repeats, 52.88; repeats plus near repeats, 58.33) are by far the highest in Group 2 and resemble or surpass the corresponding percentages of several poets in Group 1 (Prosper, Marius Victor, Paulinus of Pella, and Avitus).

Dracontius' metrical technique in his secular poem *De raptu Helenae* (= *H*) is quite unlike what we find in his *De laudibus Dei* 1 (= *L*): the three most frequent patterns in *H* are *ssds*, *dsds*, *ddss*; in *L* *ddss*, *dsds*, *dsds*; *ssds* as a preferred pattern in most unusual, and is paralleled only by Cyprian, where *ssds* is first, *dsds* second, and *ddss* tied with *sdss* for third place. In general *H* has less repetition than *L*: repeat clusters once every 93.4 lines in *H*, but once every 68.4 in *L*; one repeat every 10.2 lines in *H*, but one every 9.4 in *L*; one repeat plus near repeat every 4.3 lines in *H*, but one every 3.9 in *L*. The percentage of fourth-foot homodyne in *H* is a low 31.80, but 37.50 in *L*. Although *H* has fewer repeats, it also has much lower percentages of change in fourth-foot texture: repeats, *H* 28.13, *L* 41.25; repeats plus near repeats, *H* 25.83, *L* 39.79; in the case of the most repeated pattern (*dsds* in *H*, *ddss* in *L*), the percentages of change are as follows: repeats, *H* 20.0, *L* 54.17; repeats plus near repeats, *H* 16.13, *L* 58.82. These low percentages of change in fourth-foot texture produce in the *De raptu Helenae* a monotony similar to that found in Valerius Flaccus, Claudian, Corippus, Arator, and especially Cyprian.

Arator is less extreme in his desire for repetition than Cyprian, who is not only unusual in his choice of patterns and in his high percentages of the first eight patterns (as pointed out above) but who reaches the nadir of Latin hexameter variety; e.g. repeats once every 7.9 lines;

repeats plus near repeats once every 3.2 lines; nothing like this had appeared since Catullus LXIV, where the corresponding frequencies were 7.0 and 3.0. Among the poets who wrote on non-Christian themes, Claudian, supposedly the best of the late poets,¹⁴⁷ and Corippus, the last of the secular poets, also have an amazing amount of repetition. I repeat below some relevant statistics for Claudian 1, Corippus, Cyprian, and Arator, with the corresponding figures from the *Aeneid*, in order to show how far these particular poets of the late period depart from the Vergilian norm.

	Claud. 1	Corippus	Cyprian	Arator	<i>Aeneid</i>
% 1st eight patterns:	82.21	81.53	91.06	76.56	72.78
Patterns per 16-line unit:	8.3	8.5	7.6	8.9	9.4
% units with 8 or more:	74.0	77.63	50.62	83.58	92.46
Repeat clusters,					
one every x lines:	67.8	51.2	54.0	67.2	200.1
Repeats,					
one every x lines:	10.0	8.7	7.9	9.9	12.4
R + NR,					
one every x lines:	3.6	3.7	3.2	4.0	4.6
Favorite repeat,					
% of change:	13.79	18.92	2.63	10.0	45.14
Differs from					
homodyne %:	-20.17	-11.92	-31.53	-24.98	+7.36
R + NR, % of change:	13.40	11.23	2.22	8.06	49.28
Differs from					
homodyne %:	-20.56	-19.61	-31.94	-26.92	+11.50
Favorite reverse,					
% total reverses:	74.29	52.0	95.74	51.72	40.08

These figures prove conclusively (1) that these late poets, unlike Vergil, have almost no regard for variety either in metrical patterns or in change of fourth-foot texture, and (2) that Cyprian in these two respects goes far beyond the others in his love of repetition.¹⁴⁸ Also, in Cyprian reverse patterns are almost twice as frequent as opposites,¹⁴⁹

¹⁴⁷ See above, note 110.

¹⁴⁸ E.g. Cyprian's most repeated pattern is *ssds*; he has 38 *ssds* repeats, only one of which has fourth-foot texture change; 88 *ssds* repeats plus near repeats, with a change in fourth-foot texture in only two instances.

¹⁴⁹ After the Republican period (Cicero and the *Dirae*), reverse combinations appear more frequently than opposites in Nemesianus (*Elogues*), Claudian, Paulinus of Périgueux, and Avitus; see above, pp. 87-88.

and his treatment of these patterns is unique; of the four possible reverse combinations he has two instances of *sssd-dsss* and forty-five of *sdss-sdds*; these last comprise 95.74 of the total reverses; nothing like this had happened earlier in the whole history of Latin hexameter poetry.

APPENDIX: A NOTE ON REPETITION IN QUINTUS
OF SMYRNA

After criticizing the Latin hexameter poets of the late period (and especially Cyprian) for their monotonous repetition of the same metrical patterns, I find it interesting, by way of comparison, to turn to a late Greek hexameter poet, Quintus of Smyrna.

Greek hexameter poetry from the very beginning was heavily dactylic. The first four patterns in Homer are *dddd*, *dsdd*, *sddd*, and *ddds*, and the distribution of dactyls and spondees in the first eight patterns was 22 dactyls, 10 spondees, the exact opposite of what we find in the fragments of Ennius (10 dactyls and 22 spondees), and Ennius' first pattern is *ssss*, the opposite of the first pattern in Homer (*dddd*). The percentages in Homer are high: first pattern, 21.36; first four, 59.90; first eight, 85.42.¹⁵⁰ These percentages are not unlike those of the Roman poets Valerius Flaccus, Claudian, and Avitus. But by the fourth century, to which Quintus of Smyrna is assigned, we find in Greek hexameter poetry an increase in repetition even greater than among any of the Latin poets.

I have scanned in the *Posthomerica* of Quintus of Smyrna 960 verses (480 in Book I = 1-512, and 480 in Book XIV = 1-514, not including spondaic verses).¹⁵¹ I now compare the patterns and percentages with the Vergilian norm and with the two Latin poets who have the most repetition (Catullus LXIV and Cyprian), as follows:

	Vergil <i>Aeneid</i>	Catullus LXIV	Cyprian	Quintus of Smyrna	
				I	XIV
<i>ds</i> ss	1	1	2	—	—
<i>dd</i> ss	2	3	3-4	—	—
<i>ds</i> ds	3	4	5	5	6
<i>sd</i> ss	4	2	3-4	—	—
<i>ss</i> ss	5	5	8	—	—

¹⁵⁰ These percentages are based on my scansion of 1,920 verses (*Il.* 1.1-503, 24.1-513; *Od.* 1.1-2.61, 24.1-505) and differ slightly from the corresponding percentages in Duckworth, *Vergil* 13-15, which were derived from the earlier totals of La Roche.

¹⁵¹ I use the edition of A. S. Way (LCL 1913). For other aspects of the meter of Quintus (caesura, elision, hiatus, etc.), see F. Vian, *Recherches sur les Posthomerica de Quintus de Smyrne* (Paris 1959) 212-49.

	Vergil <i>Aeneid</i>	Catullus LXIV	Cyprian	Quintus of Smyrna I	xiv
<i>ddd</i> s	6	8	7	4	4
<i>ssd</i> s	7	7	1		
<i>sdd</i> s	8		6	7	8
<i>dssd</i>		6		8	
<i>ddsd</i>					7
<i>dsdd</i>				3	2
<i>sssd</i>			16		—
<i>ssdd</i>				6	5
<i>dddd</i>	15	—		1	1
<i>sddd</i>	16	15	15	2	3
% 1st pattern:	14.39	27.59	16.58	35.42	42.08
% 1st four:	46.95	67.90	59.91	80.83	82.50
% 1st eight:	72.78	90.98	91.06	94.79	97.92
First eight—					
Spondees:	20	20	20	11	10
Dactyls:	12	12	12	21	22
4th-foot sp.:	8	7	8	3	3
1st-foot da.:	4	5	4	5	5

In Book I of the *Posthomericæ* (480 lines) *dsss* and *ssss* do not appear, and in Book XIV (also 480 lines) five patterns are missing (*dsss*, *ddss*, *sdss*, *ssss*, and *sssd*). As a result, the first *four* patterns have percentages of 80.83 and 82.50, higher than we find in the first *eight* patterns in most Latin poets, and the percentages of the first eight patterns are 94.79 and 97.92; the other eight patterns are thus almost totally ignored. Also, *dddd*, the first pattern, has percentages of 35.42 and 42.08; again there is nothing like this in Latin hexameter poetry.

Quintus' repetition of *dddd* is almost unbelievable. In the Latin poets the same pattern almost never appears more than four times in succession.¹⁵² In Quintus, five and six patterns in succession are frequent, and we have seven instances of *dddd* together in XIV 23–29, and eight instances in I 112–19; as a result of the numerous *dddd* repeats and near repeats in the same area, we find in I 106–25 fourteen instances of *dddd* in twenty lines, and in XIV 18–35 fifteen instances of *dddd* in eighteen lines. Monotonous repetition of the same pattern can assuredly go little farther in hexameter poetry.

The lack of variety in Quintus of Smyrna is seen also in the following selected statistics on repeated patterns:

¹⁵² In all Latin hexameter poetry from the Silver Age to the sixth century, I have found only six instances of the same pattern repeated five times in succession, three in Valerius Flaccus, one in Statius (*Silvæ*), one in Juvenal, and one in Claudian.

	Vergil <i>Aeneid</i>	Catullus LXIV	Cyprian	Quintus of Smyrna	
				I	XIV
Patterns per 16-line unit:	9.4	7.0	7.6	6.1	5.8
% units with 8 or more:	92.46	30.43	50.62	13.33	10.0
Repeat clusters,					
1 every x lines:	200.1	29.0	34.0	17.8	15.0
Repeats, 1 every x lines:	12.4	7.0	7.9	5.5	4.1
R plus NR,					
1 every x lines:	4.6	3.0	3.2	2.3	2.0
Favorite repeat:	<i>dsss</i>	<i>dsss</i>	<i>ssds</i>	<i>dddd</i>	<i>dddd</i>
% total repeats:	22.18	44.44	23.17	61.36	69.83
% total pattern:	12.40	21.20	17.67	31.76	40.10
R plus NR,					
% total R plus NR:	23.15	41.60	21.95	53.85	65.11
% total pattern:	34.66	50.17	41.86	65.88	75.74

The above, I trust, proves conclusively that the late Latin poets, deficient in metrical variety as some of them are, still avoid the monotonous repetition of the same patterns (especially *dddd*) found in Quintus of Smyrna.

3. SUMMARY

The many statistical details given above on more than twenty-five hexameter poets from the Silver Age to the middle of the sixth century make for difficult reading; I append here a list of the most important findings:

Silver Age

1. The two Einsiedeln pastorals are almost too short to provide reliable information, but the statistics for each favor the view that they are the work of two different authors; they are not to be assigned to either Lucan or Calpurnius Siculus.

2. In all post-Ovidian hexameter poetry we find no such emphasis on dactyls in the first eight patterns as in the *Eclogues* of Calpurnius Siculus and the *Laus Pisonis*; for this and other metrical reasons the *Laus Pisonis* should be considered the work of Calpurnius.

3. The four *Eclogues* of Nemesianus are metrically very unlike those of Calpurnius Siculus. Nemesianus is unusual in the fact that repeated patterns are relatively infrequent and that reverse combinations occur more often than opposites.

4. The four epic poets of the Silver Age are surprisingly consistent metrically from book to book; this is especially true of Valerius Flaccus and Statius.

5. Valerius Flaccus and Statius, in spite of their use of Vergilian themes and language, are metrically "Ovidian," whereas Lucan and Silius Italicus follow Vergil.

6. Valerius Flaccus, in his use of hexameter patterns, is the most repetitious and monotonous of the four epic poets; he goes far beyond Ovid in his lack of variety.

7. Silius Italicus is the most painstaking metrician of the four poets and displays more variety than any of the other three. In most respects he closely resembles Vergil, but in many books he is even more spondaic.

8. The passage in *Punica* VIII 144-223, which appears in no extant manuscript and in no edition prior to the Aldine text of 1523, is not a Renaissance forgery but the authentic work of Silius Italicus. Metrically, these lines have the "fingerprints" of Silius, especially in the choice of patterns and in the distribution of spondees and dactyls in the eight most frequent patterns.

9. Petronius in his parody of Lucan not only disapproves of Lucan's rhetoric and avoidance of divine machinery but perhaps shows what he considers to be proper hexameter procedure; he has less concentration on the same patterns and is much more spondaic, but displays no interest in fourth-foot texture change.

10. The hexameter technique of Statius in his *Silvae* is very similar to that in the *Thebaid* and the *Achilleid*, in spite of the fact that the themes of the *Silvae* are those usually presented in elegy and epigram.

11. The *Ilias Latina*, with an acrostic signature assigning it to a poet named Italicus, is so close metrically to the hexameters of Silius Italicus that we seem justified in ascribing it to Silius, written in the time of Nero, when Silius was thirty-five or forty years of age; it should not, therefore, be called a "youthful work."

12. The metrical differences between Persius and Juvenal are striking; Persius is far more Ovidian than Juvenal and is characteristic of the poets of the age of Nero.

13. Juvenal avoids repetition and has much greater metrical variety than Persius. He is less Vergilian than Horatian, and as Lucilian as Horatian.

14. Horace, unlike most hexameter poets, changed his metrical technique over the years, with an increasing interest in variety. Persius follows him to a degree, Juvenal much more so; such similarity in statistical details is difficult to explain unless we assume that Juvenal was as familiar with Horace's metrical practices as he was with his language.

Late Empire

15. Avienus follows to a degree the metrical practices of the didactic poets of the first century A.D. but he has less regard for change in fourth-foot texture (especially in the pattern most frequently repeated) and he resembles Columella in his preference for dactylic patterns.

16. Ausonius in the *Mosella* is unique in his avoidance of repetition and his desire for variety (percentage of first pattern, 9.38; first four, 36.04; first eight, 62.50; the closest approach to such low percentages appears in the *Ars Poetica* of Horace). In his *Cento Nuptialis* the percentages are higher and almost Vergilian, but repeated patterns are less frequent than in the *Aeneid* and reverse patterns more so.

17. Claudian's metrical technique is the same in his public poems (panegyrics and invectives) and in his mythological epic, *De raptu Proserpinae*. In his choice of favorite patterns and in the high frequency of their occurrence, he resembles the Silver Age poets, especially Valerius Flaccus. He concentrates on one reverse combination (*ssds-sdss*) to a greater extent than any other Latin poet, with the exception of Cyprian.

18. Sidonius in his choice of favorite patterns closely resembles Claudian, but he shows a greater desire for variety; his percentages fall to a Vergilian range, and he has even fewer repeat clusters and repeated patterns than Vergil.

19. Corippus has the high percentages of Claudian and an even greater emphasis on dactylic patterns; also he has a higher frequency of repeats than any poet after Valerius Flaccus, with the exception of Cyprian. His *Johannis* in eight books is an avowed imitation of

Vergil's *Aeneid*, but metrically he fails to follow the technique of his great predecessor.

20. The Christian hexameter poets fall into two groups: (1) those more spondaic and Vergilian: Juvencus, Proba, Prosper (including the *De providentia Dei*), Marius Victor, Paulinus of Pella, and Avitus; (2) those more dactylic and "post-Ovidian": Prudentius, Paulinus of Nola, Sedulius, Paulinus of Périgueux, Dracontius, Cyprian, and Arator.

21. Commodian is omitted, since his verse is accentual rather than quantitative.

22. In Group 1, Juvencus and Avitus are the most spondaic in their first eight patterns; Avitus, called the "Christian Vergil," has the high percentages of Valerius Flaccus and Claudian and is therefore less Vergilian metrically than Juvencus; his concentration on repeated patterns is also greater than that of Juvencus.

23. In their use of repeat clusters and repeated patterns, both Prosper of Aquitaine and Paulinus of Pella show greater restraint than either Juvencus or Avitus.

24. Proba in her *Cento* reproduces of necessity the rhythms of Vergil, but her patterns and percentages seem no more Vergilian than what we find in Juvencus and Prosper; they are, however, somewhat closer to Vergil than those of Ausonius' *Cento Nuptialis*. Marius Victor's metrical technique resembles that of Proba in a number of striking details.

25. Prosper's *De ingratis* and the *De providentia Dei*, of uncertain authorship, are amazingly similar in most important respects; e.g. choice of patterns, distribution of spondees and dactyls, percentage of fourth-foot homodyne, frequency of repeated, opposite, and reverse patterns. We find here strong arguments to support the view that Prosper of Aquitaine was indeed the author of the *De providentia Dei*.

26. Of the second group of Christian poets (see above, No. 20), Prudentius and Paulinus of Nola, though non-Vergilian in their choice of metrical patterns and their emphasis on dactyls, avoid repeat clusters and repeated patterns (Prudentius even more so than Vergil); in the other poets there is a steady increase in repetition until we reach in Cyprian a monotony unparalleled since Catullus lxxiv.

27. Dracontius differs from the other poets in Group 2 in one respect: his percentages of change in fourth-foot texture are unusually high and resemble or surpass the corresponding percentages of several poets in

Group 1. This is true only of *De laudibus Dei* 1, not of *De raptu Helenae*, where the percentages of change are very low; in the *De raptu*, however, repeat clusters and repeated patterns are less frequent.

28. Cyprian is unique in several respects: choice of *ssds* as first pattern (elsewhere only in the *De raptu Helenae* of Dracontius); percentage of first eight patterns, 91.06; almost no shift in fourth-foot texture, especially in the pattern most frequently repeated; and no variety in reverse combinations.

29. Arator is less repetitious than Cyprian, but much more dactylic.

30. A comparison of Claudian, Cyprian, Arator, and Corippus with Vergil reveals the extent to which these late hexameter poets had lost almost all interest in the metrical variety best seen in the works of Vergil and Horace.

31. A brief Appendix on Quintus of Smyrna shows that late Greek hexameter poetry had become even more monotonous in its repetition of the same metrical patterns; e.g. in 480 lines of *Posthomerica* xiv five patterns (including the Latin favorites *ds* and *dd*) never appear, and the percentages are the following: first pattern (*dddd*), 42.08; first four, 82.50; first eight, 97.92!

TABLE I. SILVER AGE: PASTORAL AND SATIRE

	Einsied. <i>Eclogues</i>	Cal. Sic. <i>Eclogues</i>	<i>Laus</i> <i>Pisonis</i>	Nemes. <i>Eclogues</i>	Persius	Juvenal
<i>dsss</i>	11	46	27	39	114	517
<i>ddss</i>	14	80	23	44	92	398
<i>dsds</i>	9	97	38	48	73	404
<i>sdss</i>	6	32	12	38	66	412
<i>ssss</i>	4	13	1	16	32	205
<i>ddds</i>	8	69	21	20	39	186
<i>ssds</i>	3	22	7	23	26	257
<i>sdds</i>	2	33	23	15	21	197
<i>dssd</i>	3	76	22	10	52	290
<i>ddsd</i>	6	88	26	22	35	189
<i>sdsd</i>	4	46	12	9	31	207
<i>dsdd</i>	6	62	18	11	30	159
<i>sssd</i>	1	5	1	7	10	116
<i>sddd</i>	3	13	2	3	5	78
<i>dddd</i>	2	52	19	8	14	80
<i>sddd</i>	3	24	9	6	9	90
Total	85	758	261	319	649	3,785
Spondaic verses	0	0	0	0	1	35
Corrupt or bracketed	4	16	0	0	0	54
Total verses	89	774	261	319	650	3,874

TABLE 2. SILVER AGE: EPIC

	Lucan	Petron.	Valer. Flaccus	Theb.	Statius Achill.	Silvae	<i>Ilias</i> <i>Latina</i>	Silius Italicus
<i>dsss</i>	1,235	34	593	1,221	114	363	145	1,591
<i>ddss</i>	908	35	636	1,084	102	349	130	1,106
<i>dsds</i>	1,233	22	1,265	1,576	192	546	83	1,144
<i>sdss</i>	817	30	204	566	63	194	102	1,449
<i>ssss</i>	272	16	53	225	23	80	60	1,171
<i>ddds</i>	490	10	542	864	110	310	72	599
<i>ssds</i>	682	18	160	541	68	196	60	1,036
<i>sdds</i>	460	13	181	473	69	163	54	764
<i>dssd</i>	480	25	535	658	75	229	71	598
<i>ddsd</i>	325	15	498	607	71	225	74	431
<i>sdsd</i>	299	25	148	298	46	137	49	575
<i>dsdd</i>	269	10	392	629	69	224	50	387
<i>sssd</i>	135	15	33	151	16	45	28	555
<i>ssdd</i>	167	6	58	237	34	91	20	379
<i>dddd</i>	122	8	202	363	38	94	37	176
<i>sddd</i>	127	7	85	210	32	70	19	236
Total	8,021	289	5,585	9,703	1,122	3,316	1,054	12,197
Spondaic verses	13	5	1	7	0	1	0	6
Corrupt or bracketed	26	1	7	32	5	5	16	0
Total verses	8,060	295	5,593	9,742	1,127	3,322	1,070	12,203

TABLE 3. LATE EMPIRE: SECULAR POETRY

	Avien.	Ausonius		Claudian		Sidon.	Corip.
		<i>Mos.</i>	<i>Cento</i>	I	II		
<i>dsss</i>	248	42	18	316	146	135	157
<i>ddss</i>	178	43	15	279	152	127	213
<i>dsds</i>	170	43	8	444	209	143	222
<i>sdss</i>	119	28	9	297	123	103	87
<i>ssss</i>	81	21	10	14	10	45	32
<i>dddd</i>	105	28	10	156	74	73	127
<i>ssds</i>	65	34	11	210	103	100	77
<i>sdds</i>	103	24	11	154	63	70	47
<i>dssd</i>	198	45	9	141	58	63	41
<i>ddsd</i>	134	34	5	93	51	59	72
<i>sdsd</i>	106	30	3	103	57	54	37
<i>dsdd</i>	115	29	5	101	24	57	47
<i>sssd</i>	61	22	5	11	4	18	6
<i>ssdd</i>	40	11	3	43	7	36	19
<i>dddd</i>	69	29	4	23	10	35	28
<i>sddd</i>	56	17	5	44	13	24	17
Total	1,848	480	131	2,429	1,104	1,142	1,229
Spondaic verses	29	3	0	1	1	8	0
Corrupt or bracketed	1	0	0	1	3	0	8
Total verses	1,878	483	131	2,431	1,108	1,150	1,237

TABLE 4. LATE EMPIRE: CHRISTIAN "VERGILIAN" POETS

	Juven.	Proba	Prosper	<i>De prov. Dei</i>	Marius Victor	Paulin. Pella	Avitus
<i>dsss</i>	241	95	154	119	157	79	189
<i>dds</i>	198	86	81	86	144	72	102
<i>dsds</i>	152	92	114	98	119	45	94
<i>sdss</i>	175	75	97	79	119	75	151
<i>ssss</i>	157	39	89	68	54	35	105
<i>ddds</i>	62	50	55	47	83	39	43
<i>ssds</i>	120	26	75	69	87	32	106
<i>sdds</i>	84	44	40	50	69	31	57
<i>dssd</i>	85	38	59	43	38	41	56
<i>ddsd</i>	53	34	33	30	55	38	13
<i>sdsd</i>	54	32	44	33	47	32	41
<i>dsdd</i>	38	22	34	35	33	18	17
<i>sssd</i>	71	17	41	35	20	26	28
<i>ssdd</i>	36	11	32	39	20	12	16
<i>dddd</i>	24	20	26	21	34	17	9
<i>sddd</i>	27	12	23	22	22	19	18
Total	1,577	693	997	874	1,101	611	1,045
Spondaic verses	3	0	4	2	2	3	1
Corrupt or bracketed	1	1	1	0	2	2	0
Total verses	1,581	694	1,002	876	1,105	616	1,046

TABLE 5. LATE EMPIRE: CHRISTIAN "POST-OVIDIAN" POETS

	Prud.	Paulin. Nola	Sedul.	Paulin. Périg.	Drac.	Cyprian	Arator
<i>dsss</i>	179	121	102	135	144	198	61
<i>ddss</i>	211	106	136	114	192	182	117
<i>dsds</i>	208	131	171	141	191	168	174
<i>sdss</i>	200	82	76	123	96	182	38
<i>ssss</i>	30	41	10	104	32	38	0
<i>ddds</i>	157	70	114	51	104	77	119
<i>ssds</i>	116	64	69	85	146	215	97
<i>sdds</i>	114	54	72	59	73	121	61
<i>dssd</i>	119	76	80	67	82	22	32
<i>ddsd</i>	131	65	68	24	86	16	125
<i>sdsd</i>	81	39	41	36	42	14	64
<i>dsdd</i>	102	56	53	32	75	13	66
<i>sssd</i>	31	28	5	30	23	4	2
<i>ssdd</i>	47	25	26	30	49	25	42
<i>dddd</i>	75	38	36	12	46	12	49
<i>sddd</i>	65	26	29	16	25	10	28
Total	1,866	1,022	1,088	1,059	1,406	1,297	1,075
Spondaic verses	14	4	1	0	0	0	0
Corrupt or bracketed	1	0	1	0	3	36	1
Total verses	1,881	1,026	1,090	1,059	1,409	1,333	1,076